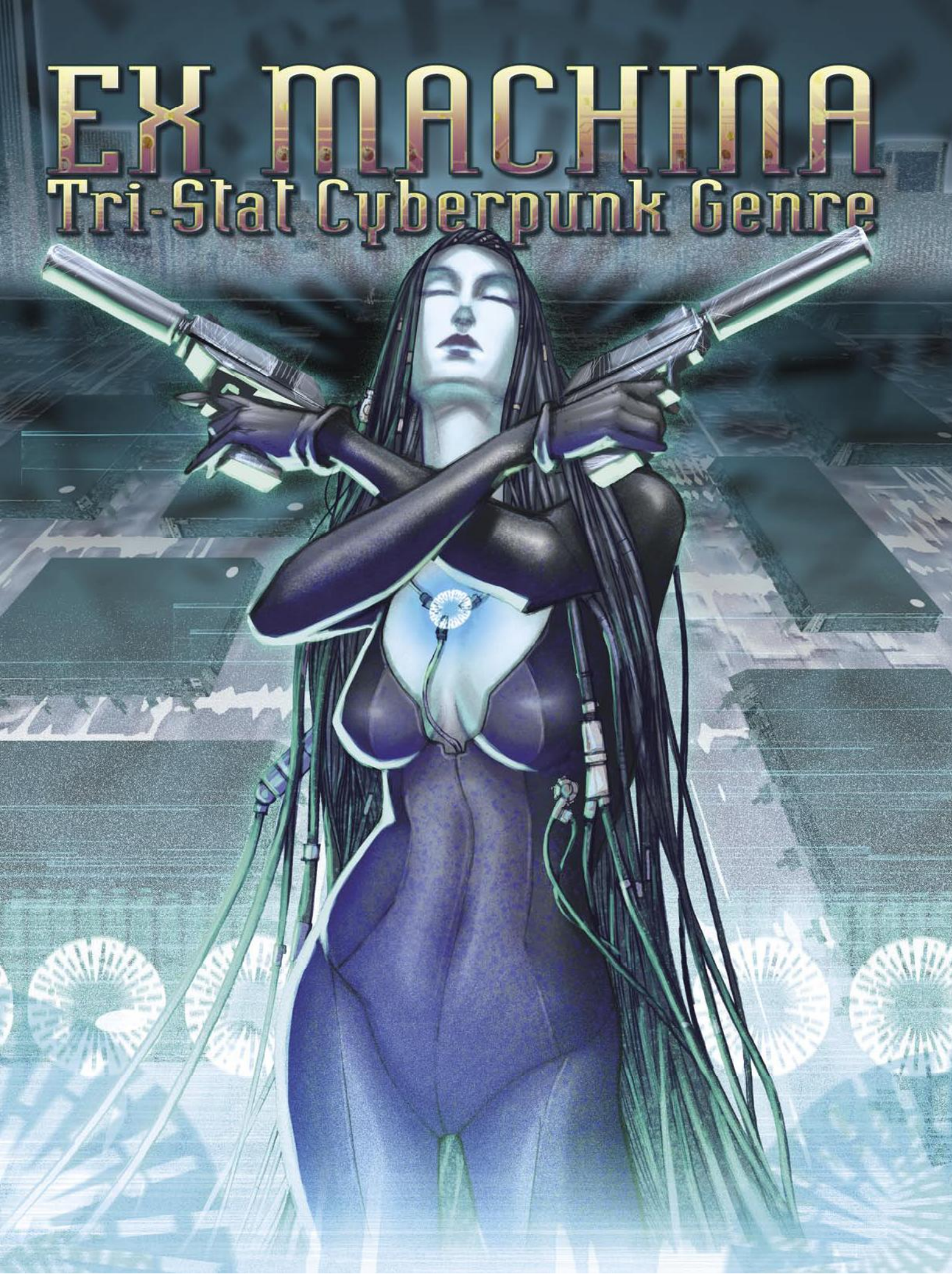
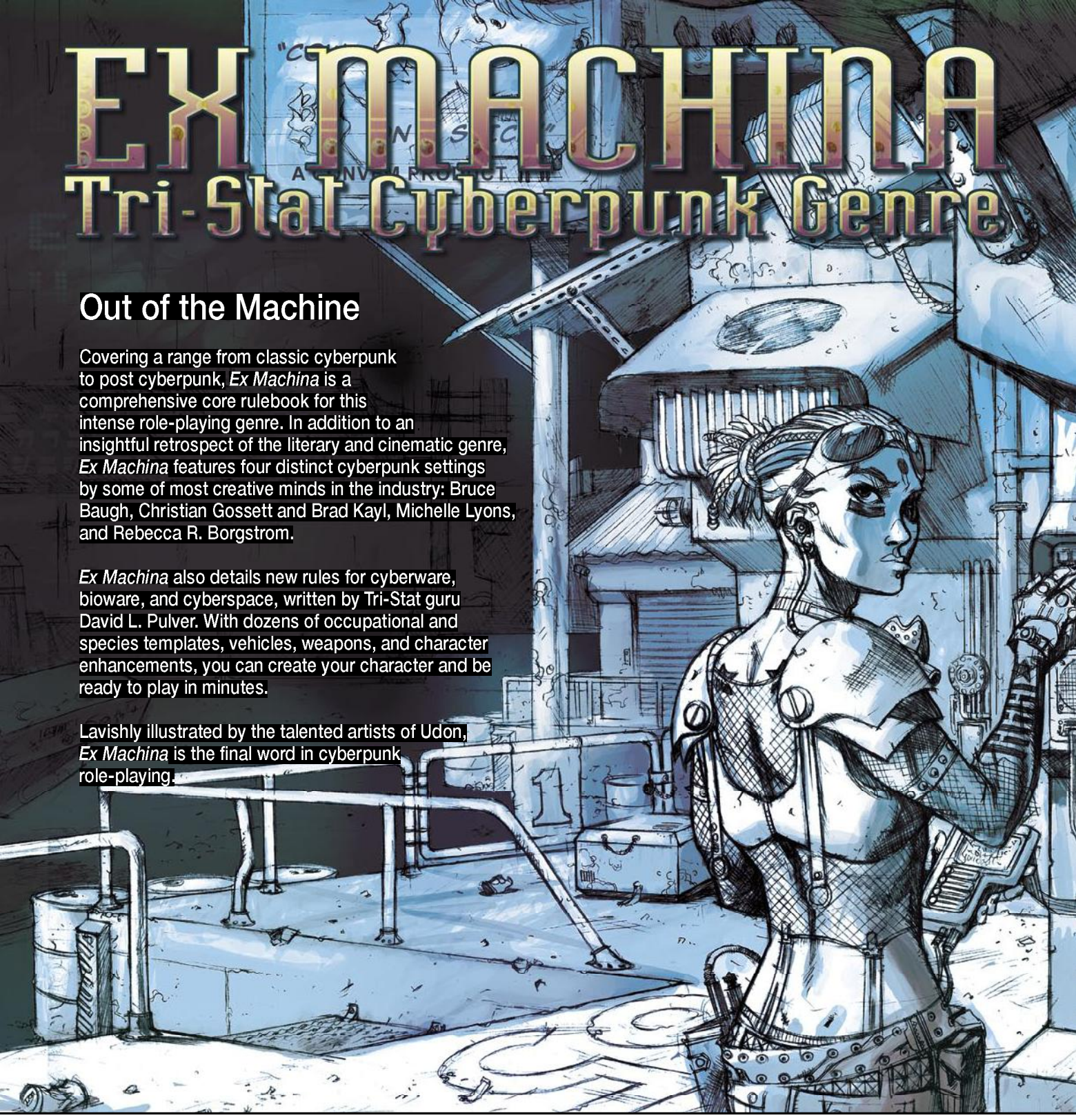
EX MACHINA

Tri-Stat Cyberpunk Genre



EX MACHINA

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Out of the Machine

Covering a range from classic cyberpunk to post cyberpunk, *Ex Machina* is a comprehensive core rulebook for this intense role-playing genre. In addition to an insightful retrospect of the literary and cinematic genre, *Ex Machina* features four distinct cyberpunk settings by some of most creative minds in the industry: Bruce Baugh, Christian Gossett and Brad Kayl, Michelle Lyons, and Rebecca R. Borgstrom.

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TRI STAT d8 SYSTEM™

EX MACHINA
Tri-Stat Cyberpunk Genre

Written By
Bruce Baugh, Rebecca Borgstrom, Christian Gossett, Bradley Kayl, Michelle Lyons

Additional Writing By
David Pulver, Jesse Scoble

Line Developing By
Jesse Scoble with David Pulver

Editing By
Michelle Lyons, James Nicoll

Additional Editing By
Adam Jury, RK, Matt Keeley, Chris Kindred, Mark C. MacKinnon

Art Direction By
Jeff Mackintosh

Cover Art By
Christian Gossett

Interior Art By
UDON (with Attila Adorjany, Chris Stevens, Dax Gordine, Eric Kim, Eric Vedder, Greg Boychuk, Jim Zubkavich, Noi Sackda, Ramon Perez, and Ryan Odagawa)

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Guardians Of Order, Inc. • P.O. Box 25016, 370 Stone Road, Guelph, Ontario, CANADA, N1G 4T4
Phone: (519) 821-7174 • Fax: (519) 821-7635 • info@guardiansorder.com • http://www.guardiansorder.com

MEMBER OF GAMA THE GAME MANUFACTURERS ASSOCIATION

秩序護衛 GUARDIANS OF ORDER, INC

It's a crime ...

... that Red Bull isn't available in Canada. Or, more accurately, it has been suggested to me that it is in fact illegal to sell it here — something about regulations banning the sale of non-cola coloured, caffeinated drinks. I don't know if it's true or not (it probably has more to do with regulations of additive levels rather than colouration), but I do believe that this book would have been finished months ago if I could get it locally. Of course, I could probably say that about every book I'm in charge of, but then I imagine I'd be a burned out husk all year 'round, instead of just during con season.

That might be appropriate for further projects, mind you ... just wire my desiccated body up via neural jack and let me live ghost-like on my writer's computers, haranguing them into more and more frenzied and gonzo writing (simply feed me by Red Bull IV-drip, please). Some probably say I do that already.

Did I say the book would have been done a few months ago? Even that was running well into delays. *Ex Machina* was originally conceived in September of 2002 — bloody hell, I'm embarrassed to admit that — with a tentative street date of November 2003. 14 months sounded like enough time ... apparently I was off a bit. We were all a little too idealistic in those pre-friend-networks/pre-taste-tribes/pre-future-phone days. The iPod had just been released, both *Matrix* sequels still had potential, and blogging was going to be the new voice of the commons (awful word, blogging — how the hell can we have collectively agreed upon such an ugly term?).

And I sold this idea of a giant cyberpunk genre book not only to Mark and Jeff, but I somehow conned a quintet of warm and fuzzy writers into climbing aboard, and fleshing out their take on the genre.

This book is about these writers, and their savage, electric ideas that crackle on every page. They are a wonderful, vicious, motley crew of neo-cyberpunks (or is that post-cyberpunks? or post-post-cyberpunks, maybe?) who have struggled with me over these long months to properly showcase their visions. Their worlds each present a different image of cyberpunk, viewed through a perspective of the early 21st century. Not only do we have the advantage of having grown up with and studied the classic cyberpunk authors, but we sit on the brink of "tomorrow;" we may not have *Blade Runner*'s air cars or Voight-Kampff tests, but we do have future-phones, WiFi, hybrid electric cars, and supercomputers masked as video game systems.

The challenge was to put it all into place and make it sparkle.... Future-shock, indeed.

Beneath the chrome and glitter were hideous little gems that cut to the quick; as manuscript pages came in, there were days I felt a desperate need to wash my brain.

Michelle Lyons is a sweetheart. When she proposed "Daedalus" to me, neither of us saw how close to home the metaphor would strike. She described it as the world gone wrong, about 90 minutes in the future. Skimming my RSS feeds, I wonder if we're closer to 30 minutes from "Daedalus." The oft-repeated Ben Franklin quote comes to mind, "They who would give up essential Liberty, to purchase a little temporary Safety, deserve neither Liberty nor Safety." It's not a vision I find very comforting.

Rebecca Borgstrom is loved and respected for *Nobilis*, a game of high concept and big gods. "IOSHI" is a story of little gods — tiny people who are masters of their own abilities, in a world of complex, corporate machinations. Some days, I'm convinced Rebecca is one of these little gods herself, a shark most likely — albeit a friendly, nearly tame one. (Nice shark, pretty shark).

Bruce Baugh, like Rebecca, I knew only through reputation before this project. He's a clever guy, with a good sense of the game industry as a whole. He's also a master of references, and undoubtedly not only read every book, movie, and comic in the bibliography, but read them twice. And by "read" I mean "analysed," and taken notes. Pondering the logistics of his orbital beanstalk is daunting, but I hope he takes over Columbia one day and makes it happen.

I met Brad Kayl and Chris Gossett in Las Vegas ... where else would one meet two L.A. kids bursting with pride over their urban magic retelling of the Soviet/Afghanistan conflict? Not only are they tremendously funny, sharp guys, with a fabulous comic in *The Red Star,* but they knew gaming ... and had a long history of *Shadowrun* campaigns, among others. Some nights I lie awake thinking about the horrors they've concocted for Underworld ... vile abuses that have burned their way into my brain.

I've known and worked with David Pulver longer than anyone else here, but only recently have I truly grown to appreciate his knowledge, skill, and killer wit. This book — massive quantities of Red Bull included — would remain incomplete without his aid and assistance.

I hope to work with all of these fine people again, someday. I think they are all much smarter than me. They scare me. But I am changed for it, and that is for the best; you must always keep moving, and always have an escape plan.

As the voice over in *Blade Runner* says:

"A new life awaits you in the off-world colonies. The chance to begin again in a golden land of opportunity and adventure. New climate, recreation facilities... "

Welcome to *Ex Machina* — a new life, a new chance, a new climate. With luck it will terrify, intimidate, inspire ... and ultimately change you, if only a little bit.

— Jesse Scoble, Night, July 2004

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Chapter 1: Introduction

He stared at the deck on his lap, not really seeing it, seeing instead the shop window on Ninsei, the chromed shuriken burning with reflected neon. He glanced up; on the wall, just above the Sony, he'd hung her gift, tacking it there with a yellow-headed drawing pin through the hole at its centre. Closed his eyes.

Found the ridged face of the power stud.

And in the bloodlit dark behind his eyes, silver phosphenes boiling in from the edge of space, hypnagogic images jerking past like film compiled from random frames. Symbols, figures, faces, a blurred, fragmented mandala of visual information.

Please, he prayed, now —

A gray disk, the colour of Chiba sky.

Now —

Disk beginning to rotate, faster, becoming a sphere of paler gray. Expanding-

And flowed, flowered for him, fluid neon origami trick, the unfolding of his distanceless home, his country, transparent 3D chessboard extending to infinity. Inner eye opening to the stepped scarlet pyramid of the Eastern Seaboard Fission Authority burning beyond the green cubes of Mitsubishi Bank of America, and high and very far away he saw the spiral arms of military systems, forever beyond his reach.

And somewhere he was laughing, in a white-painted loft, distant fingers caressing the deck, tears of release streaking his face.

— William Gibson, *Neuromancer*

Cyberpunk 101: What We're Talking About

Cyberpunk is science fiction set in the near future, usually in the next 25-100 years. It emphasises the social changes created by cybernetics, biotechnology, nanotechnology, and other emerging technologies that can change not merely what we do but what we are. It portrays the struggle of outsiders — "punks" — to make a place for themselves in the face of future shock and oppressive political and economic powers: the "system." The protagonists are often unwilling heroes, if they're heroes at all; many of them are criminals or operators on the fuzzy margins of legality.

There are exceptions to each of those points in stories widely recognised as cyberpunk. Above all, cyberpunk is defined by the attitude of openness to transformation, respect for the power of innovation and improvisation, and a fondness for rebels and dissidents. A story set in a cyberpunk-like future in which wise, far-seeing chief executive officers skilfully suppress dangerous lunatic outsiders isn't cyberpunk; a story set in a typical space opera, which emphasises social change wrought by new technology and the desirability of building communities and responding to new needs may well be. Most cyberpunk fiction, however, fits the greater part of this working definition if not all of it.

Roots and Inspirations

Stories about the future tend to portray it in stark and extreme terms. Sometimes it's an awful prophecy of doom, such as Fritz Lang's nightmarish film *Metropolis*, or the classic dystopias like Aldous Huxley's *Brave New World* and George Orwell's *1984*. Sometimes it's a vision of the world made perfect or near-perfect, like the technocratic tales of early science fiction magazines and H.G. Wells's film *The Shape of Things to Come* (in which the world is redeemed after tremendous suffering). Very seldom does the future have the complexity and ambiguity of the present.

Recycled Doomsaying. Mark I: 1970s

Thirty years ago, the future looked very bleak to a great many observers, both within and without the community of science fiction writers. The Cold War was in full force, and very few informed people could imagine it coming to any peaceful resolution. The history of the 20th century strongly suggested that however nice it might be to live in a democratic society, the totalitarian regimes of the Soviet Union and the People's Republic of China would probably outlast their rivals.

Once-liberal democracies couldn't keep down either unemployment or inflation, and state intervention couldn't resolve social problems like racism or personal yearning for meaning and order. The military-industrial complex US President Eisenhower warned about in the '50s seemed in charge just about everywhere. Mass protest could help end the Vietnam War, French opposition to Algerian independence, and the sub-Saharan struggle for post-colonial self-determination, but it couldn't create justice or happiness once the fighting stopped ... if the fighting ever did. The superpowers used guerrilla forces and puppet regimes as their pawns in the ongoing struggle for world domination. Karl Marx wrote, "Man is born free, and everywhere he is in chains," and that seemed true — whether the chains were First World corporate hegemony or Third World subjugation to external empires.

Furthermore, a growing number of economists and futurists suspected the Cold War would, in the end, be no more than a sideshow in the fading circus of the West. The Third World's leading nations were on the rise. Japan played the game of capitalism more skilfully than either Europe or America, and China and the "Seven Tiger" nations of Southeast Asia were building their own paths to wealth without the complications of Western liberalism. Demographics were on their side. The West couldn't compete against the looming combination of ever more efficient production and ever-greater numbers of labourers.

The space race ended with the 1969 triumph of Apollo over its Soviet competition, and now the US's space efforts were trickling down. Skylab would not be followed up on. The Space Shuttle fell victim to political manoeuvring and would end up more costly and less capable than originally planned. Meanwhile, back on Earth, media corporations got ever-better at co-opting the spirit of youthful rebellion as another tool for merchandising, and the rising insurgency represented by punk rock was commercialised even faster than its predecessors. The corporations could, it seemed, engulf and devour any threat to their position.

Nor were problems of the day purely social and political. The world's environment was also going to hell, and gaining speed on the way. Biologist Rachel Carson had long since sounded the first warning notes about the dangers of DDT and other pesticides in *Silent Spring*, but that was just the beginning. Toxic wastes proved responsible for more problems than anyone had imagined, and no amount of public concern seemed likely to keep pesticides out of the air, land, and water. Toxic emissions from factories and cities constantly replenished the supply of environmental poisons. Lasting climatic changes also loomed: in 1979, the World Meteorological Association warned that the world was cooling and had been for several decades, and that an ice age might well be imminent. In reaching these conclusions, the WMA drew on research in both specialised meteorological journals and prestigious cross-disciplinary journals, such as *Science*.

Science fiction of the late '70s reflected the divisions of the time. On one side, the heirs of Golden Age technophilic optimism continued to sing the praises of analytical problem solving, dismissing those who doubted progress as obstacles to an ever-brighter tomorrow. On the other, writers critical of the established order called into question the very possibility of progress as long as patriarchy, capitalism, and other established forces endured. Those uninterested in this ongoing struggle or unwilling to commit themselves to a faction took refuge in stylistic extravagance and technical formalisms.

In the midst of all this, some authors both inside the science fiction community and outside it hunted for unconventional futures and alternative ways of expressing their thoughts and feelings. William Burroughs, one of the survivors of the Beat generation of literary innovators, was already famous for combining SF imagery with the stuff of drug trips, nightmare, erotica, and more, all fused in a spare and often witty prose that reflected the influence of earlier styles, including pulp and noir. (William Gibson would later refer to Burroughs as "this dangerous old literary gentleman who sent so many of us out, under sealed orders, years ago," and indeed the cyberpunk debt to Burroughs is very strong and lasting.) Latter-day innovators like Thomas Pynchon also drew on SF for their experiments, feeling that as the present careened ever faster into unknown territory, the boundary between present reality and possible future crumbled into a miasma of waking nightmare, daydream, and chaos.

One response to the challenge of escalating systems of social control drew on a tradition including Surrealism and Situationism, and the idea that the tighter would-be rulers clenched their fists, the more of what they held would slip through. The eternal tyranny of *1984* turns out, they thought, to break up in bureaucratic inefficiency, rival agendas, and the possibility that outsiders can manipulate the information on which all governance depends. Alfred Bester, John Brunner, and others wrote stories in which overlords fell not just because plucky entrepreneurs challenged them, but because the status of overlord itself is unstable. Their imagined worlds were messy, each totalising trend offset by new complications, and life continued without any end state ever taking over.

Out of the Lab, Into the Streets: 1970s to 1982

Science fiction has a long tradition of small press magazines, fanzines, and amateur press association magazines (many of them only distributed to a small circle of contributors) and of ongoing correspondence both in the letter columns of professional magazines and directly between would-be authors. These forums act as incubators for ambitious young writers. In the mid-1970s, the writers who would establish cyberpunk busily exchanged letters and 'zines, honing their craft, critiquing the published work of the time, trading ideas, news, and commentary. They pushed themselves and each other.

John Shirley started publishing stories of high-tech horror and fusions of fantasy and science fiction in 1973. Bruce Sterling made his debut in short fiction in 1976, and at novel length a year later. William Gibson's short stories began appearing in 1977, his first novel some years later. W.T. Quick joined the growing throng in 1979, Michael Swanwick in 1980. Bruce Bethke wrote a story of crucial importance well beyond its content in 1980. The story, "Cyberpunk," provided a widely acceptable name for the movement; it did so well before the story was actually published in 1983, thanks to the habit among cyberpunk authors of circulating work in progress.

Rucky Rucker's intensely bizarre novel *Software*, published in 1982, is either a crucial early cyberpunk work or sufficiently weird to constitute its own genre; critical views vary on the matter. John Varley's Eight Worlds series (running from the early 1970s into the early 21st century as Varley's health allows him to write more) has very little cyber-anything in it, instead emphasising biotechnology. Its setting (a future solar system with Earth off-limits to humanity and the surviving members of the species living on the Moon and other bodies) and its concern with the social changes set in motion by technology (allowing for cheap and reversible sex changes, cloning, and longevity) both partake of the cyberpunk outlook and approach, though.

By 1980, it was clear to many observers (as well as to the authors themselves) that something was going on. Editors like Ellen Datlow (handling science fiction for *Omni* magazine) and Gardner Dozois (in charge of *Isaac Asimov's Science Fiction Magazine*) gave the new writers space and attention. This rather motley crew differed in many ways, both conceptually and in terms of their presentation, but they shared a lot, too: a fascination with the social consequences of ubiquitous computing power; the role of style in defining identity; the opportunities for low-lifes in high-tech contexts; and difficulties facing average people in the face of overwhelming concentrations of corporate and political power. The new writers rejected both the old-school SF trust in technology and reason (subjecting both to trenchant critiques about their origins and consequences) and the newer conventional wisdom of impending doom and despair (likewise regarding it as a flight from life as it is actually lived). The new futures weren't particularly cheery, but they had hope and the potential for changes both small and large.

In 1981, computer scientist Vernor Vinge published the novella "True Names." It didn't make as big a splash as William Gibson would a few years later, but it has been an enduring influence within both SF and computer programming communities. Vinge laid out a near-future world in which complex interactions between individual users and their computers can be abstracted into virtual landscapes. Vinge cleverly recognised the lasting appeal of fantasy among programmers and hackers, and his protagonists inhabit a jointly constructed landscape with both dungeons and dragons. He also showed governments helpless in the face of a threat born from their own operations, and the world saved by sufficiently insightful and independent individuals.

Many cyberpunk authors are musicians, some of them professionally so, and many of the early-proposed labels for their movement drew on musical inspirations. Terms like New Romantic and Techno-Punk refer to contemporary developments in rock and pop. But for every delighted proponent or advocate of a general label, there was at least one other author with a serious objection, and the debate dragged along until Bethke's invention, "cyberpunk," came along and suited almost everyone.

Even before an agreed upon name, the new movement attracted immediate attention. Some of the new authors won awards; many were cited and discussed in annual anthologies of genre fiction. Not that they were universally loved, of course; they came under criticism for (depending on the critic) sneering postmodernist ignorance about science, irresponsible Western male capitalist confidence in the possibility of progress, foolish obsession with flash and surface at the expense of substance, and so on. The general response on the part of the authors was either amused agreement or relaxed dismissal of the power of the critic to get in the way of the authors' message.

• BIRTH OF CYBERPUNK •

It's possible to argue for a long time what [illegible] the label of "first cyberpunk story." Close up, the [illegible] of cyberpunk dissolve; continuous changes matter [illegible] radical ones. William Gibson's 1977 short story "Fragment[illegible] a Hologram Rose," is clearly cyberpunk. John Brunner's 1975 novel, *The Shockwave Rider*, is almost universally [illegible] "nearly cyberpunk but not quite." Anyone who really needs to give cyberpunk a birthday, however, can regard it as being born in 1976 or 1977.

The Complete Transformation of Mind and Everything That Resembles It

A significant part of cyberpunk's power is its fusion of existing elements into new forms. One of the occasional complications of working this way is that precisely because the elements are out in the world at large, others may also notice them and do something similar.

Converging Streams: 1982 to 1984

Film director Ridley Scott wasn't reading the science fiction small-press magazines when working on his 1982 movie *Blade Runner* — he was reflecting on the gonzo future scenes created by Philip K. Dick (*Do Androids Dream of Electric Sheep*) and on ways of capturing old-time ambience, and in particular the feel of *film noir*, in a science fiction context. As it happens, he plugged together similar pieces in nearly the same way that cyberpunk authors were doing. William Gibson describes the experience of seeing *Blade Runner* while he was in the midst of revising his forthcoming novel, *Neuromancer*, and feeling like he'd seen what was in his head up on the screen.

The same sort of parallel invention was happening elsewhere with Slava Tsukerman's 1982 film, *Liquid Sky* (a favourite of many cyberpunk writers for its exotic visuals and thoroughly whacked-out story of aliens encountering punks), and the SF-tinged horror films of David Cronenberg, including 1981's *Scanners* and 1983's *Videodrome*. These works and *Blade Runner* would in turn influence many other creators along with cyberpunk fiction.

Other works had influence within the small community of cyberpunk creators without spreading far beyond it. John Shirley's 1982 novel, *City Come A-Walkin'*, is a particularly important example of this. Set in a near-future San Francisco facing growing political repression, it focuses on the struggle of independent musicians and their underground companions to achieve some dignity and liberty in the midst of it all. Unlike most cyberpunk, it has outright fantastic elements, including the soul of the city incarnate as a shadowy figure always wearing mirrorshade sunglasses, and genuine magic at work. Its ambience, however, gave focus to the efforts of other cyberpunk writers, particularly William Gibson. He describes it as Patient Zero for his own distinctive blend of ideas, infecting his consciousness with new connections between what had been disconnected impressions.

Ground Zero: 1984

In the early and mid-1980s, editor Terry Carr oversaw a line of novels called the Ace Specials, each the first novel by an author with a history of excellent and distinctive short stories. His series became the focal point for the cyberpunk movement, which gained its name and its most important visual motifs in 1984, the year Bruce Bethke's "Cyberpunk" and William Gibson's *Neuromancer* appeared. The list of 1980s Ace Special authors and titles includes several crucial works: *Neuromancer*; Kim Stanley Robinson's *The Wild Shore*, about a future US thrust back into primitive conditions after a war and careful ongoing manipulation; and Richard Kadrey's *Metrophage*, about a Los Angeles in terminal decline and the philosophy behind the politics of total control.

Neuromancer is the definitive cyberpunk work by any evaluation, beginning with its evocative opening line, "The sky over the port was the colour of television tuned to a dead channel." (Though as fantasist Neil Gaiman has noted, for today's children that would mean bright blue rather than static-laden black and white.) Endless urban sprawl is dominated by global corporations who use governments and societies at their own whim. People interact with computers via complex imaginary landscapes, the "consensual hallucination" named cyberspace; hackers attack the black ice of high-security defences with programs that draw on cyberspace imagery to crawl, pounce, soar, and lunge. In the semi-legal and illegal fringe communities where Gibson's characters gather, ageing cyber-aces reflect on lost glories while drifters and up-and-coming hot talents load themselves with experimental implants and designer drugs in search of the edge they need to rise above the pack.

William Gibson was already well established in a habit that *Neuromancer* makes throughout: an attention to brand names and matters of fashion. Gibson noticed this fascination recurring widely in spy stories like the James Bond books by Ian Fleming, military magazines, and women's fashion magazines, and he put it to work as a tool for world building. The people of his fictional world live in a culture in which style consciously matters, and this builds a bridge between them and the modern-day reader. Ironically, the constant flux of style becomes one of the few points of enduring stability in the chaos of perpetual change.

Neuromancer also sets an important precedent that's often overlooked by people who put too much attention on the setting and trappings of cyberpunk and not enough on the actual plots. The drug-crippled hacker Case, the drifting killer Molly, the brain-damaged and partially reconstructed soldier Armitage, and their various companions do scheme and scam in response to manipulations whose origins they don't identify until late. They also unleash a genuine transformation in their society at the end, however, when a physical raid on a decadent space station housing one of the world's wealthiest families, combined with elaborate manoeuvres in cyberspace, fuse separated A.I.s into a greater whole. Gibson doesn't make a big fuss about it, but later stories set in the same setting show a cyberspace increasingly transformed by new entities living in the computer matrix, influencing the physical world by their interactions with individuals and corporations.

The drive for the perfect score encounters just the right circumstances to change the world. This is an important part of the cyberpunk ethos. Cyberpunk writers are, in Bruce Sterling's words, "bored with apocalypse," and so their worlds have endured despite war and other calamities. The writers are also open to hope and change. A cynical appraisal of people's vulnerability to media manipulation and pessimistic speculation about people's ability to rein in those with power don't rule out all belief (or at least willingness to hope) in real improvement later on.

Present at the Creation: 1984 to 1986

It's been a long time since science fiction magazines sold as well as books. The stories that built up cyberpunk as a movement came to the attention of science fiction's most dedicated fans and scholars, but couldn't get very widespread notice. The arrival of *Neuromancer* in particular changed things. Readers and critics both inside and outside the science fiction community took notice of something impressive going on, and those who enjoyed the book went looking for more. They didn't have to look very far.

Bruce Sterling had been writing short stories in a single universe since 1982, focusing on different moments in a future history in which the solar system is divided between the biotechnology-affiliated Shapers and the cybernetic-focused Mechanists. His novel, *Schismatrix*, built on their framework with an extended tale of the rise and fall of whole societies, marked out a fresh cyberpunk approach to classic SF themes of human destiny and transformation. Sterling didn't keep revisiting that setting the way Gibson did with the Sprawl (and, later, with the world of *Idoru* and the Bridge trilogy), however, and his later work rang other changes on cyberpunk conventions.

Walter Jon Williams had published several non-cyberpunk books but was still very much a newcomer when he made his cyberpunk debut with *Hardwired*, a story of an Earth oppressed by both detached corporations and governments based in orbit, and of the black-market pilots and smugglers willing to challenge

their authority. It offers the same combination as *Neuromancer* : against a bleak but vigorous setting, lowlife characters get an unexpected opportunity to really shake up their world. Cowboy, the ace pilot at the centre of *Hardwired*, could hang out comfortably with Gibson's protagonists and have quite a lot to talk about.

John Shirley had already been busy infecting others, including Gibson, with cyberpunk imagery before there was the word for it. He returned to the field with his trilogy, *Eclipse*, *Eclipse Penumbra*, and *Eclipse Corona*, in which a motley crew of political activists, counterculture rebels, and others take on the growing power of a European and American fascist regime. Shirley, a musician as well as a writer, has played professionally and written songs for bands such as Queensrÿche, and he drew on his own experience to portray the bitter guitarist Rickenharp. Rickenharp finds new purpose in the anti-fascist struggle and gives his own life in a stunningly portrayed concert/act of broadcast rebellion on top of the Arc de Triomphe until tanks destroy the arch and him with it. The climax of the third volume breaks with cyberpunk's customary cosmology to include a prominent role for speculative science derived from some of Nikola Tesla's less-successful theories.

Lewis Shiner joined John Shirley at the overtly political pole of cyberpunk with his stories beginning with "Life During Wartime," about the moral and social costs of a future war between the US and Latin American powers. The experience of the Vietnam War and various clandestine struggles clearly informed these pieces, but Shiner combined them with careful extrapolation and a blazingly passionate style.

Michael Swanwick was another writer to publish his first novel as an Ace Special. *In the Drift* is set in the blighted lands around a Three Mile Island that had a full-blown meltdown, rather than a near-calamity as in real history. It brings the cyberpunk sensibility to well-established science fiction conventions about mutants, pure-gened humans, and their inevitable clashes. He followed it up with *Vacuum Flowers*, in which much of the human race has become enslaved by an A.I.-born hive mind, where biotechnology rather than cyber dominates.

Hybrid experiments of cyberpunk and other matters developed almost immediately. K.W. Jeter, previously known for intense horror, offered up *The Glass Hammer*, a tale combining *Hardwired* - like speedsters and smugglers with Gnostic cults and a vision of the world's redemption gone wrong. Greg Bear created a complex vision of humanity unmade and remade by bacteria genetically engineered to self-awareness in *Blood Music*, and cyberpunk motifs appear in some of his later work, particularly the series beginning with 1990's *Queen of Angels*, set in a Los Angeles beginning to experience radical change via nanotech.

Others would likewise take cyberpunk and mix it with divergent inspirations in coming years. Like science fiction at large, cyberpunk includes more male authors than female ones, but it's not entirely a boy's club. Pat Cadigan made her mark early on with the story "Pretty Boy Crossover," about a handsome would-be actor who finds that giving up physical existence for the digital world isn't as tidy an experience as he hoped, and revisited her success with both novels and stories.

Within a year or two of Gibson's breakthrough success, it was clear that this was something more than just a flash in the pan. In 1985, the television series *Max Headroom* debuted (the character of Max would eventually advertise for Coca-Cola). The series whole-heartedly embraced the substance of cyberpunk social concerns as well as the surface glitz of high-tech low-lifes. It confused most viewers, but its early presence helped pave the way for later efforts.

More Than Human, Other Than Human

Cyberpunk has never been a homogeneous little world. Its creators disagree with each other, often intensely, and it is the nature of literature for readers to form their own individual and conflicting interpretations. Between the two conflicting forces, it's hardly surprising that the umbrella of "cyberpunk" has come to cover such a vast collection of viewpoints and agendas.

Science fiction has always engaged in speculations about the meaning and worth of human experience. What defines us as a species? How important is this distinctively human identity? Can we change it? Are there other experiences worth as much, or more?

In the years immediately preceding cyberpunk, perhaps the strongest advocate of humanism was Philip K. Dick, whose stories say again and again that what is machine can never be human, that empathy defines humanity (and that it must be taught and can be lost, so that creatures who are biologically human may lose their standing as individuals with souls and a moral nature), and that the human condition is altogether unique and precious. It is therefore distinctly ironic that one of the best and most engaging presentations of the opposite viewpoint is the film *Blade Runner*, based in Dick's own work. In *Blade Runner*, the qualities of true humanity can arise in machines, in the inverse of the process by which humans give up themselves to mechanical regimen and amoral outlook.

Some critics accused cyberpunk of being anti-humanistic, of devaluing human dignity for the sake of cheap thrills and superficial gimmickry. As time went on, the body of cyberpunk literature grew, and authors had more time to reflect and develop their various themes at length, it became clear that this wasn't really true. When non-human intelligence, and particularly artificial intelligence, appears in cyberpunk, it is not precisely the same as human, merely comparable in some ways. There remains a distinctive quality to humanity, and the modification of humanity by drugs, cybernetics, and bio- or nanotechnology, extends this into new realms rather than removing it. While the forces of order may be everywhere, conspiring against human dignity, ubiquitous chaos is there to help those trying to renew it.

The Street Has Its Own Uses For Things

Somewhat to their surprise, cyberpunk authors found that a lot of people were ready to hear what they had to say about the individual's place in society, possibilities for the future, and how we cope with tragedy and circumstances beyond our control. Predictions of the impending death of "science fiction as we know it" sound out from prominent writers, editors, and critics every few years, but it is true that the science fiction scene of the mid-1970s was pretty stagnant. That couldn't be said in the mid-1980s. Cyberpunk ideas and imagery proliferated in all directions — the imagery further and faster than the ideas, sometimes with unfortunate consequences.

William Gibson and Bruce Sterling both offered up this line as the essence of cyberpunk: "The street has its own uses for things." That is, no matter how much you plan and try to lock things down, others will take your material and do something unexpected with it. That proved as true of cyberpunk as of anything else.

The Receding Wave: 1986 to 1990s

The first wave of cyberpunk writers continued to diversify, while others fell silent or turned to other concerns. Some, like K.W. Jeter and John Shirley, never gave up horror and other styles of fiction; for them cyberpunk was one of many tools. The seminals, like William Gibson and Bruce Sterling, continued writing work that is in some meaningful sense cyberpunk, but refined their visions and presentations to suit their changing experience of the world.

This isn't to say that everyone ever interested in cyberpunk changed the same way all at once. People don't evolve in lockstep, particularly not as individualistic a lot as cyberpunk authors. New writers made their first contributions and writers experienced in other styles added cyberpunk to their repertoire, while others retired or moved on.

George Alec Effinger, already established as an author of elaborate gonzo tales with dark hearts, took up cyberpunk motifs for *When Gravity Fails* in 1987. Driven partly by the desire to work out his grief over the neglected murders of friends, he built up a nameless Arabic city and populated it very much in the style of New Orleans, where he lived while writing *When Gravity Fails* and its sequels. He put together the consequences of plug-in personalities and a warm sympathy for people marginalised by different gender constructions and lifestyles with a classic noir murder mystery with broader implications.

Urban fantasy author Charles de Lint made a rare foray into science fiction with *Svaha* in 1987, a story of a shaman crossing from magical wilderness to technological city. John Shirley wrote quite a different story of shamanic awakening in a cyberpunk city in his 1988 story, "Shaman," updating voodoo principles for the soul-drained future. William Gibson had already used voodoo imagery in *Count Zero*, the first of the sequels to *Neuromancer*, but in that book it was a matter of A.I. temperamental preference about how to deal with people; de Lint and Shirley chose to make it real for their works. Emma Bull put her own distinctive spin on the same idea in her 1991 novel, *Bone Dance*, with quiet urban magic and a narrator who is substantially less normal than first appearances indicate. W.T. Quick made a prominent splash with *Dreams of Flesh and Sand* in 1988, only to fall silent two years and two novels later.

Paul di Filippo, whose first stories appeared in 1988, has never become widely famous, but he's an "author's author" admired and occasionally imitated by his fellow writers. His vigorously bizarre tales of biotechnology emphasise the extremely weird possibilities of cyberpunk technology. Like the stories of his fellow Texan, Howard Waldrop, however, they often hide a dark core of tragedy beneath the humour.

Vernor Vinge's *The Peace War* (1984) and *Marooned in Realtime* (1986) bracketed the typical cyberpunk milieu with a story stretching from a totalitarian near future to the Earth fifty million years after humanity. Vinge introduced the term "Singularity" to refer to the point at which humanity becomes qualitatively more intelligent, or gains access to qualitatively greater intelligence, and thereby moves into a condition beyond our ability to extrapolate. As with Bethke's coinage of "cyberpunk," the idea and the label of the Singularity caught on rapidly. Many cyberpunk stories deal with the Singularity and its boundaries in one way or another, examining the moment when humanity as we've known it becomes something possibly greater and certainly other. Australian writer Greg Egan, who began publishing intensely reasoned hard SF stories in the late '80s, took the theme for his own; nearly all his fiction is concerned with the ways in which humanity can become something greater.

Forward In All Directions

Cyberpunk offers great visuals. Advertisers, movie directors, game designers, and others all noticed this. Some of them went beneath the surface to handle cyberpunk concepts in intelligent ways, as in the television mini-series *Wild Palms* (which features an amusing cameo by William Gibson playing himself a couple decades older). More often it was just a matter of going for glitz and violence. Cyberpunk role-playing games nearly always had this problem, offering none of the sense of social engagement or transformation as a crucial factor in play, focusing instead on the big guns and gadgetry. Likewise, cyberpunk riffs became ubiquitous in low-budget sci-fi movies and as a source of cool strangeness in advertising.

Some creators did understand the inherent power and potential in what they were working with. James Cameron's robots run amok in *Terminator* and its sequels owe as much to cyberpunk as to earlier science fiction, as do the high-tech Marines of *Aliens*, the skulduggery of the corporation, and ideas of the Aliens as bioweapons. Similarly, the memory-recording technology in *Strange Days* mixes explosively with the politics of racism and police authoritarianism. Terry Gilliam took the principle of unexpected reuse to lunatic extremes in *Brazil*, along with the horror of central control that hasn't yet met its match. Paul Verhoeven's *Robocop* is a thoroughly cyberpunk story, with the question of human nature and the boundaries of humanity at the centre of a great deal of high-tech violence and pervasive corporate evil. Wim Wenders brought much of the cyberpunk ambience into the final days of the 20th century in *Until the End of the World*, and worked a very cyberpunk-like trick for the soundtrack: he asked interesting musicians to record a song in the style they might be using ten years in the future. The combination of familiarity and experimentation ended up actually changing the course of style development for several of the performers on the soundtrack.

Publication History of Cyberpunk RPGs

1988 *Cyberpunk*, R. Talsorian Games
1989 *Cyberspace*, ICE
Shadowrun First Edition, FASA
1990 *Cyberpunk 2.0.2.0.*, R. Talsorian Games
GURPS Cyberpunk, Steve Jackson Games
1992 *Shadowrun Second Edition*, FASA
1993 *Underground*, West End Games
1995 *Cybergeneration*, R. Talsorian Games
1996 *Bubblegum Crisis*, R. Talsorian Games
1998 *GURPS Bio-Tech*, Steve Jackson Games
Shadowrun Third Edition, FASA
2001 *Shadowrun Third Edition*, FanPro
2002 *Digital Burn*, Living Room Games
Transhuman Space, Steve Jackson Games
2003 *OGL Cybernet*, Mongoose Publishing

Recombination: 1990s

The world at large complicated the cyberpunk writer's mission in the late '80s and early '90s by going even more berserk than usual. The Soviet Union and its empire collapsed. China mutated into a weird hybrid of communism and fascism. Japan ran into the limits of growth in its traditional manner and turned into an economic basket case. The US was governed alternately by big-government conservatives talking in small-government terms and by small-government liberals doing just the opposite, leaving behind a muddle. The World Wide Web isn't cyberspace, but it's nonetheless continuing to transform industries and creative efforts of many kinds. Concern over global cooling gave way to concern about global warming. Few of the cyberpunks ever claimed to be prophets in the sense of forecasting events — rather they saw social trends and factors that influenced responses — which was good for them; it was not a good time for prophets willing to be honest about their records.

In addition, cyberpunk became part of a lot of other people's identities. There are hackers, software pirates, and others working with computers who shape their personas and goals based on cyberpunk. The US and other militaries have incorporated cyberpunk-style interfaces in individual and group operations. The language of cyberspace has become ubiquitous in discussing the World Wide Web. Bits and pieces of cyberpunk creation now float freely, and get used in ways nobody would have guessed twenty years earlier.

Some critics began writing about "post-cyberpunk" fiction in the 1990s, to refer

to work that may not be heavy in cyberpunk motifs but relies on them for setting and plot touches. The unexpected revival of space opera in the mid-1990s offers several examples of this. Vernor Vinge's *A Fire Upon the Deep*, Dan Simmons's *Hyperion* and *The Fall of Hyperion*, Peter Hamilton's Night's Dawn trilogy, and other works of their ilk aren't cyberpunk in their essence. Cyberpunk treatments of cyberspace, humanism and post-humanism, social issues and transformations shape all these works, however, so that they wouldn't have been written before cyberpunk happened.

Other new writers were even closer to cyberpunk, if not necessarily part of it. Linda Nagata's *The Bohr Maker* is a tale of the world on the very brink of an accidental Singularity. Wil McCarthy's *Aggressor Six* and *The Fall of Sirius* bracket a Singularity in a manner somewhat like Vinge's a decade earlier, while *Flies From the Amber* examines the consequences of medical technology extending lifespans indefinitely in an environment with little room for population growth. Greg Egan brought professorial sensibilities and a rigorous materialism with sometimes surprising consequences to bear on his ideas; Singularities loom and sometimes erupt in his books. *Quarantine* isolates Earth from the rest of the universe thanks to quantum-mechanical phenomena, and contains one of the eeriest portrayals in SF of personality restructuring, showing the drastic change of allegiance and values from the viewpoint of the victim. *Permutation City* introduces some fresh variations on classic themes of artificial intelligence and virtual worlds, including personality simulators capable of running full human minds but much more slowly than living people, and artificial life which decides that its creators are logically unfeasible and sets about removing them from existence. His later stories have ranged from near-future Earths to stories cycling through the creation and destruction of whole universes.

The success of cyberpunk shows the power an idea can have long before it achieves physical expression. Just as George Orwell's vision in *1984* has become part of political discourse (and, to at least some degree, itself a force acting to restrain the trends that Orwell feared), so the existence of cyberpunk fiction shapes real-world developments in computing and elsewhere. But then cyberpunk must in turn adapt to new forces loose in the rest of the world. One of the most problematic of these for cyberpunk is nanotechnology, the still-mostly-hypothetical science of engineering at the scale of individual atoms and molecules. It's very easy to imagine nanotech as either the next best thing to magic and the source of unlimited goodies, or as the source of the nightmarish destruction of all organised matter in reach. Working out any conceptual boundaries of what's possible and likely takes more effort. Early efforts at using nanotech in cyberpunk and post-cyberpunk stories drew many complaints to the effect that this was practically fantasy under a false flag, given the unlimited transformation of the world. Eventually writers did figure out narratively interesting ways to use nanotech, but it took time and a fair number of false starts.

Reboot

In the real world — planet Earth, Reality — there are somewhere between six and ten billion people. At any given time, most of them are making mud bricks or field-stripping their AK-47s. Perhaps a billion of them have enough money to own a computer; these people have more money than all the others put together. Of these billion potential computer owners, maybe a quarter of them actually bother to own computers, and a quarter of these have machines that are powerful enough to handle the Street protocol. That makes for about sixty million people who can be on the Street at any given time. Add in another sixty million or so who can't really afford it but go there anyway, by using public machines, or machines owned by their school or their employer, and at any given time the Street is occupied by twice the population of New York City.

That's why the damn place is so overdeveloped. Put in a sign or a building on the Street and the hundred million richest, hippest, best-connected people on earth will see it every day of their lives.

— Neal Stephenson, *Snow Crash*

Ground Zero, Mark II: 1992

Neal Stephenson is as important to the history of cyberpunk concerns in the 1990s as William Gibson was for them in the 1980s. His 1992 novel, *Snow Crash*, set a pattern for a great deal of the cyberpunk-related work of the next decade, even though it didn't kick off an explosion of new work from others in the way that *Neuromancer* did. *Snow Crash* takes the post-Cold War and inflates all its trends to the extreme, offering a vision with the Mafia running security firms and pizza delivery services, the US government working by contract, franchise governments with official housing tract designs, and a scheme to rule the world with the help of humanity's first language. Its density and wildness of vision defy easy summary. The book is weakened by an unsatisfying ending, but if *Neuromancer* shares a spirit with the vigorous, experimental sounds of a New Wave keyboardist at work, *Snow Crash* is the enthusiastic and sometimes out-of-control jamming of a hip-hop or electronica DJ throwing it all into the mix. Stephenson raised the benchmarks for what cyberpunk-descended fiction could accomplish; everyone who follows this path must take him into account, one way or another.

The Continuing Influence: Other Media

Even though cyberpunk fiction was scarce on the ground for most of a decade, the genre was alive and well elsewhere. Cyberpunk was so well established that its concerns would inevitably be raised in response to a relevant technological or social development, and any video vision of the near future was very likely to include some retro fashion and cybernetic enhancements taken for granted. The success of the Internet as a popular medium (or rather set of media) brought the word "cyberspace" and at least the general idea of shared conceptual space into general use.

When cyberpunk as a more coherent set of ideas behind the images re-emerged, it wasn't initially in prose. It happened more or less simultaneously in several other media, and to some extent in prose outside the science fiction genre.

Cyberpunk became important early on in anime and *manga*, and remains so. Masumune Shirow's lengthy series, *Appleseed*, was the first big *manga* work to make thorough use of cyberpunk. He gave his cities, robots, and powered suits an organic design that has been often imitated, and laid out a classic tale of a female cop and her cyborg partner in a genetically engineered and centrally-planned society that is a blend of utopia and dystopia. Shirow's later *Dominion Tank Police* satirised cyberpunk themes. The popular anime *Bubblegum Crisis* blended classic cyberpunk genre tropes with comic book-style superheroics in the 1980s; in the 1990s, Katsuhiro Otomo's *Akira* (released in 1988) and Shirow's *Ghost in the Shell* both won over large audiences for their thoroughly "cyber" (or posthuman) visions of the future, layered with political and social criticism of present-day tends. (*Akira* has no actual cybernetics in it, at least on the personal level, but it has complex computer visualisations, extreme social stratification, and radical transformation, all in the cyberpunk tradition.) More esoteric series like *Neon Genesis Evangelion* and *Serial Experiment Lain* combined classic cyberpunk elements with other inputs to build particularly exotic, dense, and meaning-laden worlds and stories. More recently, *Ghost in the Shell* has returned in a big way with a multi-media blitz of graphic novel, TV series, and movie.

Western filmmakers picked up on this thanks to directors interested in Japanese developments. In particular, the Wachowski's splashed hard-core cyberpunk images on the big screen to dazzling effect in *The Matrix* and its sequels, but some cyberpunk imagery showed up in films as unlikely as the second trilogy of Star Wars films, with their stylised underclasses and heavily computerised club strips. There were works not set in a cyberpunk future, but fully in keeping with the underlying ethos, like *Fight Club*. (Chuck Palahniuk, author of the original book, generally describes himself as a horror author, but seems interested in science fiction and is in any event in tune with the concerns that drive cyberpunk.)

Some comic book creators also picked up on cyberpunk approaches and applied them to their own work. This is particularly true of some of the more prominent British comics writers like Grant Morrison and Warren Ellis. Morrison buried a secret impending Singularity at the heart of his run on *Doom Patrol* and tackled issues of human responsibility and cruelty in a very cyberpunk fashion in *Animal Man*, though the climax and resolution owe more to cyberpunk's own roots in surrealism. *The Invisibles* is more a tale of modern conspiracy and magical enlightenment than anything else, but the imagery of a superadvanced techno-magical conspiracy, its tools, and the general attitude of outsiders exploiting the system's own nature both draw on cyberpunk.

Warren Ellis brought a rigorous and delighted treatment of the implications in comic-book superscience to bear on established archetypal characters as well as his own creations; *Planetary* features a Singularity in the wrong hands needing to be undone. His series *Transmetropolitan* is very much a work of post-*Snow Crash* cyberpunk, abounding in the clash of systems of control and in the wildly unexpected application of technology and ideas. The series' hero, Spider Jerusalem, is a reporter returning to the City, an urban sprawl of endless delight and savagery, to bear witness to personality uploading, xenomorphic subcultures, ubiquitous information streams, and a bestial government. He challenges the regime with wild drug trips, poignant columns published by the samizdat, and a bowel disruptor.

Ellis's more recent *Global Frequency* features an independent, covert, high tech intelligence agency determined to save the world from itself.

Christian Gossett and Brad Kayl put cyberpunk technology together with industrial magic in a manner somewhat reminiscent of Walter Jon Williams's *Metropolitan*, then ran it all together with a fantasy reworking of Soviet history in the utterly unique graphic novel *Red Star*. Kayl has since gone on to ring other changes on cyberpunk imagery in *Assassin*. *100 Bullets*, by Brian Azzarello and Eduardo Risso, is a contemporary story, but thoroughly cyberpunk in its treatment of out-of-power subcultures and the schemes of those hoping to gain and maintain control.

After a long absence, cyberpunk returned to American TV. William Gibson penned an episode of *The X-Files* with a cyberpunk motif. James Cameron's *Dark Angel* TV series aired in 2000 and lasted two seasons. A direct translation of classic 1980s cyberpunk tropes to the small screen, it featured an escaped transgenic soldier and a rogue cyber-journalist struggling against the authoritarian military-industrial complex of 2020s America. The lead heroine, Max (played by Jessica Alba), followed in the tradition of beautiful-but-deadly cyberpunk "street samurai" like Molly and Trinity.

Advances in graphics and computing power made ever more sophisticated computer games, and cyberpunk motifs are very common among players and designers in the popular games on various platforms. Some games, like *Deus Ex* and the Metal Gear Solid series, are thoroughly permeated with cyberpunk ambience; a great many more throw in cyberpunk touches. In at least some cases, it appears that the creators may not even know the origins of some of their chosen images and concepts. It's all become part of the generally available pool of shared concepts.

The New Cyberpunks: 1990s to Present

In the last years of the last decade of the last century, a new generation of writers did take up the cyberpunk legacy and proceed to handle it in the same spirit as their predecessors: looting it for everything interesting, discarding what now seemed irrelevant, and beating on the rest until it whimpered.

Scottish writer Iain Banks set an early lead in this regard. His stories of the Culture, a multi-species society governed by post-Singularity A.I.s and living well beyond the limits of scarcity, combine cyberpunk, space opera, and a great deal more, filtering all through a lens of pitch-black tragedy. Ken MacLeod built a future history with strong cyberpunk elements, the Fall Revolution universe, and pulled off a thoroughly postmodernist trick of perspective; the protagonists of each new book see the protagonists of the last book as the real villains, and usually have good reasons for doing so. Charlie Stross introduced what he calls "overclocked" fiction, in the cyberpunk spirit but paying close attention to the real-world details of how computers work; he demonstrates this spirit in dense, often highly allusive stories of social change in peculiar circumstances and the adventures facing those living in such times.

Among North American writers, Cory Doctorow is perhaps closest to the original cyberpunk authors' personal style. For many years he's co-produced a 'zine (first in print and then on the Web at www.boingboing.net) covering all things high-tech and marvellous, and honed his skills in research, analysis, and extrapolation in the process. His first novel, *Down and Out in the Magic Kingdom*, is still short of the literary polish of the best cyberpunks of the 1980s, but can fully hold its own in the world of ideas, pushing ahead a few decades and making radical transformations and their cascading consequences not only accessible but highly entertaining.

Meanwhile, earlier arrivals at the cyberpunk party continue to produce new work of their own. Neal Stephenson has turned from the future to the present and past, but his tales of cryptography, smuggling, and other complicated matters radiate the same spirit and the same moral framework.

These days, the business of cyberpunk has a strong cyberpunk tone all its own. It's not unprecedented for a professional editor to notice a writer's work on a weblog or online 'zine, request more, and end up striking a publication deal. The range of possible means of publication continue to expand, too, including print-on-demand systems that turn stored computer files into physical books in small lots and purely online approaches to document distribution. Licenses allowing for redistribution while protecting authorial claims, derived from software licensing schemes hammered out to allow decentralised programming ventures to work, have been applied to some books, including Doctorow's novel; you can buy it in a store, or get it online in any of several ways (including for free from his site). Experimentation shows no sign of letting up in this regard, either.

Recycled Doomsdays, Mark II

A great deal of what the early cyberpunks and their peers worried about didn't happen. The Cold War did end, and not through nuclear war. The Soviet Union collapsed, and even if it's revived by misplaced nostalgia, Soviet communism is no longer the wave of the future for any but extreme fanatics. The economic swamp into which Japan fell a decade ago remains deep, with no prospect of real recovery in sight. Many of the largest corporations of the '70s are gone or dissolved into components and swallowed by rivals. It seems unlikely that a new ice age waits in the wings, and the great ticking population bomb is being slowly but steadily disarmed.

Of course, new fears always rise to take the place of old ones. Global warming now looms large in many people's minds. Instead of Soviet hegemony to worry about, we have religious fanaticism and terrorism, and for some the prospect of American hegemony, too. Computerisation revolutionises new fields of work and play all the time, but not without costs, including unemployment, the widening of the digital divide (between the techno-literate and those unqualified to work with the high-tech tools), and the breakdown of traditional means for forming and maintaining communities without (yet, and perhaps ever) being able to fully replace them in online interactions. The problem of infectious disease, once thought solved, is back as careless use of antibiotics combines with natural evolution to breed ever more dangerous micro-organisms. The advent of AIDS makes much of the casual sex scenes of early cyberpunk look ludicrously obsolete, not unlike poorly understood computer jargon recycled purely for its cadence.

Inevitably, in thirty years, many of these fears and many of their matching hopes for nanotech and other transformation will look ludicrous, too. What endures is the spirit of engagement, taking the defining moments of an era and intensifying them so that what we see projected on the page and screen is our own world illuminated for us to see as if it were altogether new to us. Cyberpunk makes the familiar strange, so that the strange may become familiar.

Out of the Machine

There is a cyclical nature to our interests and concerns. Ideas and styles come back into vogue, and stories are endlessly repeated. When handled properly, old notions can be polished into something new and striking, making a compelling engagement of basic fears and hopes. We live on the threshold of cyberspace, and the questions of science and humanity are as important as they ever were.

Cyberpunk is a genre of our generation. It was conceived of when computers were massive in size and investment, and foretold a world of tiny processors and superconductors. It reinvested the noir motifs with a new style and sophistication. It foreshadowed fears of cloning and loss of humanity ... issues that blaze across today's headlines.

For a time, "cyberpunk" became synonymous with "style over substance," showcasing fast and loose cityscapes where bad-ass cyber-mercenaries and street samurai conducted industrial wetworks as the order of the day. But it often lost the human element. It forgot that under the chrome and bioware, we're all just trying to figure out what it means to be human. Even the artificial intelligences.

The dX Experiment

In 2003, *Tri-Stat dX* was released as a slim, stylish, generic game system. It stripped away the superhero trappings of *Silver Age Sentinels* and the anime features of *Big Eyes, Small Mouth*, illustrating how Tri-Stat can be a universal, rules-light, cinematic game.

This book, *Ex Machina*, is an experiment in form and substance. It is a genre book, fleshing out all the myriad notions of cyberpunk for your *dX* games. It is also a showcase piece for style and presentation. Finally, while it provides everything you need for cyberpunk role-playing, it also contains four distinct campaign worlds. This book is roughly divided into three parts, the first of which is an extensive coverage of the cyberpunk genre:

- Chapter 1: an essay introducing the notions of cyberpunk, and charting its history.
- A lengthy bibliography (see the appendix).

Part two gives rules for any cyberpunk game:

- Chapters 2-7: detailed character creation.
- Chapter 8-9: rules and game mechanics.
- Chapter 10: technology and equipment suitable for any cyberpunk game.
- Chapter 11: rules on cyberspace.
- Chapter 12: advice on running cyberpunk games.

Part three contains four unique campaign worlds — playgrounds for any group of players to explore, watching the cyberpunk tropes through different lenses. Although the worlds stand alone, obviously GMs are encouraged to mix and match ideas:

- Chapter 13: IOSHI, designed by Rebecca Borgstrom.
- Chapter 14: Heaven Over Mountain, designed by Bruce Baugh.
- Chapter 15: Underworld, designed by Chris Gossett and Brad Kayl.
- Chapter 16: Daedalus, designed by Michelle Lyons.

Heaven Over Mountain

The Orbital Tower project, or as everyone calls it when not on the job, the beanstalk, draws on the traditions of biotechnology to simultaneously present the largest artefact in the solar system and an ecosystem so distinctive as to be almost an alien world unto itself.

It rises from Earth to orbit, via carbon nanotube, and is reinforced by biotechnology. The elevator is a living thing, governed and groomed by vast networks of humans and artificial intelligence. The city at its base, and those along its length, are focal points for political and economic power — yet only from the elite reaches of Heaven can one gain perspective and a sense of the world below; a huge fraction of the world's trade and manufacturing now depends on this one thing: a 25,000-kilometer-high tree with a mind of its own.

Underworld

Underworld is to Cyberpunk what the Third World is to the United States. Where most cyberpunk worlds immediately evoke a futuristic metropolis, Underworld is the hellhole where the cheap labour is found. Same world; different focus. This is not the place to find the existential angst of a hard-bitten ex-cop or the messianic fantasy of an awakened *über*-hacker. Underworld is a dusty mirror of the world "above" that has created and maintains it. The needs of the wealthy demand the existence of Underworld.

Underworld is a closed community, where drones toil endlessly for the corporate masters. Their lives in the factories an unending hell, yet life on the street is nasty, brutish, and short. Mafia, Yakuza, gangs, and strange societies divvy up the territory, each trying to survive another day.

IOSHI

Individually Organised Science and Hobby Index. The development of human knowledge is strictly limited by the sophistication of the techniques used to organise and convey that knowledge. IOSHI (a.k.a. "the well") conveys knowledge in the traditional fashion: datajacked into a two-level personal library stored on a chip in one's brain. It serves as a significant boon to anyone who can afford personal or professional access. With a solid grasp of the state of the art, those who have learned from the well are just plain better.

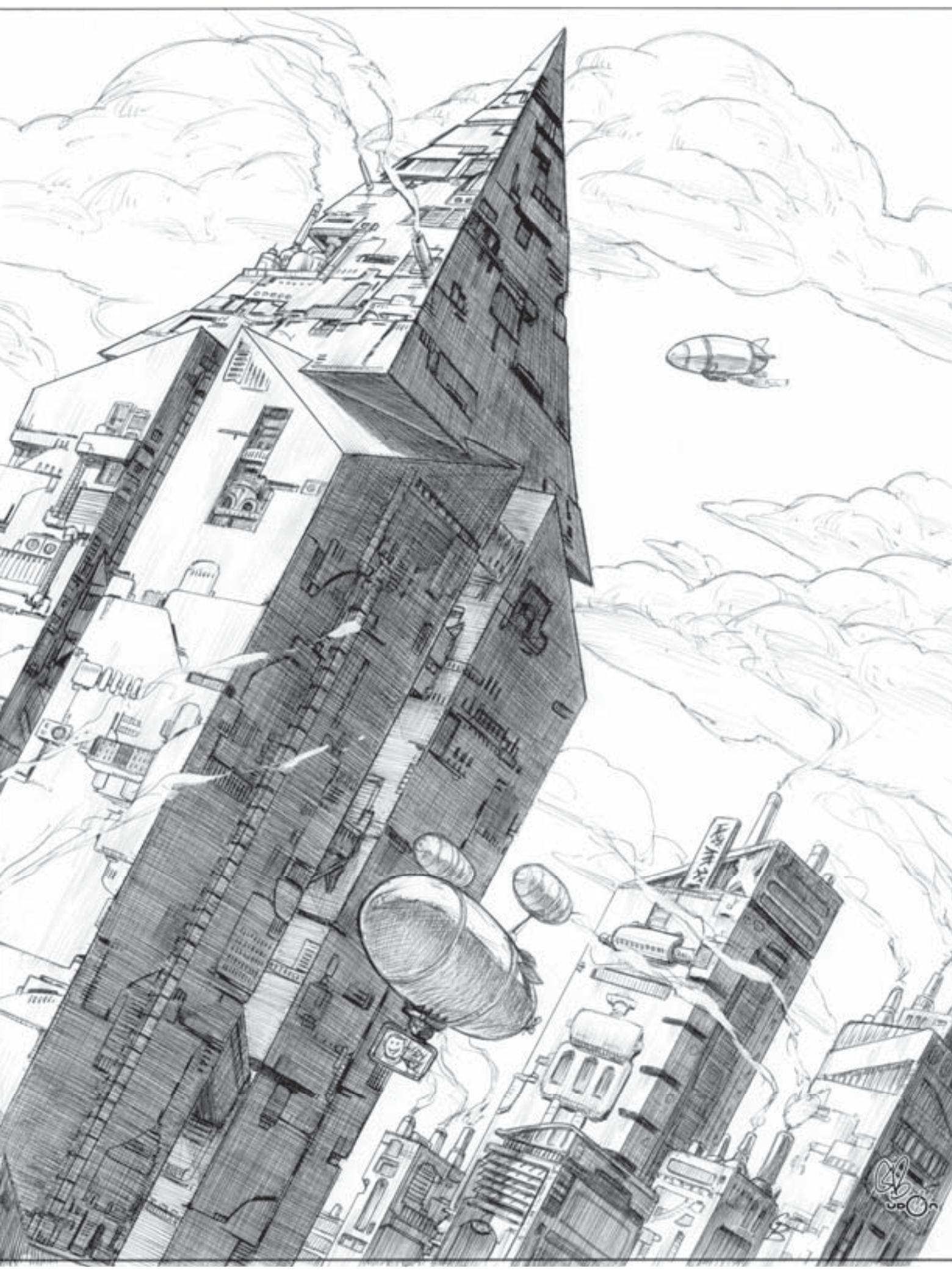
IOSHI is a patented technology. Getting to the state of the art isn't just a matter of money; it's a matter of legal entanglement. By the time you've dragged yourself permanently out of the ghetto, the corporate power structure owns you — usually a few hundred corporations own very small pieces of you, to be more precise.

Daedalus

In a sort of 90-minutes-from-reality future, things haven't gone so well. The shadow government set up to free us from the fear of total federal collapse in case of a terrorist strike has instead become the real power in the world. Their think-tank of the brightest minds of the time is Daedalus. Now free from the checks and balances that keep more available agencies from overstepping themselves, Daedalus has taken over. The new government is devoted to the protection and welfare of the political and socio-economic state, no matter the cost.

It's a happy place, where everyone is chipped and tracked; the watchers are scattered through the community, from local businesses, to church-group leaders, to the Regional Patrols ... all the way up to the Department of National Security. But sometimes the programming crashes, and you are left alone in your mind.


THE WORLD IS
OURS.
OMNICO



The Edge of Forever

We are in liminal space, firmly on the edge of science fiction, cyberspace, and a new millennium. We have stepped past the threshold, and there is no going back. The first generation of cyberpunk authors — William Gibson, Bruce Sterling, Philip K. Dick, John Shirley, K.W. Jeter, Walter Jon Williams, Michael Swanwick, and so many more — have not been fully explored. The second generation of authors, like Neal Stephenson, Masumune Shirow, Katsuhiro Otomo, Iain Banks, Ken MacLeod, and Cory Doctorow have developed those ideas in the literary sphere, but again they have barely been touched by game designers. Finally, the newest movement (post-cyberpunk, or post-post cyberpunk?) has moved beyond the realm of prose into exciting "new" arenas — Warren Ellis and Grant Morrison's comic work, film adaptations of Philip K. Dick, and the Wachowskis' film work, just to name a few. It's time to bring these ideas back to the gaming table.

Ex Machina. "Out of the machine." What comes out of the barrel of the gun, out of the factory production line? Everything. Power, tools, toys, the means to kill and cure, the lies that bind us and the truth that sets us free, the records of the past and the instruments we use to chart to the future. We are all out of the machine.

Ex Machina: Cyberpunk Role-Playing

The dark streets of the near future are home to street samurai, gangers, hackers, and all types of counter-culture riffraff. Country-owning megacorps, embittered police forces, and powerful syndicates employ them as deniable assets in a world of rapid technological evolution — their survival and success is almost literally derived out of the machine....

What is Role-Playing?

Role-playing games are tools for your imagination. They are designed to let you play out exciting stories of interest to you and your friends, and they provide structure and rules so that there are fewer conflicts and a framework within which to place the action of those stories.

As the name suggests, participants in a role-playing game (RPG) play roles. They take the roles of the principal characters in an exciting adventure story, pretending to be those characters just as an actor pretends to be the person he or she plays in a movie. Unlike a movie, though, the actions of the characters are not acted out. Rather, the action is imagined by the players and described to the other participants. You don't actually pretend to shoot a gun at someone, for example. You describe that action, saying something to the effect of "my character opens fire on the enemy."

Role-playing games have rules that dictate what the character can and cannot do. Every character in the game is defined by a set of statistics and numbers that ordain how talented he or she is at any given action. Rules mechanics then help determine whether an action was successful. The *Ex Machina* role-playing game uses a pair of eight-sided dice as a randomiser to resolve actions and conflicts. Players roll the dice to see if their characters' actions are successful or not. If their actions succeeds, whatever the characters were trying to accomplish happens. If the roll fails, something goes wrong. In either case, the results of the attempted action are described by a special player called the Game Master (GM). The GM's job is to act as rules arbiter and describe the action to the players. He or she also handles playing other characters in the game — usually the antagonists, but sometimes friends of the players' characters — and sets the environment in which the characters exist.

The object of a role-playing game is not to defeat the other players as you would in a game of cards or a board game, though. Instead, you are working to collectively tell a story about the principal characters of the game, the Player Characters. The Player Characters are the protagonists of this story, and each player is a sort of screenwriter who contributes to the plot by determining the actions of his or her character. The rules of the game exist to give you a means of resolving actions and settling conflicts, and your imagination drives the story forward. In that way, role-playing games are a kind of formalised make-believe.

Your game may include two, three, or even more players in addition to the GM. Role-playing games are typically played for about two to six hours — about the time it takes to sit down with friends to play for an evening. This amount of time is called a "session," and the game can either end at the end of the session, or it can continue by stopping play for the evening and then meeting for another session at another time. Many people who play RPGs meet with their friends to do so at a regular time on a weekly basis. A session can contain an entire story or only part of one. Stories that span several sessions are referred to as "campaigns." A campaign is similar to a television series, and each session is like a weekly episode of the show. The players get together, play for a few hours advancing the story, and then they stop. At the next session, the action picks up where it left off from the previous session. Campaigns can last anywhere from weeks to years depending on the interest and dedication of the players.

• Tri-Stat dX Family •

Ex Machina is part of the growing *Tri-Stat dX* family of games. This book includes all the rules you need for a d8 cyberpunk RPG, but if you wish to go beyond the genre – for example, adding magic or super powers – or customise your game for different power levels or dice types, take a look at the *Tri-Stat dX: Core Role-Playing Game System*. This is a toolkit for creating and playing role-playing games in any genre, theme, mood, time period, or power level. It is available as either an inexpensive 96-page book or a free download. To learn more about the *Tri-Stat dX* system or to download the *Tri-Stat dX: Core Role-Playing Game System* rules visit our company at http://www.guardiansorder.com.

Dice and Notations

The *Tri-Stat dX* system of games uses polyhedral (multi-sided) dice during game play, though usually only a single die type for a particular power level of game. The number of faces on each die, also called the "game dice" is an indication of the power level.

Ex Machina is a posthuman power level game in which it is likely that many of the heroes and villains will have more than human abilities. It uses eight-sided dice. When you need to generate a random number with a dice roll, always roll two eight-sided dice, abbreviated 2d8. The values showing on each die after the roll are added together to generate a random number between 2 and 16. If your roll of 2d8 generates a 4 on one die and a 6 on another, for instance, the final result is 10.

GMs with *Tri-Stat dX* should feel free to adapt *Ex Machina* to other game dice if it better suits their style of play.

Chapter 2: Character Creation Basics

The design of a new character for the *Ex Machina* Role-Playing Game should involve a thoughtful collaboration between the player and the GM. Your objective is to create a character who is fun to play, has plenty of reason to undertake adventures, and who fits into the GM's campaign. In *Ex Machina*, you can choose to spend as little as ten minutes or upwards of an hour designing a character. The difference lies in the amount of detail and individuality given to your character. At no time during an RPG campaign do you have more control over the destiny of your character than during the creation process. If you have any questions about game mechanics or specific character abilities, talk to the GM before you begin character creation.

Step 1: GM Discussion

Talk to the GM about the nature of the upcoming game. Issues that should be addressed include the duration of the game, scheduled playtime, the setting and related timeline, and the thematic intensity level. Based on this, the GM should set the power level of the campaign, which will determine the number of Character Points that you may use to design you character and game dice (typically 2d8). See page 15.

The abilities of characters in *Ex Machina* are specified by assigning them Stats (a broad rating of the character's physical, mental, and spiritual abilities), Attributes (more specific abilities that distinguish the character from the norm, which may represent everything from owning high tech gear to being a cyborg with superhuman speed), Skills (like knowing how to hack into a computer or fly a helicopter), and Defects (such as being wanted by the Mafia or missing an arm). All of these cost (or in the case of Defects, give back) Character Points.

Step 2: Character Outline

Use the game boundaries established through your talk with the GM to sketch a rough character outline. See page 16.

Step 3: Assign Stats

Use Character Points to give your character Body, Mind, and Soul Stats, or to modify the Stats in your template (see Step 4), making sure each Stat is not lower than 1 nor higher 16. See page 16.

Step 4: Pick Templates (Optional)

You may choose to use Character Points to buy your character one or more templates. These are pre-designed sets of Stats, Attributes, Skills, and Defects (see below) associated with genre archetypes (such as Street Punk or Hacker), cybernetic or biotech enhancement, or even nonhuman origin. Templates are a quick and easy way to create a character that fits into the cyberpunk genre.

Step 5: Select Attributes

Any remaining Character Points not used to buy templates may be used to acquire Attributes, which are rated in Levels from 1 to 8 (although some may be lower or higher in certain instances). You may also modify the Attributes in any templates you acquired, although this may require GM permission. See page 40.

Step 6: Select Skills and Specialisations

If you did not select an occupational template, your character receives a number of starting Skill Points, plus additional Points if you assigned the Highly Skilled Attribute or fewer if you will assign the Unskilled Defect (Step 7). If you chose an occupational template, the majority of your Skills have been selected for you, but you will need to choose their Specialisations. Skill Levels normally range from 1 to 4. See page 69.

Step 7: Select Defects

You are encouraged to take Defects appropriate to your character outline. If you chose any templates, some Defects will be included in them, but you may add to them if you wish. Defects will provide you with more role-playing opportunities and give you Bonus Points you can use just like other Character Points to raise Stats, acquire additional Character Attributes, or pay for further templates. See page 76.

Step 8: Calculate Derived Values

After you have modified your character's Stats through any templates, Attributes, and Defects that affect them, you can calculate his or her derived values — Combat Value (both Attack and Defence), Health Points, and Shock Value. See page 84.

Step 9: Earn Background Points

You can earn 1 to 4 extra Character Points by giving the GM a background history of your character, an important character story, or a character drawing. See page 84.

GM Discussion (Step 1)

You and the other players should discuss the nature of the upcoming game with the GM. Before any characters are created, the GM should outline such details as genre, setting, campaign duration, story boundaries, and expected time commitment. As a player, you should listen closely to the GM's descriptions since it will directly influence the character you wish to create.

Ask for clarification of any rule modifications the GM plans to use as well as any background restrictions on your character. If you have any game preferences involving issues such as combat intensity, maturity level, or drama versus comedy ratio, let the GM know about them. Help the GM create the game that you all want to play.

Players should also discuss the technological basis of the setting with the GM, along with what human or posthuman technologies are allowed for their characters before they begin work on their Character Outline. The GM may wish to restrict nonhuman or part-human characters to an approved list of templates. These may be unique to his or her setting or selected from those presented throughout *Ex Machina*.

One of the most important things that the Game Master should discuss with his or her players is the power level of the game, which determines the Character Point total. Character Points are a measure of the relative capability of characters. The power level of the game will determine how many Character Points are available to each player, though non-player characters (NPCs) may be given widely varying Character Point totals depending on their roles in the game.

Ex Machina games use two eight-sided dice for all rolls. The GM may wish to scale the power level of the game up or down, however. For advice on doing so, see *Tri-Stat dX*.

The suggested Power Level of a cyberpunk game is "posthuman" with a starting Character Point total for player characters that ranges from 75 to 125 Points. This will allow players to create highly competent adventurers similar to the protagonists of cyberpunk literature and film.

75 to 90 Points

This is recommended for average-powered games, in which most characters will have few or no cybernetics, and in which powerful nonhuman characters are rare. This is typical of many cyberpunk stories for the protagonists to possess only minor modifications, or none at all. A typical mix is about 30-50 Points in Stats, 10-20 Points spent on occupational templates (page 18) or mundane Attributes (see page 40) and 0-30 Points in ware or species templates (page 26 or 36) or Special Attributes (see page 40).

91 to 110 points

This is suggested for games in which it's possible to start with a very competent individual who also has cybernetics or other expensive Attributes (such as high-level Agents or Organisational Ties). A balanced mix is 35-55 Points in Stats, 10-25 Points spent on occupational templates or mundane Attributes and 10-40 Points in ware or species templates or Special Attributes.

111 to 125 Points

This is recommended for very high powered games where the protagonists can be both incredibly capable and possess many cybernetic modifications, or where they will be high-level movers-and-shakers. This is an appropriate range for powerful posthuman characters, such as full cyborgs. A balanced mix is 40-60 Points in Stats, 10-30 Points spent on mundane Attributes and/or an Occupational template, and 20-50 Points in ware or species templates or Special Attributes.

Non-Player Characters

These can be built on any Character Point total. For play balance, player characters should be superior to run-of-the-mill opposition: about 25-50 Character Points is suitable for a typical, minor league opponent, but major enemies may be built on as many or more Points as a starting character.

Character Outline (Step 2)

A character outline is a broad concept that provides you with a frame on which to build your character. It is not fully detailed; there is no need for you to concern yourself with the character's specific skills, powers, or background details at this stage. Use the game boundaries established in your discussion with the GM as the starting point for your character and build your outline on that foundation. Discuss your character ideas with the GM to ensure your character will work with those of the other players and with the overall themes and focus of the campaign. You may wish to examine the occupational templates in Chapter 3 and consider basing your character on one of these genre archetypes, whether or not you actually plan to use one of these templates.

Some other things to consider:

Is the character human?

In many cyberpunk settings, non-human or part-human characters may exist. Examples include: androids, total cyborgs, intelligent computers, genetic constructs (clones, genetically-enhanced people, or human-animal hybrids), and robots. You may wish to examine the species templates in Step 4 and consider selecting one of them. Consult with your GM: some GMs may require that all characters be human, or limited to a particular set of species templates.

What are the character's strengths?

In some campaigns, the players may want to create complementary characters with distinct sets of abilities. A degree of specialisation helps players enjoy their characters by giving them a unique identity. At the same time, it is equally important that the characters are not too specialised, or the group will lack cohesion and other players will sit around bored while each specialist has his or her own little adventure within the game. Again, the occupational templates in Chapter 3 may be of help in selecting appropriate roles with distinct abilities.

What are the character's weaknesses?

Game characters may be larger than life — figures of myth and legend — but usually still have weaknesses. Is the character addicted to stimulants? Does it take a while for the character's powers to activate or can they be negated by some special substance? Does the character have an Achilles Heel? Does the character struggle with an addiction? Providing weaknesses to a character adds greater depth and potential for role-playing.

What helps define the character?

You should decide on the character's age and sex, determine a broad archetype for his or her personality, and sketch an idea of ethnic and social background. On the other hand, it is equally important that a character have room to grow beyond your initial concept. A character that you have spent hours perfecting and detailing may quickly become stagnant and uninteresting once play begins. A good character outline usually focuses on one or two main personality traits and leaves plenty of room for you to explore and develop the character into a fully rounded personality over time. Although this personality sketch should be an integral part of the character, it should not rule all of his or her actions. At some point during the game, your pacifistic martial artist may be driven to an act of vengeance, or your angst-ridden vigilante may finally discover a cause in which to believe. As long as these developments proceed naturally from events in the game, they should be a welcome part of the role-playing experience.

Assign Stats (Step 3)

Stats (or Statistics) are numerical assignments that reflect your character's basic capabilities. Higher Stat values indicate an advanced level of accomplishment or achievement. *Ex Machina* uses three Stats to represent your character's abilities: Body, Mind, and Soul.

Body Stat

This Stat measures the physical aspects of your character. This includes overall health, strength, endurance, quickness, rate of healing, manual dexterity, and ability to withstand trauma. A character with a high Body is in good physical shape.

Mind Stat

The Mind Stat represents a character's mental abilities. High values indicate intelligent, witty, and quick-learning characters.

Soul Stat

The Soul Stat represents luck, willpower, determination, and spirit and can sometimes represent psychic ability, empathy, and unity with nature. A high rating in the Soul Stat helps a character focus his or her personal energies or life force to go beyond his or her normal limits and to fuel special abilities.

Stat Cost

Raising a Stat by one value costs 2 Character Points.

Stat Values

Characters may have Stats in a range of 1 to 16, although the maximum Stat values available to a typical character are more restricted. A value of 4 in a Stat is the adult human average with ratings under 4 indicating decreasing competency and ratings over 4 designating increasing superiority. Although 4 may represent the human average, characters in a role-playing game are often significantly better than average. For more details, see Table 2-1: Stat Value Descriptions. Thus, a person of average build, high intelligence, and above average determination might have Body 4, Mind 7, and Soul 5.

Your starting Character Points are used to purchase Stats. You must decide how many of them you will spend on Stats and then divide these Points among the character's Body, Mind, and Soul. At least 2 Character Points must be assigned to each Stat.

GMs are encouraged to require a solid character concept before allowing Stats values to exceed the "Talent Threshold," since these represent values beyond typical capacity for characters of a specific power level. Stats should not normally exceed the Maximum Value.

In *Ex Machina*, the Talent Threshold is 10 with a Maximum Value of 16. Stats of 11-16 are best justified by the character being exceptional in some way, usually via the selection of appropriate templates (such as being an android or genetically-engineered superhuman) that provide Stat bonuses. The GM may wish to restricts Stats of 12 or more to characters taking species or ware templates that provide Stat bonuses.

Otherwise, it is up to you to decide how many Character Points you will use for Stats and what each Stat's value will be. Any Character Points not spent on Stats will be used to acquire various useful talents and abilities called Attributes (page 40). The GM may set an absolute ceiling or floor on the number of Character Points that can be allocated to Stats to ensure characters have a balance between Stats and Attributes.

Less Capable [Stat] Defect

With only three Stats, *Ex Machina* is obviously slanted towards well-rounded, balanced characters. But what if your character is weak in a particular area of a Stat? For example, your character might be strong, healthy, and durable, but not dextrous. Similarly, he or she could be intelligent and witty, but forgetful, or strong-willed and composed, but unlucky. On page 79, you will find the Less Capable [Stat] Defect, which was designed specifically to further divide the Stats. Although you do not normally assign Defects until Step 6, become familiar with Less Capable [Stat] at this point if you need to define your character with more precision.

Table 2-1: Stat Value Descriptions

Stat Value	Description
1	Inept; infant
2	Significantly below adult human average; child
3	Below adult human average; teenager
4	Adult human average
5	Above adult human average
6	Significantly above human average
7	Highly capable
8	Extremely capable
9	Best in the region
10	Best in the country
11	World-class ability
12	Maximum human potential
13	Above human achievement
14	Significantly above human achievement
15	Moderately powerful superhuman ability
16	Powerful superhuman ability

Stat Modifications via Templates

Some templates (see Step 4) provide a bonus or penalty to Stats. The cost of this is included in the template's cost. If the modifier would increase a Stat above 16, cap that Stat at 16, and reduce the cost of the template accordingly. The same is true if the modifier would reduce the Stat to 0 or less: cap the Stat at 1, and increase the template's cost to make up for it.

Chapter 3: Pick Templates (Step 4)

Templates are sets of ready-to-use archetypes and abilities. Three types of templates are presented in this chapter: occupational, species, and ware templates. All of them have a listed Character Point cost.

- Occupational Templates are archetypal roles such as "hacker" or "street punk." They grant a set of Stat modifiers, Attributes, Skills, and Defects. Most of them cost 10 or 15 Character Points. You may choose to give your character a single occupational template.
- Species Templates are posthuman "races" such as an android or a genetically engineered human. They provide a set of Stat Modifiers, Attributes, and Defects suitable for a posthuman entity. Select a Species Template if your character will be a posthuman entity, and use some of your remaining Character Points to acquire that template.
- Ware Templates are particular cyberware or bioware modifications, such as a cybernetic arm or a neural jack. They normally incorporate Attributes and/or Defects. Select one or more Ware Templates if your character will start out with cyberware or bioware.

You may have all three types of templates. Nonetheless, templates are completely optional. You can create a character without using them, simply by proceeding to Step 5 (in the next chapter) and selecting Attributes, and then going on to choose Skills and Defects.

Table 3-1: Occupational Template Cost Chart

Template	Character Point Cost	Page
Hacker	10	18
Idol	15	19
Investigator	15	20
Medic	15	20
Street Punk	10	21
Street Samurai	15	21
Suit	15	24
Tech	15	25
Teleoperator	15	25

Occupational Templates

Occupational templates are common cyberpunk archetypes. Each template has a summary description, followed by the archetype's typical role in a group of a cyberpunk adventurers.

Template Cost is the Character Point cost to acquire the template. It is the sum of all Stat, Attribute, and Defect Character Point costs.

LVL shows the Level of the Stat, Attribute, or Skill granted or modified. It is noted as a bonus (or penalty), since these stack with any other Levels the character may possess.

STATS lists the Stat modifiers of the template. For example, if the Template has Body +2, increase your character's Body Stat by 2.

ATTRIBUTES list the Attributes provided. Some Attributes incorporate Restrictions or Reductions. These are special linked Defects that limit or handicap a particular Attribute in some way, but which also reduce its Character Point cost.

SKILLS are the Skills the template provides. Occupational templates include Skills worth a total of 30 Skill Points, +10 Skill Points per Level of the Highly Skilled Attribute or -10 per Level of the Unskilled Defect in the template. Note that Skill Points are different than Character Points and are tracked separately (see Skills, page 69, for a full explanation of Skill Points).

Skills have one or more Specialisations noted in parenthesis. For example, Gun Combat (Pistol) means the character's Gun Combat Skill specialisation is shooting a pistol. "Any" means that any Specialisation appropriate to that Skill must be selected when the template is chosen — for a list of Skills and the Specialisations that may be chosen for each of them, see page 69.

DEFECTS are the Defects with which the template is burdened. GMs and players may to substitute other Defects of equivalent class and value.

Customisation Notes are optional suggestions for adding additional Attributes, Defects, or Skills to the character. Use them in conjunction with Character Creation Steps 5-7.

These templates are only the most common cyberpunk archetypes. Further world-specific Occupational Templates may be found in the cyberpunk settings presented later in this book.

Hacker

Almost everyone in a cyberpunk world can use computers and networks in a rote fashion, but hackers understand how they work on a fundamental level. They are the masters of the virtual world of cyberspace.

• The Hacker • Occupational Template

Hacker Template Template Cost: 10 Points

Stats +1 Mind, +1 Soul

Attributes +1 Gadgeteer (-1 Restriction:Programs and computers), +3 Gadgets (Select any), +2 Heightened Awareness (-1 Restriction: Cyberspace only)

Skills +1 Area Knowledge (Cyberspace), +2 Computers (Pick any two), +1 Forgery (Electronic Documents), +1 Gaming (Computer Games), +1 Street Sense (Pick any), +1 Urban Tracking (Pick any)

Defects -1 Nemesis OR Owned, -1 Phobia (Loss of net access) OR Wanted

Computer hacking is the process of solving problems with available computing resources. Hacking is a wide-open field, and includes everyone from the corporate programmer coding security features for the company's network, to the 16-year-old messing with the guts of an old computer, to the wizkid system cracker trying to foil the corp programmer.

A great deal of information exists in secure online repositories. This includes valuable secrets and vital operational data for various businesses and organisations. A hacker's ability to ferret out, sabotage, or protect this data adds a significant weapon to any group's arsenal. They may even be able to interface their brain directly with a computer system, allowing them to manipulate data and programs at superhuman speeds.

Hackers typically face online threats rather than physical ones, but their action scenes should regularly interweave with the group's whenever possible. GMs should avoid cases where a hacker's adventure is essentially independent from the rest of the group. One way to do this is to impose a rule of geographic proximity: the deck mechanism the hacker uses, or perhaps the hacker's online avatar, must stay close to the group on joint missions. Hackers can provide valuable support functions if the group physically invades a secure area. Most security in information age societies relies heavily on computer-managed automation. The relevant computers often have a network connection, however circuitous, to the outside world. Hackers can deactivate or limit some of the obstacles that face the group when it seeks to penetrate such security.

Customisation Notes

- If the GM is using the iconic cyberspace rules (page 142), take 1-3 Levels of Alternate Form (Partial-Powered Form) to represent the hacker's cyberspace avatar. See the sample avatar (page 143) for an example.
- Ace hackers may have Wealth and the Famous (or Wanted) Defects.
- Hackers will often be hired by a powerful corporation. They may have 1-2 Levels of Organisational Ties and, sometimes, the Owned Defect.
- Every hacker should have a customised state-of-the-art wearable or notebook computer with a suite of cutting-edge (possibly illegal) programs for cyberspace operations. A unique prototype computer might even be an Item of Power.
- Some hackers have trouble relating to people. Take Less Capable Soul (Charisma or Empathy) Defect for a classic "nerd."
- Hackers often have neural jack cyberware (page 27) and com implants (page 27).
- Some hackers may have one or more autonomous or A.I. programs as Agents, Henchmen, or Servants; a hacker might even be an A.I. See A.I.s, page 128. An A.I. can also be a powerful Nemesis.

Idol

The idol is a celebrity, or hopes to become one. He or she may be an actor, a rock star, a sensory interface star (see Sensory Interface, page 29), news announcer, sports star, or even a politician. In cyberpunk worlds, some celebrities have reached their status through natural talent, originality, or hard work ... but many others are the disposable "products" of media conglomerates, with their images and even their bodies shaped by the company that owns their contract. Becoming a star may also require more invasive modifications — not merely a sculpted body, but also camera eyes or a neural interface rigged for full-sensory recording. Some stars are not even human: an artificial intelligence might be a "virtual idol."

An idol's main advantage is his or her contacts, possible wealth, and potentially a network of fans that can provide help or useful information in an emergency. This is a double-edged sword, however, since the idol may become a valuable commodity that the competition wishes to steal or eliminate, be targeted by obsessed fans, or, if the idol takes a stand against the corporate-political complex, become a liability for powerful establishment interests. The stress of being an idol can also sometimes lead to other problems, such as overindulgences and inevitable addictions.

• THE IDOL •
Occupational Template

Idol Template Template Cost: 15 Points

Stats +2 Soul

Attributes +1 Agent (Bodyguard or manager), +1 Divine Relationship, +1 Features (Appearance: cuteness or good looks), +1 Gadgets, +2 Organisational Ties (Moderate), +1 Wealth

Skills +1 Disguise (Cosmetics OR Makeup), +2 Etiquette (Pick any), +3 Performing Arts (Pick any), +1 Seduction (Pick any), +1 Urban Tracking (Corporate)

Defects -1 Famous, -1 Nemesis OR Owned (Managers or Handlers), -1 Unskilled

Customisation Notes

- The Agent is a bodyguard or very protective manager. It can easily be omitted or scaled down to Henchmen; if omitted, the template is worth only 10 Points.
- Politicians will have extra Levels of Organisational Ties (perhaps at a higher Point Cost/Level too). They may also have Law (International or Political) or Social Sciences (Politics), though many cyberpunk politicians are simply media stars or talking heads run by behind-the-scenes managers.
- Rock stars and other idols that worked their way up from the street music scene may have Combat Skills, Area Knowledge, Street Sense, and possibly Intimidation.
- Sports stars substitute +2 Body for +2 Soul and replace some or all Levels of Performing Arts with Skills like Acrobatics, Powerlifting, Swimming, or Sports.
- Successful idols may have extra Levels of Wealth, Famous, or Owned.
- Idols with drug or other addictions will have Special Requirement.

Investigator

The investigator is the heir to the noir tradition that lies at cyberpunk's roots. Investigators include police detectives, journalists, private investigators, government intelligence, security service agents, "fixers," and corporate security specialists. They are specialists in finding missing things, whether persons or items, and in solving mysteries.

Some investigators are hunters who specialise in tracking down fugitives; they may be ordinary bounty hunters, or they may be after runaway robots, transgenics, or androids. A subtype of investigator is the "information broker" who collects, buys, and sells data, but does not actually use it (except possibly for a bit of discrete blackmail).

The most important skill of a good investigator is getting people to talk and open up. In addition to a talent for information gathering and puzzle solving, good investigators tend to be physically and mentally tough, since they often face physical threats or intimidation at the hands of thugs sending them a message to "get off the case." Knowing when to duck also helps, but sometimes an investigator just has to fight.

Investigators usually work well in a team with friends of other occupations — knowing a skilled hacker or tough street samurai can be especially handy. A successful investigator will also have various contacts (with local police, a news agency, or someone he or she has helped in the past).

• The Investigator • Occupational Template

Investigator Template Template Cost: 15 Points

Stats +1 Mind, +1 Soul

Attributes +1 Combat Technique (Concealment OR Judge Opponent), +2 Gadgets, +1 Heightened Awareness, +3 Highly Skilled, +2 Organisational Ties (Moderate), +1 Tough

Skills +1 Area Knowledge (City), +1 Computers (Databases, Networks), +1 Driving (Automobile OR Motorcycle), +2 Interrogation (Pick any), +1 Stealth (Pick any), +1 Street Sense (Pick any two), +2 Urban Tracking (Pick any), +1 Gun Combat (Pistol), +1 Ranged Defence (Personal), +1 Unarmed Attack OR Unarmed Defence (Pick any)

Defects -1 Marked OR Nemesis, -1 Red Tape OR Recurring Nightmares

Customisation Notes

- Organisational Ties may be with a detective agency, police force, or even a corporation. Even if the character is not a member, he or she may have valuable contacts, such as the crime reporter who knows several police officers or mob figures, or the private eye who is an ex-cop.
- Journalists may trade in Gun Combat for appropriate Levels of Writing or Visual Arts (Photography or Video).
- Investigators working in technical fields such as criminal forensics or environmental protection may have the Biological, Physical, or Police Sciences Skill.

Medic

In the past, medics healed flesh, bones, and organs and helped the body fight off micro-organisms. Today, people's bodies contain computer chips and electromechanical parts; invading micro-organisms are sometimes designer plagues or tiny machines in their own right. A healer must become part doctor, part bio-engineer, and part mechanic.

Depending on the setting and the character, medics may possess the training and license to run a medical office, perform cybernetic and biotech procedures, and prescribe medication. Medics must have a steady hand, stolid determination, excellent composure, and an agile mind.

A medic also needs guts. In dark, run-down cities beset by gang wars, out-of-control crime, and ethnic strife, paramedics and emergency medical technicians must sometimes make their way through free-fire zones to reach the wounded. The situation is sometimes so bad that medical responses may only be available to those with top-line insurance policies, who can afford a gung-ho "combat medic" willing to brave any situation.

Those medics who are still willing to respond to a call for help — regardless of their client's ability to pay — are often local heroes, respected by almost everyone in the neighbourhood. These hazards pale, however, compared to the risk faced by medics who specialise in biohazard threats, in a world where "natural" hazards like SARS or Ebola are augmented by scores of designer plagues that have escaped from labs or been deliberately released. A punctured suit in an infected "hot zone" could mean lingering death.

• The Medic • Occupational Template

Medic Template Template Cost: 15 Points

Stats +2 Mind, +1 Soul

Attributes +1 Gadgeteer (-1 Restriction: Drugs or implants only), +3 Gadgets, +1 Henchmen (Nurse or medical robot) OR Divine Relationship, +1 Highly Skilled, +2 Organisational Ties (Moderate; Clinic or medical license)

Skills +2 Biological Sciences (Pick any), +1 Electronics (Cybernetics), +3 Medical (Pick any two), +1 Poisons (Synthetic), +1 Social Sciences (Psychology), +1 Street Sense (Influential Persons), +1 Ranged Defence (Personal)

Defects -1 Marked OR Significant Other, -1 Red Tape OR Skeleton in the Closet

There are also so-called "street docs" — individuals who perform black market, unlicensed, and often experimental medical practices. Some of these are simply doctors practising without a license or dispensing black-market medical supplies. Others are engaged in the cutting edge of illegal bio-cybernetic activity, providing no-questions-asked medical services, bio-weapons, and cybernetic implant operations to street samurai, criminals, and other outlaws. The most notorious of the street docs are "organleggers" — criminals who trade in stolen organs and salvaged cybernetics (sometimes ripped from the bodies of victims) for those who cannot or will not acquire legitimate replacements.

Customisation Notes

- Medics often have no cybernetics at all, but implanted Gadgets can be useful (such as drug dispensers, tools from a field medical kit, etc. — see page 49).
- Prosperous medics may have a customised van, air van, or helicopter outfitted as an ambulance or mobile lab (acquired as Gadgets).
- A medic may take the Item of Power Attribute to gain access to incredibly sophisticated medical technology such as a nanodoc (page 112) or metamorphosis tank (page 112).

Street Punk

Street punks can be street or cycle gang members, bike or skateboard messengers, homeless runaways, street hustlers, petty criminals, and wannabe hackers, samurai, or celebrities. Many are teenagers. Street punks can be surprisingly technologically sophisticated, making use of the latest (often stolen or black market) devices or implants in unexpected ways.

Street Punks are not necessarily poor — especially if they are involved in dealing black market substances like stolen software, cybernetics, or drugs — but they are often living on the edge. They are frequently caught between rival gangs, organised crime, and the police, lacking the protection that crime syndicate members or legitimate citizens enjoy. No one cares if they live or die, and their short, desperate lives are often casually snuffed out without anyone noticing. They're just another statistic on the street.

They sometimes get involved in high-powered situations by accident. The package they were supposed to deliver or the item they casually pick pocketed turns out to be far more valuable than they thought, and now they know too much. They may start out as pawns, but can sometimes use the wits that kept them alive on the streets to seize the opportunity to promote themselves into knights.

Customisation Notes

- Bicycle messengers or skatepunks (who may also be couriers) will have Sports (Bicycling OR Skateboarding) +2 (4 Skill Points).
- Gang members would have Organisational Ties, and possibly Attack Combat Mastery and Gun Combat. Cycle gang members may have Driving (Motorcycle).
- Prostitutes or strippers would have Seduction and/or Performing Arts (Dance).
- Members of immigrant minority groups may have Languages +1.
- Street punks are often wannabe, student, or teenage versions of the other archetypes. A wannabe hacker would have Computers +1 and Gaming +1, an apprentice Tech would have Electronics or Mechanics +1, an up-and-coming idol would have Performing Arts (Music) or Sports, and so on.

Street Samurai

Street samurai dedicate themselves to the art of personal combat. A few take this to a higher level and study large-scale tactics and strategy as well. A classic street samurai adheres to a code of honour and personal discipline. This allows the

• The Street Punk • Occupational Template

Street Punk Template Template Cost: 10 Points

Stats +1 Body, +1 Soul

Attributes +1 Gadgets, +1 Defence Combat Mastery, +2 Divine Relationship, +1 Heightened Awareness, +1 Highly Skilled

Skills +1 Area Knowledge (City), +1 Burglary (Pick any two), +1 Intimidation (Street), +1 Performing Arts (Fast Talking), +1 Sleight of Hand (Pick Pocketing), +1 Street Sense (Pick any), +2 Urban Tracking (Underworld), +1 Melee Attack OR Melee Defence (Pick any), +1 Unarmed Attack OR Unarmed Defence (Pick any)

Defects -1 Ism (Youth, minority group, or criminal record), -1 Nemesis

• The Street Samurai • Occupational Template

Street Samurai Template Template Cost: 15 Points

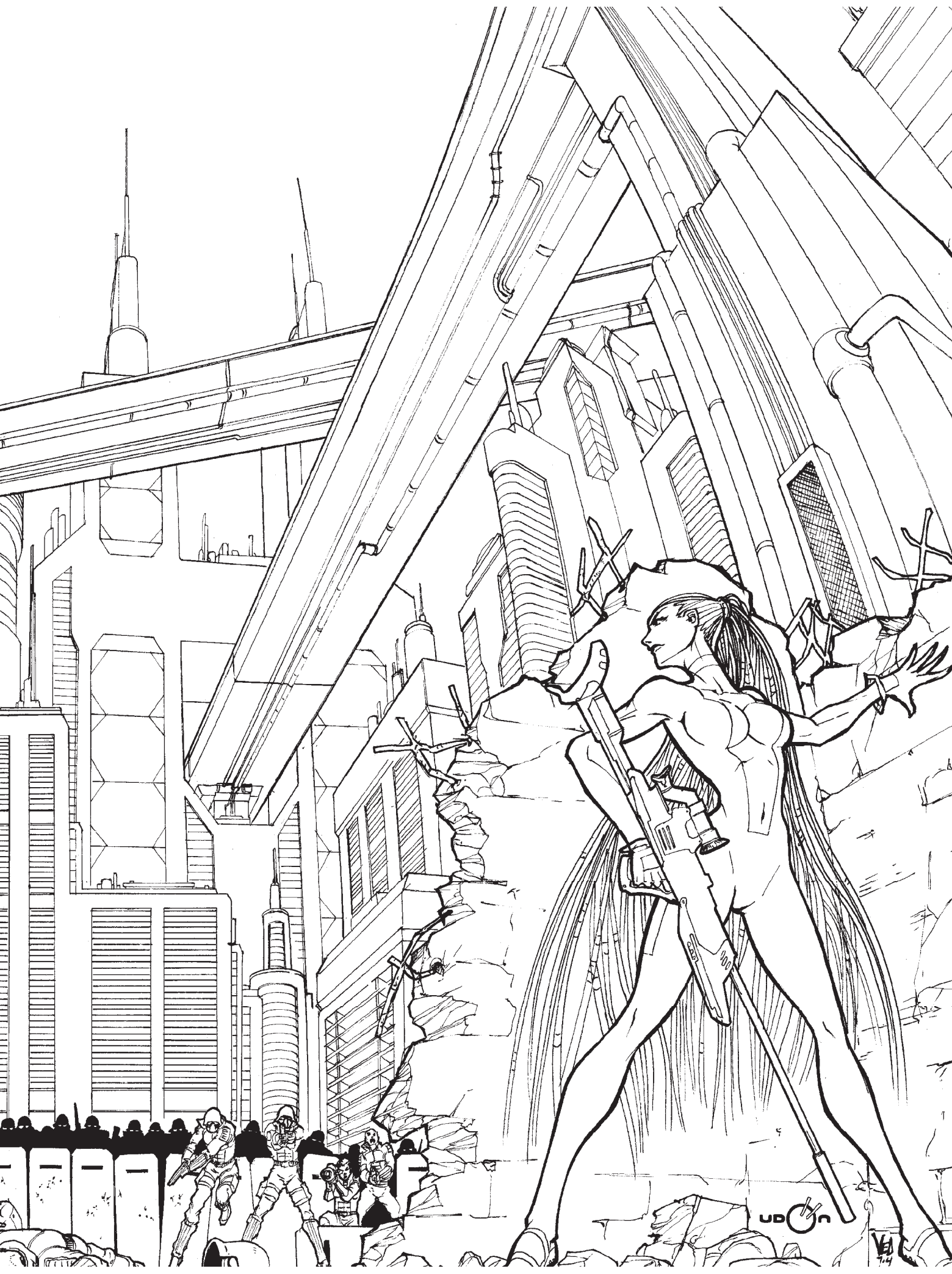
Stats +2 Body

Attributes +1 Attack Combat Mastery, +2 Combat Technique (Pick two), +2 Gadgets, +1 Heightened Awareness, +1 Massive Damage (One preferred attack), +3 Highly Skilled

Skills +1 Acrobatics (Pick any), +1 Intimidation (Pick any), +1 Military Sciences (Pick any), +1 Stealth (Pick any), +1 Urban Tracking (Pick any), +2 Gun Combat (Pick any), +2 Ranged Defence (Personal), +1 Unarmed Attack (Pick any), +1 Unarmed Defence (Pick any)

Defects -2 Marked OR Wanted OR Significant Other, -2 Nemesis OR Owned





character to immerse him or herself in gritty, horrible violence while retaining a sense of humanity. Some street samurai lack honour, while others prefer achieving tactical objectives to killing their foes — but both bloody, messy violence and the underlying sympathetic nature of the participants have an important place in the cyberpunk genre.

To prosper on the streets, a samurai must dish out massive damage and survive grievous harm, both with a deadly grace. Combat ability is a street samurai's stock in trade. Most street samurai rely on guns, but an unarmed or melee-oriented martial artist makes a viable street samurai as well. Many places, such as corporate offices or even some bars, will search visitors or patrons to ensure they are disarmed. A street samurai with Unarmed Combat Skill or the ability to wield improvised weapons will not be disadvantaged if violence breaks out.

In a social situation, a street samurai's presence often proves intimidating. This allows the group to ask questions and investigate issues it would otherwise find unsafe to pursue.

Customisation Notes

- Street samurai often accumulate several Points worth of cyberware templates, especially those that provide enhanced speed, combat techniques, or built-in weaponry.
- Street samurai will often have Organisational Ties.
- Street samurai may have Melee Attack and Melee Defence, or even Thrown Weapons, as appropriate.
- Street samurai live and die by the gun (or possibly the sword, the paired knives, or the implanted claws). GMs should allow them to own carefully modified and honed weapons that moderately outclass the armaments typically used by ordinary opponents. Street samurai purchase such weapons as major Gadgets (often with plenty of customisations), Items of Power, or Special Attacks.

Suit

Suits — also called "faces" or "fixers" — are the movers and shakers of a cyberpunk world. They include corporate executives, lawyers, political power brokers, lobbyists, government bureaucrats, Yakuza and Mafia bosses, military staff, intelligence officers, and their middle-management subordinates and troubleshooters. Suits are often distrusted for their establishment ties and professed loyalty to the "Man Upstairs," but their connections and legal training can easily make the difference between a venture's success and failure.

The most important attribute for a suit is Organisational Ties. A suit with this Attribute is not necessarily working for another organisation, but he or she is certainly connected to it.

Many suits are most at home behind a desk. Especially when just starting their career, however, many must venture out into the field or the streets in order to ensure that things get done to their own and — more importantly — their superior's satisfaction. In many instances, a suit is more afraid of the consequences of failure than of the threat of physical danger.

Customisation Notes

- Suits working for security, intelligence, police or criminal organisations will often have an extra Level of Highly Skilled to acquire Skills like Gun Combat (Pistol), Military Sciences (Intelligence Analysis), or Police Sciences (Any).
- Senior suits will usually take two or more Levels of Agents or Henchmen, and additional Levels of Organisational Ties and Wealth.
- Suits working for a research and development company may have a science degree, even if they are now managers; take Computers or Physical Sciences Skill.

• The Suit •
Occupational Template

Suit Template Template Cost: 15 Points

Stats +1 Mind, +1 Soul

Attributes +1 Gadgets (-1 Conditional Ownership), +1 Henchmen (Secretary or bodyguard), +4 Organisational Ties (Significant), +1 Wealth (-1 Restriction: Tied to Organisation),

Skills +1 Etiquette (Pick any), +1 Interrogation (Psychological), +2 Intimidation (Pick any), +1 Languages (Pick any), +1 Law OR Social Sciences (Pick any), +2 Management and Administration (Pick any two), +1 Performing Arts (Fast Talk OR Public Speaking), +1 Urban Tracking (Corporate)

Defects -1 Less Capable (Empathy) OR Nemesis, -1 Owned OR Red Tape

- Different flavours of Suits can be created by modifying the specialities. For example, a District Attorney would have Management and Administration (Government) and Law (Criminal).
- Popular Gadgets include one or more of: sports car or limousine with luxury interior; satellite phone; and tailored body armour. Successful suits will have additional Levels of Gadgets to ensure they have more toys with which to impress people.

Tech

Techs perform chemical, mechanical, and electronic engineering. Most of them thoroughly understand the underlying scientific principles; the rest have an intuitive knack for technology. Typical techs have a solid understanding of information technology and a limited grasp of biotech, but their core focus is machinery.

Techs create solutions. They practice creative, practical engineering, retooling available objects and machines to fit the group's needs and improve its leverage on the world. A tech adjusts the group's resources to apply more readily to a given situation, enabling the characters to overcome any situation or obstacle that does not outright exceed their capabilities. The characters become more resilient and effective in a dozen subtle ways.

Science and technology drive many cyberpunk worlds. A tech serves as the group's interface with the cutting edge. Techs understand the implications and applications of new science and discoveries. True techs must be polymaths, able to appreciate every brand of science and several of the arts. Techs should also have the ability to take care of themselves in dangerous situations; this keeps the group from leaving the tech at home while taking his or her equipment into danger.

• The Tech •
Occupational Template

Tech Template Template Cost: 15 Points

Stats +3 Mind

Attributes +1 Combat Technique (Portable Armoury OR Weapons Encyclopaedia), +1 Gadgeteer, +3 Gadgets, +1 Highly Skilled

Skills +1 Burglary (Hot-Wiring), +1 Computers (Pick any), +1 Demolitions (Pick any), +2 Electronics (Pick any two), +2 Mechanics (Pick any), +1 Gun Combat (Pistol)

Defects -1 Marked OR Nemesis OR Significant Other

Customisation Notes

- Techs usually possess a small arsenal of exotic and useful technological toys, purchased as Gadgets and Items of Power. Attributes commonly encoded into Items of Power include Adaptation, Armour, Environmental Influence, Features, Heightened Senses, Jumping, Natural Weapons, Sensory Block, Special Attack, Superstrength, and (for vehicles) Flight, Land Speed, and Water Speed. In a high-tech game, techs can make limited use of Invisibility.
- Techs occasionally run small businesses such as garages or pawn shops. If so, they will have the Management and Administration (Small Business) Skill.
- Full-fledged scientists can be created using the tech template. Replace Mechanics or Electronics Skill with equivalent Levels of Biological or Physical Sciences.
- A more "realistic" Tech may replace Gadgeteer with +1 Mind or an extra Level of Gadgets.

Teleoperator

Teleoperators ("operators") connect their brains to a vehicle's operating control via a neural interface. This allows them to manoeuvre the vehicle far more quickly and precisely than with mundane controls. Teleoperator specialities include driving a car, truck, or helicopter with inhuman skill as well as control over teleoperated robot drones.

Operators contribute to the group's physical manoeuvrability, in turn increasing the number of locations to which they have access. Having a teleoperator opens up new avenues of approach to and retreat from every situation. Teleoperators give the group a better chance to recover from mistakes, making retreat and assault more time-efficient.

Teleoperators also have the potential to operate remotely. Skilled teleoperators may be able to perform tasks in multiple locations simultaneously. Using a teleoperated robot, a teleoperator can directly and physically intrude into places far too dangerous for the characters themselves. Many of their robots may not be humanoid at all, and serve a variety of purposes, from reconnaissance, to infiltration, to heavy combat. Most "suicide missions" cost teleoperators cash rather than their lives.

Customisation Notes

- Many teleoperators will be more specialised, for example, having only Driving Skill instead of a mix of Boating, Driving, and Piloting.
- Teleoperators are among the character types most likely to have extensive cybernetics, usually to enhance their reflexes and increase their situational awareness. It is not uncommon for them to have lost limbs or other body parts in vehicle accidents or under fire, which they will have replaced with cyberware.
- A teleoperator will often have one or more vehicles, usually bought as Gadgets depending on their power. They will have plenty of vehicle customisations (see page 128) including Teleoperation Link, as well as Armour or Electronic Countermeasures.
- In some settings, an operator may have a customised vehicle built as an Item of Power (page 52).
- Teleoperators buy relatively ordinary robots as mechanical Henchmen, and one or two trademark remote manifestations as mechanical Agents or Servants. See Robots (page 113). They can accompany the group even if the teleoperator is back at base or in a vehicle, ensuring that the teleoperator can participate in non-vehicle-related action scenes. This is less important if the teleoperator has an extremely portable primary vehicle, such as an advanced, lightweight motorcycle reasonably capable of scaling stairs and manoeuvring through building hallways.

• The Teleoperator •
Occupational Template

Teleoperator Template Template Cost: 15 Points

Stats +1 Body

Attributes +1 Combat Technique (Accuracy OR Steady Hand), +4 Gadgets, +2 Highly Skilled, +1 Servant (Variable)

Skills +1 Area Knowledge (Pick any), +1 Boating OR Piloting (Pick any), +1 Computers (Systems Operation), +2 Driving (Pick any two), +1 Mechanics (Automotive OR Aeronautical), +1 Navigation (Pick any), +1 Gun Combat (Pick any), +1 Heavy Weapons (Pick any), +1 Ranged Defence (Pick any two)

Defects -2 Conditional Ownership OR Wanted, -2 Nemesis OR Marked

Ware Templates

If you wish to play a cybernetically or biologically augmented character you may choose to start with one or more Ware Templates. These are collections of Attributes (page 42), many of them modified via PMVs (page 41) or Linked Defects (page 76).

You can acquire one or more Ware Templates for your character by paying the template's listed Final Cost in Character Points. This represents cybernetic or biological modification he or she has undergone before starting play. Any Ware Template you select should fit your character's outline. For example, if you are playing a poverty-stricken street punk, come up with a well-founded reason before giving the character sophisticated ware like a chameleon smartskin. Perhaps he or she was picked up off the streets as an experimental subject, but then escaped.

Since Ware Templates represent technological enhancement, your character may also acquire them in the course of play. This will usually require various in-character activities (such as spending money and undergoing surgery and recovery). See Character Advancement (page 147).

Ware Templates are described in a manner similar to Occupational Templates. Each has a list of one or more Attributes and/or Defects along with the Level. As with Occupational Templates, many Ware Templates include Restrictions or Reductions that limit the Attributes in various ways. The Final Cost is the sum of all Character Point costs. This is the Character Point cost to acquire the Ware Template.

Effects-Based Cyberware

Unlike "power-based" games, Tri-Stat dX is an "effects-based game" – that is to say the Attributes list game effects, and it is up to the player and GM to define how the special effects work in-game. For example, a character with Superstrength could have cyberarms, muscle augmentation, a reinforced skeleton, or even a booster drug. The options are nearly limitless, and the difference between a knock-off cyberarm with Superstrength Level 1 and an Imperial cyberarm with Superstrength Level 2 is as simple as one Level.

Therefore rather than give thousands of redundant examples of cyberware, we have presented a selection of customisable templates. For example, Boosted Reflexes (page 26) can provide any combination of Combat Technique: Lightning Reflexes (up to 3 Levels), Extra Attacks (up to 2 Levels), and Extra Defences (up to 2 Levels). It is up to the player to decide exactly what he or she wants for the character, and pay the appropriate costs. Although this means a little more work in determining the final cost of certain templates, it also gives players the greatest freedom to design the characters they want to play. The templates provide players with guidelines for an acceptable range of Attributes in an *Ex Machina* game.

Cyberware
(Cybernetic Enhancement)

Cybernetic enhancement is the process of replacing human body parts with machinery. The first "cyborgs" were people with clumsy prosthetic limbs and artificial organs aimed at replacing crippled body parts. In the early 21st century, it became possible to directly splice nerves to electronics, permitting cybernetic parts to equal — and eventually exceed — human norms.

Cybernetic enhancements are artificial limbs, organs, chips, and devices that either replace body parts or are implanted into the body. They differ from cybernetic prosthetics (which merely replace a damaged limb or organ) by either enhancing biological functions (such as a stronger arm) or adding new capabilities (such as an implanted computer).

A few examples of cyberware are sufficiently modular as to be classed as minor or major Gadgets. A character may acquire these via the Gadgets Attribute (page 49).

Cheap, Second-Hand, and Discount Cyberware

Defects such as Backblast (page 64), Special Requirement (Extra maintenance or regular battery changes) (page 82), Unappealing (page 83), or Unreliable Power (changes; page 83) may be used to represent the effects of cheap, malfunctioning, obsolete, salvaged, or second-hand cyberware. This will reduce the Character Point cost of the template. Conditional Ownership (page 78) is also appropriate for cyberware that is issued by an agency or which the character is still paying off ... and if people come to repossess it, they may not be too careful in how they remove it.

Neuro-Tech

The real definition of cybernetics is: a branch of science concerned with control systems in electronic and mechanical devices as well as the extent to which useful comparisons can be made between man-made and biological systems. This is what neuro-tech is concerned with — the interface between man and machine, between software and the brain's natural "wetware."

Boosted Reflexes

The user's nervous system is enhanced to allow faster processing of nerve signals. Techniques may range from implanting artificial glands that ramp up controlled production of neurotransmitters to using tailored viruses or medical nanomachines to modify nerve coatings. This can provide one or more of the following Attributes:

Attributes

1-3 Combat Technique (Lightning Reflexes), 1-2 Extra Attacks, 1-2 Extra Defences

Final Cost: Sum of all costs; see Attribute descriptions.

Neural Jack

This is a small computer system that is implanted in the user's brain. It translates the electrochemical activity ("thought") of a living brain into digital signals, and vice versa. This allows the brain to interface directly with a computer or other electronic device that has been fitted with a Neural Interface Adapter (page 109).

Early prototype neural jacks enabled paralysed individuals to (slowly) input commands into an interface-equipped computer. Mature systems permit faster hands-free access to information, and allow virtual reality to be a "full sensory" total experience.

These benefits come at a price: the user's mind becomes vulnerable to certain types of dangerous feedback. Safeguards exist that are supposed to prevent this, but these can be bypassed by skilled hackers or special programs, or disabled in order to give the user an edge at the expense of increased risk.

A neural jack will have one or more sockets into which connections or other hardware can be plugged. In some settings, the sockets must be installed on the skull or possibly near the base of the spine. In others, the technology allows them to be hidden anywhere on the body. Sockets usually can be easily concealed (by hair, makeup, or a flap of false skin); depending on the culture, it may be either stylish or gauche to expose them. A neural jack has no utility on its own. It requires additional firmware upgrades (see Neural Buffer, page 29) or Gadgets (see Wetware Plugs, page 27, and Neural Interface Adaptors) in order to function.

Attributes

2 Features (Neural Jack, Socket Interface; -1 Bane: Neural feedback)

Final Cost: 1 Point for a basic neural jack. Each extra socket (that allows another device or plug to jack in) is an extra Feature costing a further 1 Point.

• Neurotech Gadgets •

Two technologies related to neural jacks are:

Neural Headset

This is a headset or helmet containing a set of neural induction electrodes and interface hardware attached to a cable. It allows the user to use equipment fitted with a neural interface adapter as if he or she had a neural jack. It counts as a major Gadget.

Neural Interface Adapter

This upgrade can be added to a wide variety of electronic equipment (such as computers) and to any weapon or vehicle. It allows the device to be mentally controlled by the user (if it is normally hand-held, he or she may still have to aim or otherwise manipulate it, though) and for any electronic displays to be routed directly into the user's sensorium. Used in conjunction with a neural jack or neural headset, this provides an increase in precision and reaction speed: vehicles receive a +1 Manoeuvre Bonus, while weapons gain +1 bonus to attack checks. Counts as a minor Gadget.

Com Implant

This is a computer with wireless modem implanted in the user's skull. It requires a neural jack as a prerequisite. For its capabilities, see Com, page 108. A com implant effectively allows "digital telepathy" — the user can communicate with any other com implant user within radio range. This system also incorporates a retina display, allowing text, data, a time display, and so on to scroll across the user's visual field.

Attributes

1 Features (Implant com)

Final Cost: 1 Point.

Wetware Plugs

This is a major enabling technology that can go hand-in-hand with the neural jack. A wetware plug (also called an "interface chip," or "bio-soft") is a tiny device about the size of a pencil eraser designed to be plugged into a neural jack's socket. This is usually known as "jacking" the plug. When this is done, the wetware plug's firmware is activated and interfaces with the wearer's brain and nervous system (called "wetware"). Jacking allows the user to access data or programs stored in the plug, or for the plug's programs to take partial control of the user's mind and body. There are many different kinds of wetware plugs. Specific kinds detailed here are Data Plugs (page 27), Skill Plugs (page 27), and Persona Plugs (page 28).

In some cyberpunk settings, wetware plugs may be cutting-edge technology. In others they may be common, perhaps rented to the public like a DVD is today.

Data Plugs

A data plug is the wetware plug equivalent of a computer disk: it stores text, graphics, programs, or other data (see SIN, page 30) in a format readable by a neural jack. Capacity may vary by setting; a typical data plug should have enough storage space for storing software, multimedia, and "roaming" user information (100+ gigabytes by modern standards).

A person with a neural jack who jacks a data plug can mentally access the information stored on it. Some data plugs may be password protected. Physically opening up the plug to evade the protection requires a Mind-based Electronics (Security) Skill check. Failure may erase the information.

Computers can also read and write to data plugs. Each data plug counts as a minor Gadget.

Byte Size

In *Ex Machina* we have not provided a clearly defined metric (such as gigabytes) for computer memory. Technology changes so quickly that we cannot guess what memory size will be like, or what image or video quality will achieve, in another decade, let alone further down the road.

Instead, we have used a shorthand, memory slots, to give a game effect without having to nail down a precise storage capacity.

Skill Plugs

Skill plugs are highly sophisticated and semi-intelligent "expert" software programs encoded into a wetware plug. They interface with the user's nervous system, providing the user with "instant" plug-in reflexes and knowledge.

Each skill plug is coded with a single Skill and Specialisation, such as Gun Combat (Pistol). Most skill plugs only have Skill Level 1; a few have Skill Level 2. The Skill can be used exactly as if the user possessed it. These will also increase any existing Skill Level the character possesses; even an expert can gain some benefit from the hardwired reflexes or built-in knowledge databases that are incorporated into a skill plug.

A skill plug must be physically inserted into a neural jack in order for it to function. Each skill plug occupies one neural jack socket.

A skill plug that provides Level 1 counts as a minor Gadget; one that provides Level 2 counts as two minor Gadgets.

Persona Plugs

These are software simulations of human personalities. They are a more advanced form of skill plug. When the user jacks a persona plug, he or she mentally "becomes" the simulated person, either superficially (retaining their own goals and motivations) or completely (as if possessed).

Individuals unhappy with their own lives might jack commercially-purchased personas, perhaps based on celebrities. A cult, corporation, or military could insist that its members run personas of true believers, model workers, or perfect soldiers. A meek person who wanted revenge for a lost loved one might buy a black market persona of a ruthless killer and jack it long enough to see vengeance.

• Persona Plugs •
Designing Persona Plug Alternate Form

A persona plug is a Gadget that grants the user a heavily-restricted Full-Powered Alternate Form, whose content is a set of purely mental characteristics. Here are some guidelines for creating the Alternate Form:

The Stats it can affect are Mind and Soul. It will rarely produce an increase of more than +1, but it may decrease Stats.

Attributes appropriate for a persona plug's Alternate Form include: Attack Combat Mastery, Combat Technique, Defence Combat Mastery, Enhanced Mind or Soul, Heightened Awareness, Highly Skilled, and (possibly) Sixth Sense.

Defects appropriate for a persona plug's Alternate Form include: Blind Fury, Easily Distracted, Inept Attack, Inept Defence, Less Capable (Mind or Soul options), Recurring Nightmares, Sensory Impairment, and Significant Other.

A persona plug that grants the Highly Skilled Attribute may come with a set of Skills. Unlike those from a Skill Plug, these Skills are not cumulative with any possessed by the user; use whichever Level is higher. A persona plug should also have its own personality traits, which the user should role-play.

• Sample • Persona Plug Forms

Mercy Angel
Attributes +2 Heightened Awareness, +1 Highly Skilled
Skills 1 Interrogation (Psychological), 2 Medical (Diagnosis)
The Mercy Angel Persona is a mystery-solving doctor from a popular vid series. His (or her) persona is also a licensed persona plug that is slotted by people in need of their own personal physician, or just more confidence.

Silk
Stats +1 Soul
Attributes 1 Highly Skilled, 1 Sixth Sense (Area 2; People who are looking for a date)
Skills 1 Domestic Arts (Cooking), 1 Etiquette (Upper Class), 1 Performing Arts (Dance), 2 Seduction (Female OR Male)
Defects -2 Less Capable Soul (Luck, Willpower)
The Silk Persona is the perfect courtesan or gigolo. He or she (different versions exist) is an experienced lover with smooth moves. Shy people may slot Silk if they're looking for a hot date and aren't sure they have what it takes.

Bloody Valentine
Attributes 2 Attack Combat Mastery, 2 Highly Skilled
Skills 1 Interrogation (Physical), 1 Stealth (Concealment), 2 Melee Attack (Knife)
Defects -2 Blind Fury, -1 Less Capable Soul (Empathy), -1 Wanted
An illegal persona recording of a merciless serial killer, the Bloody Valentine Persona may be bought on the black market by those seeking perverted thrills, or those who want revenge against an opponent but lack the bloodlust to carry it out. The person slotting Bloody Valentine is not "actually" wanted (although the Plug is probably banned), but will behave as though he or she is.

Each persona plug is a Gadget (either two minor or one major, see previous page) that possesses the following Attributes and Defects:

Attributes

1 Alternate Form (Full-Powered Form; Reduction -6: Only 4 Points awarded; -1 Restriction: Requires neural jack)

Final Cost: A persona plug that adds changes worth up to 2 Character Points counts as two minor Gadgets. One that adds 3-4 Points of changes is a major Gadget.

Neural Buffer

A neural buffer is an implant that allows the user to copy and store data in his or his or her head, without having to physically insert a plug. It may be thought of as the equivalent of having a hard drive built into one's brain. A person must already have a neural jack before he or she installs a neural buffer.

A neural buffer is rated for the number of "memory slots" it possesses. Each slot counts as a Level of the Features (Neural buffer) Attribute. (A neural buffer can be imagined as an extremely low-powered version of Power Flux.)

A wide variety of information can be copied and stored in a neural buffer. The maximum slots limit what can be stored in a user's head at any one time. A memory slot in a neural buffer can be used to copy and store or run:

- Skill Programs take one slot for a +1 program; two slots for a +2 program. It takes 5 rounds to download and copy a +1 program or 10 rounds to download and copy a +2 program.
- Persona Programs are each equivalent to a persona plug (page 28). They are more sophisticated and take up four slots within a buffer. It takes 20 rounds to download and copy.
- Data, games, or other programs, equivalent to the information that can be stored in a data plug (page 27), can occupy a single memory slot. It usually takes 5+ rounds per slot to download and copy.

Data or programs in memory slots can be voluntarily deleted to make room for another program; this takes a single action. It does erase the program locally, but (assuming it is still stored off line) it can be downloaded again to be reused.

This technology can be thought of as a second generation of wetware plug technology. Instead of having to physically insert plugs into a socket, the user can instead jack into a computer and copy programs into his or her mind directly from another computer. This technology is powerful, and may not exist in every cyberpunk setting.

The content of a memory slot can be swapped in and out simply by plugging a cable into the user's neural jack and copying the material from a computer. The content itself — Skill programs, persona programs or other data — will usually count as minor or major Gadgets.

Attributes

1 Features (Neural buffer)

Final Cost: 1 Point/Level. Up to three Levels can be installed in most settings.

Neural Buffer Programs

Programs for a neural buffer are software and count as Gadgets. Depending on the society, they may be available for purchase or (in some cases) available on the Net as freeware, shareware, or pirate programs ("warez").

Final Cost: as Skill Plugs or Persona Plugs.

Other data, such as games, information, SIN experiences, or audio-visual movies counts as mundane equipment. It might cost a few dollars (a new computer game or SIN experience) or a few million dollars (secret plans for a new supercomputer).

File Sharing

Like other software, neural buffer programs can, in theory, be freely copied and thus made available to an entire party of adventurers. The GM can either require characters to still pay for their own Gadgets in Character Points, or may allow players to freely pool their programs and use them as a group resource. This does make neural buffers and their programs more powerful, but can better simulate certain settings.

Sensory Interface (SIN)

This is the technology of translating a living being's sensory impressions into digital form and recording it for later replay by that person or another individual. It may also be possible to synthesise artificial sensory impressions identical to the real thing.

A SIN is a simulated sensory experience — instead of being a mere audio-video recording, it also encompasses smell, taste, and tactile sensations: heat, cold, pleasure, and even pain, although most SINs are edited to remove unpleasantness.

In many cyberpunk settings this sort of technology has replaced audio-visual recordings and books as the most common mass media. All kinds of experiences may be on tap, from travelogues and training sessions to pornography. It may even be popular to wire animals or A.I.s for SIN recordings, so that humans can experience nonhuman life.

If full sensory impressions cannot be synthesised, live actors will still be needed for any media, raising nasty possibilities for exploitation.

Sensory Interface Recorder ("SIN Recorder")

This brain implant allows the user to record his or her sensory experiences as they take place. The experiences are stored in a neural buffer (page 29) or a data plug (page 27). Each data plug or slot in a neural buffer can store about two hours of sensory experience. The user can usually turn the implant on or off with a thought, but it is also possible to install an "involuntary" SIN recorder that is remotely controlled.

Attributes

1 Features (SIN recorder)

Final Cost: 1 Point.

Mind Uploading

This technology represents the ultimate culmination of sensory recording and persona simulation. It is the ability to scan a human being's brain and then create a working digital copy of a human mind — an "upload."

Memory Backups

Memory uploading may lead to the creation of laws that ban the existence of multiple conscious versions of a single person, or which treat such copies as less than human, to prevent society from facing radical upheaval. As a result, this technology is most likely to be used solely to create a "backup" of the original memory, which is periodically updated. The backup is stored, unconscious, for revival in the event of death or total incapacitation.

• SIN Gadgetry •

Various portable devices (that are not built into the body) can also be used in conjunction with SIN technology. These include:

SIN Deck

This is a small paperback book-sized stand-alone device (or a disk-drive sized module that plugs into a desktop computer) that can record and play back SIN recordings.

A typical SIN deck has cable ports for up to four users to plug into it and automatically incorporates a neural interface adapter (page 109). Each user must have either a neural jack (page 27) or neural headset.

Someone playing back a SIN is effectively in a trance, as his or her own sensory responses are replaced by those of the recording. Someone recording a SIN suffers no penalties. No Skill is required to use a SIN deck. Minor Gadget.

SIN Editor

Recorded sensory impressions contain all the annoying details of real life. If SIN becomes a new media, editing raw SIN recordings may become a new art form. A SIN editor is a high-end SIN deck that (in conjunction with a desktop computer) can edit sensory interface recordings. It is usually used to modify the raw sensory data into a useful package – for example, to create a commercial SIN by removing distracting or unpleasant moments, compressing time, and so on, or even combining several sensory experiences into one. This is as much an art as a science, and would require both a Soul-based Visual Arts (SIN) and a Mind-based Computers (Programming) Skill check. Major Gadget.

Making a backup probably requires visiting a hospital and undergoing a scanning process. This may involve inserting nanomachine probes into the brain to analyse the deep interconnected neural structures that store memory, or it could be a less-invasive high-resolution scanner using an advanced successor to nuclear magnetic imaging. Either way, the process would require highly sophisticated equipment and lots of computer time and data storage. Initially, only the wealthy elite (or secret agencies) would have access to it. Regular updates may also be required, or else users could face losing memories.

In game terms, having a memory backup that can be restored to life again is the Reincarnation Attribute. If it takes about a day to restore someone (and the process can be disrupted by legal action or sabotaging the stored backups) it would count as:

Attributes

4 Reincarnation (Easy to stop; 1 day)

Final Cost: 8 Points. The cost can be altered if restoration is faster or slower. For example, it would only cost 2 Points if it took six months to restore someone.

Uploading into a Machine

There may be no way to restore a digital mind to flesh. If so, for the upload to regain consciousness it must be installed into a computer brain. It could then "live on" like an A.I., or be placed in a robot body. It is also possible to create a virtual reality (perhaps mirroring the real world) that would be inhabited by a whole community of uploads; the uploads' "real world" would be a computer they are running on, but they would have avatar bodies (see Cyberspace Avatars, page 142) that seem to be real.

A recorded human mind would probably require tens or hundreds of thousands of gigabytes of storage space, and would require a supercomputer to run it. As the bodies of the rich and powerful wear out (or burn out due to decadent living) this may result in the gradual creation of a wealthy elite of "digital dead" living inside computer software. Society may or may not be willing to treat them legally as "people" — and it is possible that a celebrity or magnate who uploaded his or herself might try to conceal that fact.

Uploading into a Clone

It may be possible to "play back" a recorded memory upload into a living body's brain. This might work with any body (if common, this could create a society where people swap bodies for fun). It is also possible this would only work if the body was a clone of the original, perhaps created using accelerated growth tanks. The wealthy (or people with a "death insurance" policy) may have already grown clones of themselves and have them stored in suspended animation ready for revival. The revival process may take a week or so (including rehabilitation), or may be faster or slower, depending on the technology.

Destructive Uploading

In some settings, safely scanning a brain to make an upload is impossible: the structure of memory is such that the brain must be destroyed (usually by taking it apart using surgical nanomachines) to make an accurate copy. The user's mind is preserved forever in a digital form, but is also destroyed in flesh. If so, uploading may be less popular, perhaps only used by a radical fringe who believe that machines are better than flesh, or by those who have no other option, such as individuals dying of an incurable disease.

Cybernetic Limbs and Organs

These "bionic" parts are what many people think of when cybernetics are discussed. Sometimes called "high function prosthetics," they were developed in the early 21st century to provide replacement parts for disabled individuals for whom actual limb or organ transplants were unavailable. As technology advanced, benefiting from synergies with robotics, the most advanced replacement parts became more effective than flesh. This raises the question of otherwise healthy people in physically-demanding occupations (like soldiers, emergency services personnel or criminal enforcers) voluntarily replacing flesh with superior machinery. In some cyberpunk worlds, such augmentation may still be unusual or even unethical; in other settings, it may be as common as body piercing is today.

Sensory Enhancement

A person's senses can also be augmented by cybernetic implants. Sensory augmentation is difficult, because the senses are closely tied to the brain and nervous system. It is not enough to give a person chemical sensors that improve his or her sense of smell — the user will also need the appropriate "wetware" implants to understand and process these new sensations. This can make sensory enhancement a delicate and expensive process.

Cyber-Prosthetics

These are artificial body parts (arms, hearts, etc.) providing functional replacements for crippled or worn-out limbs or organs. They are an new technology today and in near future cyberpunk settings (where they may compete with transplants), but will be a mature technology in classic cyberpunk worlds. In some classic cyberpunk and far future settings they may even be obsolete, replaced by biotechnology or nanotechnology that can quickly replace limbs or organs organically, rather than with machines.

Cyber-prosthetics that do nothing more than duplicate ordinary human capabilities such as an artificial eye or heart that is no better or worse than the original organ are worth no Points, although they may cost money. If characters use prosthetics (or conventional transplants) to replace Defects (usually Physically Impaired) that they began play with, the GM may require that they expend Advancement Points to "buy off" the Defect. Alternatively, the GM can ensure the adventure they went on to raise the money for the replacement was sufficiently difficult to pay back the requisite BP.

Cybernetic Eyes

An ordinary prosthetic eye possesses normal vision. Cybernetic enhancement can give a bionic eye additional capabilities, such as augmented vision or target tracking.

Cheap cybernetic optics may lack some of the resolution of human vision. It is also possible for a cyborg to be blind to visible light but still possess heightened vision in other areas of the spectrum, such as infrared. Such a cyborg could not read text or normal instrument displays, and would have to relearn how to identify many ordinary objects (like faces).

Camera eyes function as normal eyes but can also snap pictures. The user must already have a neural jack with a data plug or neural buffer to make use of the eye; 1,000 still pictures (at maximum resolution) or 10 hours of video (or eight hours audio-video if used in concert with cybernetic ears) can be stored in a single memory slot or data plug.

Select one or more of these Attributes and Defects:

Attributes/Defects

1 Combat Technique (Accuracy), 1 Features (Camera), 1 Heightened Senses (Infravision), 1 Heightened Senses (Microscopic Vision), 1 Heightened Senses (Ultravision), 1 Heightened Senses (Vision), 1 Special Defence (Flare; +3 Stat check to resist blinding), -1 Sensory Impairment (Colour blind), -2 Sensory Impairment (Blind to colour and visible light)

Final Cost: Sum of individual costs.

Cybernetic Ears

A basic prosthetic ear possesses normal hearing. Cybernetic enhancement can give an bionic ear additional capabilities, such as augmented hearing beyond the human range.

Recorder ears function as normal ears but can also record sound. The user must already have a neural jack or neural buffer to make use of the ears; 24 hours of audio (or eight hours audio-video if used in concert with camera eyes) can be stored in a single memory slot or data plug.

Select one or more of these Attributes:

Attributes

1 Features (Built-in short-wave radio), 1 Features (Audio recorder), 1-2 Heightened Senses (Hearing), 1 Heightened Senses (Radio reception), 1 Heightened Senses (Ultrasonic hearing), 1 Special Defence (+3 Stat check to resist deafening), 1 Special Movement (Balance)

Final Cost: Sum of individual costs.

Cybernetic Limbs

The standard cyber-limb is a construct of myoelectric cable muscles (which expand or contract when subject to electrical impulses) and titanium alloy bones, sheathed in a coating of synthetic flesh. It is extremely strong and durable, but unless the cyborg also possesses a reinforced skeleton, he or she will not be able to make full use of potential strength. Many cyber-limbs have a special Restriction.

Restriction (Strain at full strength)

Restriction (Strain at full strength) means that the cyborg can only safely benefit from half the normal bonus for Superstrength (+2 Stat bonus and lift 1/2 tonne, +5 damage) with that limb. If he or she chooses to use full strength, any feat of strength or blow that strikes home also causes the cyborg to lose 1 Health Point. Each extra round full strength is used doubles the Health Point loss until the limb is taken in for repairs. If the damage in a single round ever exceeds Shock Value, the joint breaks and the limb is effectively crippled.

Example: Polychrome has a high-power cyber-arm. She tries to prop up the roof of a collapsing building to let her friends escape. The GM rules it masses 700 kg of steel and masonry, so she must use full strength. Her friends will need three rounds to get free, so on the first round, she loses 1 Health Point; on the second, 2 more Health Points; and on the third round, she loses 4 more Health Points. Poly has a Shock Value of 5 – if she had tried to hold on for one more round, her arm would have broken.

Style: Marked

Cyber-limbs can omit the synthetic flesh ("all natural") coating. If a cyborg has one or more obviously artificial limbs, take the Marked Defect.

Cyberarm

This is a single cybernetic arm and hand. A cybernetic limb is tireless, feels no pain, is incredibly strong, and has superior gripping strength. A cyborg that uses two arms could lift a full tonne, but only if the arms were properly braced and supported. Unfortunately, if a cyborg's arm is attached to an ordinary person's torso, any tremendous feat of lifting is likely to rip the arm out of its own socket.

It grants the following Attributes:

Attributes

1 Armour (Shield), 1 Superstrength (-2 Part of Body: One arm; -1 Restriction: Strain at full strength)*, 2 Special Defence (Pain x2; -1 Part of Body: One arm; acts as 2 BP)

Note: Part of Body (One arm) limits the Superstrength to situations where the cyborg is grappling, throwing, or striking using the augmented arm. It limits the Special Defence to situations where the cyborg's arm is specifically exposed to damage, such as reaching into a vat of acid.

* If the cyborg has a reinforced skeleton this restriction is removed.

Final Cost: 3 Points, or 4 Points if the cyborg has skeletal reinforcement (page 33).

Micro-Manipulator Hand

Popular with techs, this replaces a normal hand with a retractable multi-functional tool manipulator built into the fingers (sometimes nicknamed the "Swiss Army Hand").

Attributes

1 Elasticity (Hand; -1 Restriction: Fingers only), 1 Features (Built-in micro-tool kit)

Final Cost: 2 Points.

Telescopic Joints

A cybernetic arm may be given this additional function: telescoping joints or extendable cables that allow the forearm and hand to extend out a few metres.

Attributes

1 Elasticity (Arm; -1 Restriction: Increased reach only)

Final Cost: 1 Point.

Cyberlegs

Cyberlegs are only available in pairs. (A single prosthetic leg is also possible, but is effectively no different than a normal leg.) A pair of cyberlegs grant the following Attributes:

Attributes

1 Jumping, 1 Combat Technique (Leap Attack), 1 Superstrength (-1 Part of Body: Both legs; -1 Restriction: Strain at full strength)*, 2 Special Defence (Pain x2; -1 Part of Body: Both legs)

Note: Part of the Body (Both legs) limits the Superstrength to situations where the cyborg is kicking using the augmented legs. It limits the Special Defence to situations where the cyborg's legs are specifically exposed to damage, such as walking through corrosive waste.

* If the cyborg also has a reinforced skeleton (page 33) this Restriction is lifted.

Final Cost: Cyberlegs cost 5 Points, or 6 Points if the cyborg has skeletal reinforcement.

Dermal Modifications

The skin is the body's largest organ. These modifications are designed to provide it with additional capabilities. See Style: Marked (page 80).

Smartskin

The user's skin is coated with a nanofilm layer that transforms his or her entire body into a liquid crystal display. The smartskin can interface with a data plug in a neural jack or data stored within a neural buffer to display data over his or her body. Thus, if the user had a music video stored in a buffer or a data plug, it could appear on part or all of his or her body as a unique fashion statement.

The user can acquire a data plug or memory slot program with an assortment of dermal colour schemes and patterns. This will grant a +1 bonus to Disguise (Makeup) and Stealth (Camouflage) Skill checks in situations where a quick change of skin hue would make a difference.

Attributes

1 Features (Smartskin)

Final Cost: 1 Point.

Chameleon Smartskin

This is similar to a smartskin, but incorporates an array of millions of tiny nanocameras and processors. If the smartskin is set in "chameleon mode," the cameras will scan the surrounding environment and adjust the user's skin pigmentation to match. This provides partial invisibility to sight only, but the user must be either naked, or wearing "smart clothing" equipped with similar technology in order for it to be effective.

The user is only partially invisible when moving faster than a slow walk, as his or her silhouette will flicker (observers make a Mind Stat check at -4 to spot). Once the character is spotted, combat penalties are halved.

Attributes

1 Features (Smartskin), 2 Invisibility (Sight, two slots; Reduction -1: Partial invisibility; -1 Restriction: Naked form only)

Final Cost: 4 Points.

Nanofibre Skin

The cyborg's skin is reinforced by advanced flexible synthetic armour that looks and feels like ordinary skin. The effects are cumulative with body plating. The armour is less effective than full body plating, stopping only 3 damage.

Attributes

1 Armour (Reduction -2: Reduced armour value; Stops 3 damage)

Final Cost: 1 Point.

Partial Body Plating

The cyborg's skin is partly covered with rigid armour plates, although the face, joints, neck, and groin remain unprotected.

Attributes

1 Armour (-2; Unarmoured Area; Stops 10 Damage)

Final Cost: 1 Point.

Full Body Plating

The cyborg's skin is entirely covered with synthetic armour. Rigid plates cover the chest, skull, forearms, thighs, and shins. Transparent lenses shield the eyes, while the face and joints are protected by lighter flexible material.

Attributes

1 Armour (-1; Thin area; stops 10 Damage), 1 Special Defence (Flare attacks)

Final Cost: 3 Points.

Reinforced Skeleton

The bones in the cyborg's torso, head, and any remaining non-cybernetic limbs are reinforced by impregnating them with a synthetic metal-organic, carbon nanotube or diamondoid laminate to make them all but unbreakable. This procedure requires biomedical nanotechnology. In particular, it is necessary to implant small nanofactories in the body that supplement or replace certain bone marrow functions.

A reinforced skeleton will be visible to X-ray machines and other medical scanners. It will usually also result in a weight gain of about 5%, due to the greater density of the materials used compared to bone.

Reinforced skeleton also has synergistic effects on the capabilities and Point cost of cyberarms and cyberlegs (page 31).

Attributes

+1 Toughness

Final Cost: 2 Points.

Cybernetic Weapons

These are built-in weapons that are spliced to the user's nervous system so that they can be fired (or in the case of melee weapons such as claws, extended or retracted) at will. These devices are more likely to be used "on the street" by crooks, gangs (and possibly undercover cops) than by military forces or intelligence agents. This is because devices of this nature are detectable by security sensors (X-rays, nuclear magnetic resonance imaging) deployed at airports and other secure areas.

Weapons are assumed to be concealed until needed, unless otherwise noted. If they are obvious, the user should take the Marked Defect. Projectile weapons will usually have a small flap or concealed slot into which new ammunition can be inserted.

Secondary Special Attacks

If a character has more than one Special Attack (for any reason) only the most expensive is paid for at full Point Cost. The others count as Alternate Attacks (page 61) and are one-quarter the listed cost (round up, minimum 1 Point); adjust template costs accordingly.

Melee Weapon Implants

Claws are the most popular melee weapon: light alloy or enhanced-cartilage scalpel blades that can be hidden beneath the user's finger nails, and retracted or extended by flexing muscles in the hand. Fangs and horns are similar. All are often bioware (page 35) rather than cyberware — the product of vat-grown buds grafted onto the recipient's body.

Talons are claws made of advanced super alloys or manufactured diamondoid material that are strong enough to slash through armour. They must either emerge from the wrist or be built into a cybernetic arm.

Electroshock implants deliver a high-voltage shock intended to stun and disable, and can affect humans or electronic systems with equal effectiveness.

Venom sacs are implanted into the mouth or hand and contain a dose of a powerful neurotoxin or other venom. They are linked to fangs or claws. Venom sacs are most useful as part of a surprise attack, delivered during a kiss or other intimate encounter.

All of these weapons tend to be black market implants; there may be many variations as each street doc comes up with his or her own custom versions.

Select one or more of the following Attributes:

Attributes

1 Natural Weapon (Claws, Fangs, or Horns), 1 Special Attack "Talons" (Damage 20, Muscle-Powered, Penetrating: Armour, Melee), 1 Special Attack "Electroshock" (Damage 40, Stun, Melee), 1 Special Attack "Venom sac" (Damage 20, Incapacitating, Linked to attack*, Limited Uses x3, No Damage, Toxic)

Final Cost: 1 to 4 Points.

* The Venom sac must be linked to a primary attack, such as Claws, Throat Tentacle, Talons, or Fangs.

Throat Tentacle

The cyborg has a barbed cybernetic tentacle implanted in his or her stomach. The tentacle is normally coiled out of the way, but can emerge out of the throat like a striking snake, with a reach of up to 50 cm. This is most effective as a weapon in an intimate situation — if the user can perform an open mouth kiss (or equivalent) with his or her victim, the tentacle can enter and inflict an automatic Called Shot to the victim's vitals. A throat tentacle may have a venom sac to further increase its effects. The tentacle can attack even as the user performs another melee attack, pins his or her foe, etc.

Attributes

1 Special Attack "Throat Tentacle" (20 Damage, Flexible, Unique Ability, Melee), 1 Extra Attacks (-2 Restriction: Extra attack must be with tentacle)

Final Cost: 10 Points.

Ranged Weapon Implants

A ranged weapon may be built into the body. Some examples are:

Gas dischargers project a small cloud of incapacitating gas. The gas reservoir can fit into a modified lung with a tube extending up through the mouth or nose, or it can go into a cybernetic limb. Although a non-contact attack, it has the Melee Disability due to its extremely short range (a metre or less). Gas dischargers are most effective if the user has Special Defence against poison.

Cybergun implants are guns built into the arm, usually consisting of a electronically-fired preloaded barrel installed to shoot out a flap in the palm. The barrel runs the length of the forearm. To reload, the barrel tube is ejected and insert a new one.

Dazzle laser implants can be installed in a cybernetic eye or hand. They fire a low energy visible light laser that can temporarily blind a person or optical sensor.

Attributes

1 Special Attack "Gas discharger with nerve gas" (Damage 60, Incapacitating, Irritant, Limited Shots x2, Melee, No Damage, Toxic), 1 Special Attack "Gas discharger with Bedtime Mist knockout gas" (Damage 60, Incapacitating, Stun, Limited Shots x2, Melee, No Damage, Toxic), 2 Special Attack "High capacity gas discharger with nerve gas" (Damage 60, Area Effect, Enduring, Incapacitating, Irritant, Limited Shots x3, Melee, No Damage, Toxic), 2 Special Attack "High capacity gas discharger with Bedtime Mist knockout gas" (Damage 60, Area Effect, Enduring, Incapacitating, Stun, Limited Shots x3, Melee, No Damage, Toxic), 1 Special Attack "Cybergun" (Damage 20, Auto-Fire, Inaccurate, Limited Shots x2, reload: 1 round, Short Range), 1 Special Attack "Dazzle Laser" (Damage 20, Accurate, Flare, No Damage, Short Range)

Final Cost: 4 or 8 Points each.

Cyborg Weapon Arm

Cyborgs can replace the forearm or entire arm with a high-powered weapon. Select any of the following as options and then apply the Physical Impairment Defect (if both arms are replaced with weapon arms increase the impairment's value to 3 BP):

Attributes

1 Special Attack "Chainsaw Arm" (20 Damage, Muscle-Powered, Penetrating: Armour, Melee), 3 Special Attack "Mini-Gun" (20 Damage, Auto-Fire, Spreading, Inaccurate, Limited Shots, reload: 1 round), 1 Special Attack "Missile Pod" (40 Damage, Area Effect, Homing, Limited Shots x2, Stoppable), 1 Special Attack "Rocket Pod" (40 Damage, Area Effect, Limited Shots x2)

Defects

-2 Physical Impairment (Missing hand)

Final Cost: 2 to 12 Points.

Morphing Weapon Arm

If advanced "smart matter" nanotechnology exists, a cyborg's arm may be able to "morph" into any kind of standard firearm or melee weapon. The cyborg must purchase a program for each type of weapon. The cost of the program is equal in cost to the weapons and accessories (and in game terms, each weapon or accessory program counts as a minor or major Gadget, just as a weapon does). For example, if an arm can morph into an assault rifle (a major Gadget), the program also counts as a major Gadget.

Attributes

4 Features ("Mutable" major gadget; -1 Restriction: Arm cannot be used as an arm while morphed; -1 Restriction: Ammunition for firearms not included), 1 Combat Technique 1 (Portable Armoury)

Final Cost: 3 Points.

Miscellaneous Implants

A variety of additional implants can be built into a human body.

Filter Lungs

This is an implanted micropore filter that protects against inhaled toxins.

Attributes

1 Adaptation (Noxious gases)

Final Cost: 1 Point.

Gill Implant

This is a modification to the lungs to allow a human to breathe water as well as air.

Attributes

1 Adaptation (Underwater)

Final Cost: 1 Point.

Hidden Compartment

A hidden compartment capable of housing a pistol, knife-sized weapon, or other small device can be installed within a bionic arm or leg, or a pouch inside the stomach.

A tiny hidden compartment — too small for a weapon, but large enough to smuggle drugs, a data plug, or some other miniaturised device — is also possible. This will be harder to find (-3 or greater penalty on any checks to detect it).

Attributes

1 Combat Technique (Concealment)

Final Cost: 1 Point.

Installing Cybernetic Implants

Characters who begin play with cyberware or bioware templates do not have to worry about installing them. Those who gain them during play (see Character Advancement, page 147) may find the process more difficult. In addition, characters may wish to remove or install cyberware in the field (for example, to take out a mind-controlling chip, cortex bomb, or the like, or disarm an opponent).

Installing or removing cyberware requires a Medical (Surgery) Skill check, normally of average difficulty. The operation typically requires about an hour for every Character Point the cyberware costs (a minimum of half an hour).

If installing cyberware, a success means the operation was successful. The cyberware will be functional. Failure means the cyberware was installed, but it does not function properly or produces some side effects (GM's option). Either way, the subject also suffers some stress from the operation itself, losing 1 Health Point for every hour of surgery that it required. This is halved on a critical success, doubled on a critical failure.

If removing cyberware, the same rules apply, except the operation takes only half the time (reducing damage). On a success, the cyberware is removed intact. On a failure, the surgeon fails to safely remove it, while a critical failure may damage the cyberware; trying again requires the operation be repeated (inflicting further damage on the subject).

The above difficulty assumes cyberware is installed using a portable microsurgery. If using ordinary surgical tools rather than this gear, increase the difficulty to above average. If performing the surgery in a fully-equipped hospital or a cybernetic workshop, reduce it to below average; GMs may wish to avoid rolling for surgery performed by competent NPC surgeons in a well-equipped hospital or clinic, simply assigning the basic Health Point loss.

Smart Hair

A person's hair can be replaced with thin cyber-interfaced myoelectric wires that resemble ordinary hair, but can also change colour and style itself at the user's mental command; this can also provide an impromptu disguise.

In settings with advanced technology, the myoelectric wires can also function collectively as an extra limb.

Attributes

1 Feature (Restyle), 1 Natural Weapons (Tentacles)

Final Cost: 1 or 2 Points.

Cortex Bombs and Toxin Sacs

These are malevolent ways of ensuring an individual's compliance.

Cortex bombs are tiny explosive charges with a micro detonator that are surgically installed into a victim's brain. They will instantly kill the subject (or at least, cause terrible brain damage) if they explode. They are often designed to be triggered upon receiving a coded radio signal, or if tampered with. Others may be set to go off after a time limit has expired, or if a periodic "all clear" signal is not received or jammed. A successful Electronics (Security) Skill check may reveal how to jam or otherwise block an external trigger, but will not prevent a timed system from setting the device off.

Toxin sacs are similar, but are placed inside the body near major arteries and contain nasty biological agents or poisons. The effect may or may not be lethal.

Diagnosis of these implants requires a Mind-based Medical (Diagnosis) Skill check using diagnostic scanners or medical nanoprobes. Removal requires a Body/Mind-based Medical (Surgery) Skill check at a -4 penalty. Failure by 1-2 means the surgeon believes he or she cannot remove the item without triggering it; failure by 3+ sets it off.

Someone subjected to these systems usually has the Defect Owned 3 BP.

Biotech Enhancement "Bioware"

Biotech enhancements, or bioware, are body modifications derived from cloned, harvested, or genetically modified organic material. Biotech augmentations have the advantage of only being detectable via medical diagnostic scans — they don't set off metal detectors, for example, and usually require little or no specialised maintenance to support. Their disadvantage is that they are generally more subtle in their effects, and that unless care is taken to tissue-match the upgrade, they may be rejected by the body.

Custom Transplants

The usual technique involves custom-growing a genetically-engineered transplant (such as new eyes, muscle tissue, or glands) that is matched to the intended recipient to avoid rejection, then transplanting that material into the recipient's body. Since this transplant must be custom-designed for the user, it must be ordered (and usually paid for) in advance, and will usually take about six to eight weeks to grow.

Implanting Biotech

An operation is required to implant the biotech (whether custom engineered or "off-the-shelf") into the subject's body. Use the normal rules for cyberware operations, except that the relevant skill is Medical (Surgery).

If nanomachines exists, a more advanced alternative might be a "seed" that is swallowed by the subject, and which then proceeds to grow the new organ, enhancement, or otherwise modify the character's body. It will still usually take six to eight weeks for the change to appear. Alternatively, metamorphosis tanks (page 112) can also rebuild someone with any or all of these options.

Black Market Bioware

Someone who doesn't want to wait can buy an "off-the-shelf" transplant (usually on the black market). If so, he or she must make a Body Stat check a week after the operation (GM's decision as to exact time) and if that succeeds, again a full month later. If either check fails, his or her body begins to reject the transplant. He or she will suffer the loss of 1 Health Point per day; this damage is incurable until the transplant is surgically removed. The risk of rejection can be countered by taking anti-rejection drugs (+2 to the Body Stat check), but these suppress the user's immune system, and for the duration of that period will result in him or her temporarily gaining the Less Capable Body (Immune System) Defect 1 BP.

Bioware

A variety of modifications that are normally cybernetic enhancements may be available as purely biotech augmentations.

Biotech Sensory Enhancement

These enhancements involve implanting both new tissue, such as a new cornea or entire eye for a vision enhancement, or viper-type heat sensing pits for Heightened Senses (Infravision), and the nervous tissue necessary to control it. Unlike a bionic eye, it will usually take between 1-3 weeks for the necessary connections to heal. During that time of adjustment, the enhanced sense will be non-functional (if a subject's sense of balance is being enhanced, the recipient will be tripping over everything; in the case of a defence to hearing or blinding, the user will be blind or deaf while it adjusts).

These enhancements may sometimes produce visible changes in the body (for example, Heightened Senses: Hearing 2 might involve large animal-like or pointed ears). Significant changes may allow for the Marked Defect.

Select one or more of these Attributes:

Attributes

1 Heightened Senses (Infravision), 1 Heightened Senses (Vision), 1-2 Heightened Senses (Smell), 1-2 Heightened Senses (Hearing), 1 Special Defence (+3 Stat check to resist deafening), 1 Special Defence (+3 Stat check to resist blinding), 1 Special Movement (Balance)

Final Cost: Sum of individual costs.

Muscle Graft

This is a quick way to "bulk up" — the cyberpunk equivalent of steroid pushing. The Body gain will be visible with obvious bulging muscles, but since the muscles are not supported by additional skeletal strength or cardiovascular growth, it tends to put some extra strain on his or her system, resulting in the acquisition of a corresponding Defect.

Attributes

2 Enhanced Body, -1 Less Capable Body (Endurance)

Final Cost: 3 Points.

Cosmetic Xeno-Grafts

Purely cosmetic, exotic xeno-grafts are also available, such as a coat of soft fur, feathers, cat-like eyes, cloven hooves, a muzzle, mottled reptile-like skin, pointed ears, a short tail, light scales, chameleon skin that changes colour based on mood (rather than as camouflage), or other "exotic fashion" grafts. They may be trendy in some subcultures, just as body piercing and tattoos are. They cost no Character Points unless they grant tangible benefits, enhance appearance (a Feature), or detract from it (the Unappealing Defect).

Other Bioware Implants

Any of the following cyberware may be defined instead as biotech transplants:

Reflex boosting (page 26).

Nanofibre skin (page 32).

Reinforced skeleton (page 33).

Melee weapon implants: claws, fangs, horns or venom sacs only.

Throat tentacle (page 33).

Ranged weapon implants: gas discharger only).

Miscellaneous implants: gill implant, smart hair, hidden compartment, and toxin sacs only.

Posthuman Species Templates

These are examples of artificially-created entities that are more than — or other than — human. Some may be suitable for player characters; others are more useful as Agents (page 43), Henchmen (page 50) or Servants (page 60) or as opponents. These templates work the same way as occupational templates (page 18) except that they do not include Skills.

Full Cyborg Body

A person whose entire body has been replaced by machinery is a full cyborg. He or she externally resembles a humanoid robot. Only the brain and part of the spinal cord remains organic. This template is for someone with an obviously cybernetic body.

The Soul penalty is due to trauma of being transformed into a living machine.

• Full Cyborg Body •
Posthuman Species Template

Full Cyborg Body Template (15 Points)

Stats +1 Body, -1 Soul

Attributes

+1 Adaptation (Noxious gases), +1 Armour, +1 Combat Technique (Leap Attack), +1 Features (Implanted radio), +1 Jumping, +8 Special Defence (Air x2, Ageing, Disease x2, Hunger, Pain, Toxins), +1 Superstrength, +1 Tough

Defects

-1 Achilles Heel (Electrical damage), -1 Ism (Jealousy or prejudice), -3 Marked (Metal body), -1 Special Requirement (Batteries require daily recharging)

Homo Superior

This is a fairly conservative "perfect human" concept produced through human genetic engineering (see Genetic Engineering, page 107). Such a "genetic elite" with carefully selected genes (and a bit of discrete tinkering) might look like this.

• Homo Superior •
Posthuman Species Template

Homo Superior Template

Template Cost: 8 Points

Stats

+2 Body, +1 Mind, +1 Soul

Attributes

+1 Features (Designer beauty), +2 Special Defence (Ageing, Disease)

Defects

-1 Ism (Jealousy or prejudice)

Customisation

One (or more) of these options can be added to the basic Homo Superior template representing more radical genetic engineering, possibly including splicing in gene sequences from other species:

- Super-Soldier — Add Body +2 (4 Points), Attack Combat Mastery +1 (2 Points), Defence Combat Mastery +1 (2 Points), Heightened Awareness +1 (1 Point), and Special Movement (Cat-Like) (1 Point). Final Cost: 10 Points.
- Drone — Add Less Capable (Willpower) (2 BP); add Owned (1-3 BP). Final Cost: -3 to -5 Points.
- Transgenic Chimera — Add Features (Fur) +1 (1 Point), Heightened Senses (Smell and Hearing) +2 (2 Points), Natural Weapons (Claws and Fangs) +2 (2 Points); increase Ism to (3 BP); add Marked (3 BP). Final Cost: 0 Points.
- Mer-Person — Add Adaptation (Underwater) +1 (1 Point); Water Speed +2 (4 Points); add Marked (3 BP). Final Cost: 2 Points.

Artificial Intelligences (A.I.)

A self-aware A.I. is an artificial intelligence program that is capable of rational thought and reasoning equivalent or superior to a human. In theory, an A.I. will be able to think much more quickly than a person, since its thought processes are purely electronic rather than electrochemical. This means that there is always the danger that a self-aware A.I. will outsmart its creators, overcome any programmed safeguards, and evolve in an unexpected fashion. Some "free" A.I.s may be benevolent; others may not.

A.I.s are usually created by corporations who wish to make use of their super-intelligence to run complex research or intelligence-gathering projects. Self-aware A.I.s are often portrayed as naturally "at home" in cyberspace, making them the ultimate computer hackers. In cyberpunk fiction, they are usually a new or newly mature technology and often very expensive. Their programs may be so complex as to require huge state-of-the-art mainframes or supercomputers to run.

True A.I.s are characters in their own right in cyberpunk worlds. An A.I. should be created as a character; those owned by other characters should be constructed as Servants.

A.I.s have Body, Mind, and Soul Stats, Attributes, and Skills, just like any other character. Those that are embodied within static computer systems will, however, have Defects such as Confined Movement and Physical Impairment (No Limbs).

A typical A.I. template is shown below, for a machine that is embodied within a static computer system. Features (Major Gadget: Supercomputer) gives the A.I. the built-in capabilities of a supercomputer (page 109). Its Physical Impairments and Special Requirements would be removed or reduced if the A.I. were embodied within a mobile robot. Its Reincarnation Attribute assumes it regularly backs up its memory off site; if destroyed, it will take its masters or minions at least a week to get everything restored within a new computer system. Locating and corrupting or destroying the backup can prevent its resurrection.

The Owned Defect is not included in the template, but many A.I.s — though not all — will have the Owned Defect. (Owned would be inappropriate for an A.I. that is free-willed, nor is it appropriate if the A.I. is a Servant, since the servile status is assumed).

• Artificial Intelligence • Posthuman Species Template

A.I. Template Template Cost: 20 Points

Stats +1 Body, +3 Mind

Attributes

+4 Features (Major Gadget: supercomputer), +3 Reincarnation (Easy to stop; 1 week), +12 Special Defence (Air x2, Ageing, Disease x2, Hunger x2, Pain, Poison x2, Sleep x2)*

Defects -1 Less Capable (Empathy), -1 Physical Impairment (Cannot heal naturally), -2 Physical Impairment (No sense of smell or taste), -3 Physical Impairment (No limbs), -3 Special Requirement (Plugged into power supply)

* Note: Special Defence Ageing was assigned because while A.I.s can possibly outlive us, they presumably do wear out, too. Similarly, while an A.I. may not feel pain the way humans do they are likely not immune to it; when struck they may stagger back, temporarily crash, or otherwise experience an analogous reaction to pain as bits short out.

Android

An android is a humanoid robot designed to pass (at least superficially) as a human. Some androids are as intelligent as humans; in other cyberpunk worlds, it is impossible to miniaturise a self-aware computer to that degree, but androids may still be teleoperated, or simply not very intelligent.

A typical android template is given below suitable. The GM may wish to modify it to reflect various models or programming by adding Special Attributes or Defects.

For a different (and less humanoid) robot see the Patrol Bug (page 114).

• Android • Posthuman Species Template

Android Template Template Cost: 10 Points

Stats +1 Body , -1 Soul

Attributes

+1 Adaptation (Noxious Gases), +2 Features (Minor Gadget: Com, Neural Jack), +11 Special Defence (Air x2, Disease x2, Hunger x2, Pain, Poison x2, Sleep x2), +2 Tough

Defects

-1 Achilles Heel (Electrical damage), -2 Ism (Androids are treated as property), -1 Less Capable (Empathy), -1 Marked (No pulse, white blood, etc.), -1 Physically Impaired (No natural healing), -2 Special Requirement (Batteries need regular recharging)

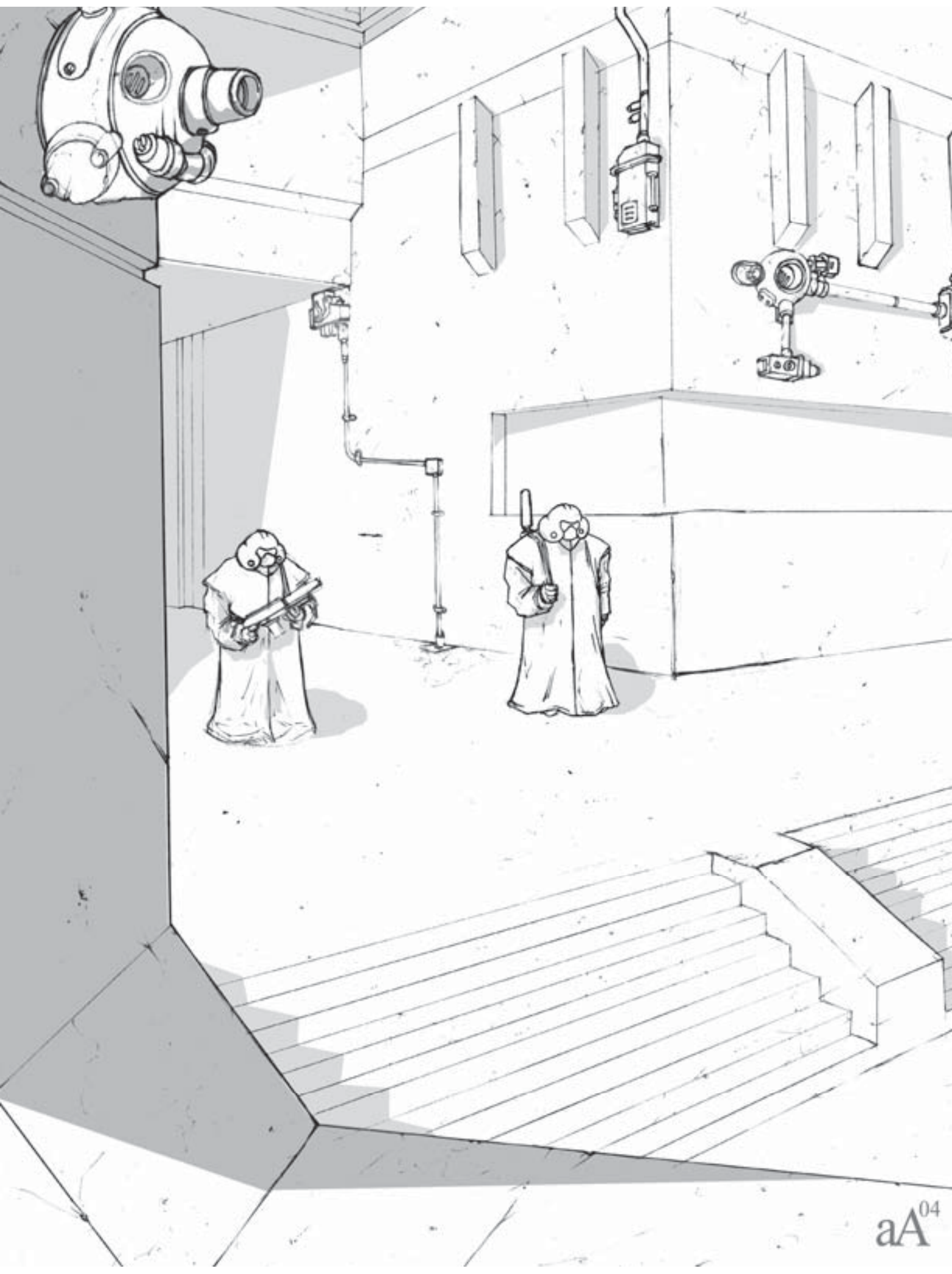
Customisation Notes

Four typical model versions:

- Combat model — Add Attack Combat Mastery +1 (3 Points), Defence Combat Mastery +1 (2 Points), Heightened Senses (Infravision) +1 (1 Point), Jumping +1 (1 Point), Superstrength +1 (4 Points). Final Cost: 11 Points.
- Pleasure model — Add Features (Appearance x2) (2 Points). Final Cost: 2 Points.
- Child Surrogate model — Body -1 (-2 Points), Features (Cute Appearance) (1 Point). Final Cost: -1 Point.
- Non-Self Aware model — Features (Minor Gadget: Teleoperation Interface) +1 (1 Point), Less Capable Intelligence and Intuition (-2 Points). Final Cost: -1 Point.

A humanoid robot that is obviously nonhuman (resembling a metallic or plastic doll or skeleton) would have Marked at 2 or 3 BP instead but will often have Armour 1 (3 Points). Owned or Wanted (if on the run) are very suitable Defects for androids, but not part of its species template.





Chapter 4: Select Attributes (Step 5)

The three Stats represent your character's basic abilities, but his or her more specific acquired or innate talents and abilities are known as Attributes. Any Character Points remaining after you have purchased Stats and templates are available to acquire Attributes.

If you used templates to create your character you may not need to choose Attributes, but you should look up each of the Attributes that are included in your character's templates. In many cases — but most especially if your template includes Agents, Henchmen, Gadgets, Item of Power, Organisational Ties, or Servant — you will need to make additional decisions to further define his or her abilities. For example, if your occupational template includes Gadgets, you will need to determine how many and what type of devices or weapons you possess as a result.

There are many different Character Attributes, each representing a particular talent or special ability. Acquiring an Attribute or increasing it in Level requires the expenditure of one or more Character Points depending on the Attribute's Character Point cost per Level.

Attributes can only be acquired above Level 8 with the GM's permission.

A few Attributes are restricted to only a specific number of Levels, while certain others (such as Organisational Ties and Gadgets) can break the Level 8 ceiling without disrupting game play signifcantly.

The selection of Attributes is one of the most important steps during character creation. Through Attributes, you define your character's unique capabilities compared to other individuals. Think carefully about the balance between a few high-Level Attributes and a large number of low-Level Attributes.

If you find yourself needing more Character Points than you have been assigned, consider burdening your character with one or more Defects (Step 6: Defects, page 76). Each Defect can provide you with additional Character Points, which can be used to acquire more Attributes or higher Stats.

Mundane and Special Attributes

Attributes are each classed as either Mundane or Special.

A Mundane Attribute is a talent that an unmodified human being can possess. The Attribute may be extraordinary, but the character is still an unmodified human despite possessing it. An example of a Mundane Attribute is Combat Technique.

A Special Attribute is a power that marks the character as non-human or part-human (such as a cyborg, animal, or computer). It may also be possessed by a device such as an Item of Power. An example of a Special Attribute is Healing, Illusion, or Superstrength.

If you are choosing your Attributes rather than selecting templates, you may only take Special Attributes with GM permission. The GM may rule that Special Attributes are only available if taken as part of a particular template; if so, the only way to get a Special Attribute such as Superstrength would be to choose to play a robot or have appropriate cyberware.

This power isn't very cyberpunk!?

Tri-Stat is a universal, effects-based game engine. Therefore some of the options on the exhaustive list of Attributes may not seem very cyberpunk, at first glance. As a rule, these all fall under the Special Attribute designation. Still, it's easy to understand that a normal Joe won't have Superstrength, but a bouncer's cyberarm could easily bend steel bars. What about Attributes like Creation, Mimic Powers, or Nullify?

Many of these don't have immediate application in generic cyberpunk worlds ... but then again, most do have some use. Many will have the Restriction: Only in cyberspace. Others will be used to qualify unusual situations, such as extreme genetic modifications, designer drugs, bio-weapon lifeforms, or even xenomorphic encounters. Others may be used for mecha, superpowers, or magic – *dX* can handle anything, and thus all the options are presented here, though we've presented guidelines to facilitate your cyberpunk campaign.

Attributes Cut from dX

Certain Attributes were cut from *Tri-Stat dX*, however, if we couldn't find any way to justify in *Ex Machina*. These include: Animal Summon/Control; ACV Knockback (from Combat Technique); Combination Attack; Computer Scanning; Damage Absorption; Damage Conversion; Duplicate; Energy Bonus; Exorcism; Force Field; Grow; Immovable; Immunity; Insubstantial; Mass Increase; Own a Big Mecha; Plant Control; Pocket Dimension; Projection; Shrink; Special Attack Abilities: Drain Energy, Knockback, Penetrating (Force Field), Quake, Vampiric; Special Attack Disabilities: Drop Shields, Uses Energy; Swarm; Telekinesis; Teleport; Transmutation; Tunneling; Unknown Superhuman Power.

Any of these can be added from *Tri-Stat dX* with the GM's permission (see The Tri-Stat dX Family, page 14).

Modifying Attributes and Adjusting Point Costs

Players may occasionally find that an Attribute does not exactly match their concept of how a particular power or capability should function. The GM (and, with GM permission, the players) may redefine the effects of existing Attributes to better suit particular character concepts. If the GM feels a changed effect makes the Attribute significantly more or less powerful, he or she may alter its Point cost to reflect this.

Additionally, the value of Attributes assumes the setting of the game gives them a good chance of actually being useful in play. If a character is given an Attribute that the GM decides is unlikely to have much, if any, utility in the

campaign, he or she can reduce its Character Point Cost or even give the Attribute away for free. If circumstances change and the Attribute becomes useful on a regular basis, the character should pay for the Attribute with Character Points granted through advancement (page 147).

Power Modifier Values (PMVs)

Several Attributes can be modified by a variety of factors known as PMVs, referring to Table 4-1: Power Modifier Values. These modifiers allow players to customise their characters' Attributes, making each Attribute unique to the character. The description for each Attribute lists which PMVs are required, and which are optional. Required PMVs must be assigned at a minimum of Rank 1.

PMV Cost

Each Rank in a PMV costs 1 Character Point.

Area

Area modifies the radius of influence of the Attribute, centred on either the character (for Attributes with a Range of zero) or on a specific location (for Range Rank 1 or higher).

Duration

Duration determines the maximum period of time that the Attribute's effect will influence a target (requires no concentration to maintain after it is activated). In most cases (with the exception of Mimic; page 53), this only applies when the character is using an Attribute to affect someone or something else. Duration does not apply when using the Attribute to affect him or herself, since the character can simply reactivate the Attribute at will. At the end of an Attribute's Duration, its effects will cease.

Range

Range determines the distance at which the Attribute may be used. Range is a measure of how far away the centre of an Attribute can be manifested; it does not determine the area or number of targets affected (see Area and Targets). Attributes with the Range PMV at Rank 0 can only be used through contact with the target. Alternatively, if the Attribute has the Area PMV above Rank 0, characters may centre the effect upon themselves (or any other location within the Range).

Targets

Targets determines the maximum mass of objects and/or number of people, as is appropriate, that the Attribute can affect. A Rank of zero indicates that only the character can be affected; a Rank of 1 means that any single individual (including the character) or appropriate mass can be targeted. It should be noted that the target objects or people must still be within the Attribute's Area and Range to have an affect. For rules on using an Attribute against unwilling targets, see Using Attributes Against Opponents, page 101.

Zero Rank PMVs

What does it mean when an Attribute has an optional PMV at Rank zero? Can the Attribute still work? How does it function?

For Area, it means the Attribute affects a pinpoint area even smaller than a grain of sand. Unless the character is using the Attribute on him or herself or on an incredibly small target, its effect is virtually insignificant, unnoticed to almost everyone. It is appropriate to take the Area PMV at Rank zero if the character will only use the power to affect him or herself.

Duration of zero means the Attribute has an instantaneous effect. Since the effect of the Attribute vanishes instantly, nobody but the most perceptive people will be aware that anything happened. Consequently, most Attributes that list Duration as a PMV require it to be assigned, or the Attribute is virtually useless.

A Range of zero means that the Attribute can only be used on him or herself, or when touching a target. This restriction is appropriate for many Attributes that require contact to activate.

Targets at Rank zero means that the character can only affect him or herself with the Attribute — it cannot be used on other targets. Many Attributes have Rank zero Targets that only affect the character directly.

Consequently, if the character wishes to use his or her Attribute to affect other people than just him or herself, assigning PMVs at Ranks 1 or higher is necessary. If, however, the character simply wishes to affect him or herself, PMVs may not be required for the Attribute at all.

Table 4-1: Power Modifier Values

Rank	Area	Duration	Range	Targets
0	pinpoint	instantaneous	touch	self
1	10 cm	1 round	10 m	1 Person/50 kg
2	1 m	5 rounds	100 m	5 People/100 kg
3	10 m	1 min	1 km	10 People/500 kg
4	100 m	10 min	10 km	50 People/1 tonne
5	1 km	1 hr	100 km	100 People/5 tonne
6	10 km	12 hr	1,000 km	1,000 People/10 tonne
7	100 km	1 day	10 k km	10 k People/100 tonne
8	1,000 km	1 week	100 k km	100 k People/1,000 tonne
9	10 k km	1 month	1 M km	1 M People/10 k tonne
10	100 k km	6 month	10 M km	10 M People/100 k tonne

• PMVs • How do they work?

The Power Modifier Value Chart allows players to create distinct applications of the same Attribute. By assigning a certain Rank in a PMV to an Attribute, you will create different variations of the base use. By using the PMVs for Area, Range, and Targets you can create a specific version of the Attribute that works very differently than another character's. In short, the PMVs allow you to push Attributes beyond their standard mechanics and use them in new and innovative ways.

Attribute Progression

The effects of each Attribute improve as its Level increases. Most Attribute description indicates which column of Table 4-2: Progression Charts you should reference when determining the game effect of the Attribute. For example, Agents (page 43) has a Progression of "Slow." When determining the game effect of Agents, the player looks at the Slow column of Table 4-2: Progression Charts and cross-references it with the Rank equal to his or her character's Level in the Attribute. Thus, if his or her character had Agents at Level 3, the character would command four agents.

Some Attributes begin the progression at a higher Rank on the Chart. For example, Flight (page 49) has a Progression of "Medium Progression Chart, starting at 10 kph." Thus, the Level 1 effect of Flight (10 kph) is equal to Rank 3, or two ranks higher than the Level of the Attribute. Therefore, if a character had Flight at Level 6, the player would reference Rank 8 on the Medium Progression Chart and see that his or her character could fly at speeds up to 5,000 kph.

Sliding Up and Down the Metric Scale

Since Tri-Stat dX uses the metric scale, converting between units of measure is easy. For example, Creation has a Progression of "Medium Progression Chart, starting at 1 kg." Following Table 4-2, the Attribute at Level 7 would function at 1,000 kg. Of course, 1,000 kg equals 1 tonne, so the progression is effortlessly converted to tonnes: Level 7 is 1 ton, Level 8 is 5 tonnes, and so on.

Descriptive or Special Progression

If the Attribute indicates a descriptive progression, read the Attribute entry for more information.

Linear Progression

If an Attribute follows a linear progression, the advancement per Level is indicated clearly. For example, the entry for Tough reads, "Linear; +20 Health Points each Level."

Reversed Progression

A few rare Attributes require a reversed progression as the Level of the Attribute increases. Contamination, for instance, has a Progression of "Time Progression Chart Reversed, starting at 6 months." Thus, the Level 1 effect for Contamination is equal to Rank 11 on the Time Progression Chart. For each additional Level of the Attribute, the Rank decreases by one.

Table 4-2: Progression Charts

Rank	Fast	Medium	Slow	Time
1	1	1	1	10 Initiative
2	10	5	2	1 round
3	100	10	4	5 rounds
4	1 k	50	8	1 min
5	10 k	100	15	10 min
6	100 k	500	30	1 hr
7	1 M	1 k	60	12 hr
8	10 M	5 k	125	1 day
9	100 M	10 k	250	1 week
10	1 B	50 k	500	1 month
11	10 B	100 k	1,000	6 month
12	100 B	500 k	2,000	1 year
13	1 T	1 M	4,000	10 year
14	10 T	5 M	8,000	100 years
15	100 T	10 M	15,000	1 k years
16	1 Q	50 M	30,000	10 k years
17	10 Q	100 M	60,000	100 k years
18	100 Q	500 M	125,000	1 M years
19	1 Quint	1 B	250,000	10 M years
20	10 Quint	5 B	500,000	100 M years

k = Thousand M = Million B = Billion
T = Trillion Q = Quadrillion Quint = Quintillion

Attribute Restrictions

Players may wish to assign the Restriction Defect (page 81) to one or more of their characters' Attributes, thereby reducing the Attribute's total cost by 1 to 3 Points (or sometimes more). The description of each Attribute lists some example Restrictions that are appropriate for the Attribute. GMs, however, are always the final arbiter of whether or not a Restriction is acceptable for an Attribute.

Attribute Reductions

In addition, players can assign the Reduction Defect (page 81). Reductions decrease the Attribute's cost per Level by a number of Character Points, determined by the severity of the Reduction. NOTE: An Attribute must always cost at least 1 character point.

Attribute Entries

The Attribute entries in the following section indicate: the Character Point cost; the Stat most often relevant to the Attribute's use should a check be needed; the associated required and optional Power Modifier Values; the Attribute's Level progression; several suggested limitations to the Attribute (for the Restriction and Reduction Defects); and finally the Attribute's game effects.

Attributes

Adaptation

Type: Special
Cost: 1 Point/Level
Relevant Stat: Body
Required PMVs: None
Optional PMVs: None
Progression: Linear; +1 environment each Level
Reduction: None
Restrictions: Time limit; no Armour; naked form only

The character can adapt to survive in a number of environments hostile to ordinary humans equal to his or her Adaptation Level. Examples of hostile environments include: acidic/basic liquids, extreme pressure, intense cold, intense heat, noxious gases, radiation, underwater (the ability to "breathe" water), and vacuum (low pressure, not the absence of air). Adaptation does not apply to non-human characters whose natural environment is not the Earth's atmosphere (such as a cybernetic mermaid living in the ocean). In these cases, the character must assign Adaptation (Earth Atmosphere) to survive in normal human environments. Surviving in low- or no-oxygen environments is a Special Defence Attribute (page 65), not Adaptation.

The Attribute also provides 5 points of Armour against environmental conditions and attacks similar to the adapted environment. For example, Adaptation (Heat) provides Armour while in the desert heat and against fiery blasts, while Adaptation (Pressure) provides Armour while deep-sea diving and against a crushing gravity attack. In most natural Earth environments, this Armour provides complete protection against the elements. Adaptation can thus be viewed as a very limited form of the Armour Attribute in many situations. A character with even Level 1 Armour gains the benefits of Adaptation against damage due to environmental conditions. Armour does not protect against specific hostile environments that have less tangible damaging effects, such as extra dimensional, noxious gases, and underwater.

Table 4-3: Attributes

Attribute Name	Cost per Level	Progression	PMVs	Relevant Stat	Page
Mundane Attributes:					
Agents	5	Slow	None	Soul	43
Attack Combat Mastery	3	Linear	None	None	44
Combat Technique	1	Linear	None	None	45
Defence Combat Mastery	2	Linear	None	None	47
Divine Relationship	1	Linear	None	None	47
Extra Attacks	8	Linear	None	None	48
Extra Defences	3	Linear	None	None	48
Features	1	Linear	None	None	48
Gadgeteer	2	Slow	None	Mind	49
Gadgets	2	Linear	None	None	49
Heightened Awareness	1	Linear	None	Body/Mind	50
Henchmen	1 or 2	Slow	None	Soul	50
Highly Skilled	1	Linear	None	None	51
Item of Power	3 or 4	Linear	None	Soul	52
Massive Damage	2 or 5	Linear	None	None	53
Organisational Ties	1, 2, 3	Descriptive	None	Soul	58
Servant	2 or 6	Linear	None	None	60
Tough	2	Linear	None	None	67
Unique Attribute	1-10	Variable	Variable	Variable	68
Wealth	3	Medium	None	None	68
Special Attributes:					
Adaptation	1	Linear	None	Body	42
Alternate Form	2, 3, or 9	Linear	None	Body	44
Armour	1 or 3	Linear	None	Body	44
Block Power	1 or 6	Linear	None/A,D,T	Soul	45
Contamination	2 or 4	Time Rev	T/A,R	Body	46
Creation	2 or 3	Medium	D/R	Mind/Soul	47
Elasticity	2	Descriptive	None	Body	47
Enhanced [Stat]	2	Linear	None	None	47
Environmental Influence	1	Linear	A,D/R	Soul	48

Attribute Name	Cost per Level	Progression	PMVs	Relevant Stat	Page
Special Attributes (continued):					
Extra Arms	1	Slow	None	None	48
Features	1	Linear	None	None	48
Flight	2, 3, 4	Medium	None	Body	49
Healing	4	Linear	T/A,R	Body/Soul	50
Heightened Awareness	1	Linear	None	Body/Mind	50
Heightened Senses	1	Linear	None	Body/Mind	50
Illusion	1, 2, 3, 4	Fast	A,D,T/R	Mind	51
Invisibility	2 or 3	Linear	None/A,T	Body	51
Jumping	1	Medium	None	Body	52
Land Speed	1	Slow	None	Body	52
Metamorphosis	5	Linear	R, T/A, R	Mind/Soul	53
Mimic Powers	7 or 10	Linear	None/D,R	Mind	53
Mind Control	2, 3, 4, 5	Variable	D,T/A,R	Mind	56
Mind Shield	1	Linear	None/A,R,T	Mind/Soul	56
Natural Weapons	1	Linear	None	None	57
Nullify	7 or 12	Linear	T/A,D,R	Soul	57
Power Flux	5, 10, 15, 20	Linear	Special	Variable	58
Regeneration	6	Linear	None	Body	59
Reincarnation	2 or 4	Time Rev	None	Soul	59
Sensory Block	1	Linear	A,D/R	Mind	59
Sixth Sense	1	Linear	A/None	Soul	60
Special Attack	1 or 4	Linear	None	None	60
Special Defence	1	Linear	None	Variable	65
Special Movement	1	Linear	None	Body	65
Speed	6	Medium	None	Body	66
Superstrength	4	Medium	None	Body	66
Telepathy	1, 2, 3	Descriptive	T/A,R	Mind	67
Transfer	5 or 10	Linear	D/R	Soul	68
Unique Attribute	1-10	Variable	Variable	Variable	68
Water Speed	2	Medium	None	Body	68

Agents

Type: Mundane
Cost: 5 Points/Level
Relevant Stat: Soul
Required PMVs: None
Optional PMVs: None
Progression: Slow Progression Chart, starting at 1 Agent
Reduction: Built on fewer Character Points
Restrictions: Agents have further limited Stats/Attributes/Defects/Skills

The Agent Attribute represents mercenary employees, hired guns, researchers, or fanatical followers. Unlike Henchmen, Agents are often well trained, and can become reasonably dangerous. Agents fill the gap between Henchmen and Servants, allowing for a squad of effective, capable followers.

Individual Agents are NPCs. All of the character's Agents normally have identical Stats and Attributes, although Skills may vary. A character may have followers with varied Stats or Attributes, but each one counts as two Agents. Agents are built on 30 Character Points, and have 10 Skill Points. For every additional +2 Points spent, however, they all gain 8 Character Points. It is recommended that the Character Point total for the Agents not exceed one-quarter to one-half the character's Point total.

Agents will fight for the character, although they need not be soldiers. Many advisors, scientists, or even lawyers fall under this Attribute. Agents, due to their secondary nature to the story, should usually not have the following Attributes: Agents, Henchmen, Servant, Special Attack, or Transfer.

Alternate Form

Type: Special
Costs: 2, 3, or 9 Points/Level
Relevant Stat: Body
Required PMVs: None
Optional PMVs: None
Progression: Linear; +10 Character Points for the Alternate Form each Level
Reduction: Fewer Character Points awarded
Restrictions: Under certain conditions, time limit, requires special equipment

A character with Alternate Form can instantaneously transform into one other specific form that is determined during character creation and approved by the Game Master. Once selected, the form cannot be altered. Alternate Form allows the character to possess a radically different body shape than his or her normal human form, and exhibit exotic physical features as well.

If a character only has a single, permanent, non-human form, this Attribute should not be applied. Instead, the character must acquire the relevant Attributes and Defects that best represent the form's capabilities. A character with several different Alternate Forms should assign this Attribute multiple times. The Attributes gained in the character's Alternate Form obviously cannot be Dependent (page 78) upon the Alternate Form Attribute. Different Alternate Forms can be built with different Attribute Levels as well. To create a character with unlimited additional forms, see the Power Flux Attribute (page 58) with a Shapeshifting speciality.

Partial-Powered Form (3 Points/Level)

The form is built from 10 Character Points for each Alternate Form Level, which can be used to acquire Stats, Attributes, and Defects. The character's Stats all drop to zero and thus must be raised with the Alternate Form's new Character Points; Derived Values also must be recalculated. Additionally, the character's regular Attributes, Skills, and Defects no longer function in the Alternate Form, though the GM may decide that some Attributes (such as Gadgets, Henchmen, Organisational Ties, Wealth, and others) and some Defects (such as Achilles Heel, Bane, and others) still retain their effects. Defects can also be assigned to the new Form to provide additional Character Points. Unless the GM indicates otherwise, normal clothing becomes part of the Alternate Form as well.

Full-Powered Form (9 Points/Level)

The form is built from 10 Character Points for each Alternate Form Level, which can be used to acquire Attributes and Defects. The character retains all the Stat Values, Attribute Levels, Skill Levels, and Defect Bonus Points associated with his or her regular form. The newly acquired Attributes and Defects add to the character's normal form. If the character's Stats are modified by the Enhanced [Stat] Attribute or Less Capable [Stat] Defect, the Derived Values should be recalculated as necessary. Unless the GM indicates otherwise, normal clothing becomes part of the Alternate Form as well.

Cosmetic Changes (2 Points)

A "Level 0" option of the Alternate Form Attribute is also available at the cost of 2 Character Points. This Level allows a character to undergo several cosmetic changes that confer no additional abilities on the target. This includes: a 10% size increase or decrease, change of gender, 50% age increase or decrease, colour changes (eye, skin, or hair), and minor physical changes (shape of ears, facial features, or bodily proportions). This can also add the Features (Appearance) Attribute or Unappealing Defect.

Armour

Type: Special
Cost: 1 or 3 Points/Level
Relevant Stat: Body
Required PMVs: None
Optional PMVs: None
Progression: Linear; +10 damage reduction each Level
Reduction: Reduced Armour values
Restrictions: Needs repairs; cumbersome and restricts movement; under certain conditions

The Armour Attribute represents actual armoured plates, or simply skin or clothing that is highly resistant to damage. It is most often found on combat vehicles, cyborgs, androids, giant monsters, and powerful beings.

Armour reduces the damage that is inflicted on the character or structure (see Chapter 7: Game Mechanics). Armour reduces the damage of each attack by 10/Level (20/Level for Shield). The base cost for Armour is 3 Points/Level.

A number of options are available for the Armour Attribute, which alter the Attribute's Point cost or modify the Armour's effectiveness. The minimum Point cost of Armour, regardless of options, is 1 Character Point.

Partial

The Armour has a small thin area (half Armour value, -1 to Point cost) or an unarmoured area (no Armour value, -2 to Point cost) that can be targeted using a Called Shot (page 93). Point cost reductions apply to the total cost of Armour, not the cost per Level.

Optimised Armour

The Armour is focused against a particular uncommon attack form. Eligible attack forms include electricity, cold, laser beams, fire/heat, energy blasts, etc. Armour cannot be optimised against broad categories such as blunt impacts or piercing weapons, however. Optimised Armour provides doubled protection against the chosen attack form only, and no protection against other forms. A character can acquire both Optimised Armour and ordinary Armour by assigning the Armour Attribute twice.

Shield Only

The Armour does not cover the character's entire body. Instead, it is a shield that the user must deliberately interpose in front of a melee or unarmed attack using a Block Defence (page 96). The character must also possess the Combat Technique (Block Ranged Attacks) Attribute to use the shield in a Block Defence against ranged attacks. If the character successfully defends, the shield's Armour can protect against 20 damage each Level (rather than 10). This option reduces the cost of Armour to 1 Point/Level (rather than 3 Points/Level).

Attack Combat Mastery

Type: Mundane
Cost: 3 Points/Level
Relevant Stat: None (uses Combat Value)
Required PMVs: None
Optional PMVs: None
Progression: Linear; +1 Attack Combat Value each Level
Reduction: None
Restrictions: None

Attack Combat Mastery denotes either an innate "killer instinct" or the character's intimate knowledge of a wide range of offensive combat techniques covering all aspects of armed and unarmed encounters (including Special Attacks

and ranged weapons). Individual Combat Skills (page 75) let a character specialise with particular weapons or specific styles, but Attack Combat Mastery allows a character to pick up any weapon (or use none at all) and be dangerously proficient. See page 84 for more information on the Attack Combat Value.

Block Power

Type: Special
Cost: 1 or 6 Points/Level
Relevant Stat: Soul
Required PMVs: None
Optional PMVs: Area, Duration, Targets
Progression: Linear; -1 Check Value penalty to effect character using +1 specific Attribute each Level
Reduction: More than one but less than all
Restrictions: Under certain conditions; against broad or specific group of people; weak against an Attribute

Opponents have difficulty affecting the character with specific Attributes because the Attributes' effects are blocked. For 1 Point/Level the character can block one Attribute at each Level, which must be determined during character creation (or when Block Power is assigned as advancement). In the case of the Special Attack Attribute, only another character's single, specific attack is blocked (which reduces an enemies chance to hit the character). For 6 Points/Level, the character can block all Attributes, including all Special Attacks (they suffer a penalty to hit the character but if they do hit, they have full effect). The Duration PMV only applies when the character is using Block Power to stop specific Attributes from affecting a willing or unwilling target, rather than him or herself. Targets cannot be blocked from the effects of their own Attributes, however.

When an opponent targets the character, he or she must make a successful Stat check at a -1 penalty for every Level of the target character's Block Power Attribute. If the check fails, the Attribute does not affect the character (although a multi-target Attribute may still affect the other targets). The base Check Value is determined by the "Relevant Stat" of the Attribute used. If no Stat is indicated, the Soul Stat is used as a default. If the check succeeds, the target character is affected by the Attribute as normal.

Combat Technique

Type: Mundane
Cost: 1 Point/Level
Relevant Stat: None (uses Combat Value)
Required PMVs: None
Optional PMVs: None
Progression: Linear; +1 technique each Level
Reduction: None
Restrictions: Under certain conditions; against broad or specific group of opponents; with specific weapons or weapon groups

The Combat Technique Attribute allows a character to perform astounding feats with a wide variety of melee or ranged weapons, or special attacks. For a listing of penalties associated with some special combat manoeuvres, see page 95. Each Level gives the character one combat technique; the Game Master will determine if a specific manoeuvre can be assigned multiple times. The GM and players are encouraged to develop their own combat techniques as well.

Accuracy

The character suffers reduced dice penalties when attempting an accurate attack, such as striking at partial Armour, weak points, or vital spots, shooting at longer-than-usual ranges. Accuracy is also used when attempting a special trick shot, such as carving an initial on someone's body or ricocheting an arrow off a wall to shoot a target around a corner, and when using the Deflection or Reflection techniques (see below). Each difficulty penalty is reduced by 2 (to a minimum of 0). For example, attacking a vital spot (-8 penalty) would become a -6 penalty, while firing at double range (-4 penalty) would receive -2 penalty.

Blind Fighting

The character does not suffer penalties associated with attacking or defending with melee weapons or while unarmed in poor light, absolute darkness, or against an invisible opponent.

Blind Shooting

The character suffers half penalties associated with attacking with ranged weapons in poor light, absolute darkness, or against an invisible opponent. This technique can be assigned twice to reduce the penalty to zero. The character must be capable of detecting the general presence of the target, however, through one of his or her senses (smell, hearing, sixth sense, etc.).

Block Ranged Attacks

Under normal circumstances, a character cannot use a Block Defence (page 96) against a ranged attack. With this technique, a character gains this defensive option.

Concealment

The character has an unearthly ability to conceal weapons about his or her person. As long as the character has something to hide the weapons (even if it only long hair or a light robe) the character's weapons will not be noticed by anything short of an actual physical search, and such a search is conducted at a -8 Check Value penalty. A Special Attack weapon with the Concealable Ability is even harder to find: searches suffer a -12 Check Value penalty.

Deflection

If the character makes a successful Block Defence, he or she can deflect a standard melee or ranged attack away harmlessly without damaging the blocking object. The GM may decide that some types of attacks cannot be deflected. When trying to deflect a Special Attack (page 60), the Block Defence roll is penalised: -2 for each Level of the Special Attack.

Hardboiled

The character is a survivor, willing to endure great pain and push his or her body past normal limits. Each time this Technique is assigned, the character gains a +10 bonus to his or her Shock Value (page 84).

Judge Opponent

The character can judge his or her opponent's approximate Combat Value and weapon Skill Levels from the foe's attitude and posture even without actually seeing him or her fight. Additionally, the character can accurately estimate the opponent's remaining Health Points. For both of these advantages, the GM may decide to provide descriptive indications such as "your enemy is much better than you with a sword, but if you nail him with both shotgun barrels, it will drop him", rather than saying "the enemy's ACV is 12, with a Melee Attack (Sword) Skill of 2, and he has 30 Health Points remaining."

Leap Attack

The character can make leaping attacks, delivering additional damage due to momentum. Any time the character has a higher Initiative than his or her opponent, he or she may attempt a leaping attack. If the strike is successful (it hits and the target fails a defence) the character gets an extra +5 bonus to damage and may additionally add his or her Acrobatics Skill Level (if any) to the damage. If the

character fails to hit, however, or the opponent succeeds with his or her defence, the character is off balance and receives a -2 penalty to any further defence checks until his or her turn to act in the following round.

Lightning Reflexes

The character reacts quickly in combat and frequently outmanoeuvres opponents. Each time this technique is selected, the character gains +5 to all his or her Initiative rolls.

One Shot Left

The character will always have at least one projectile remaining for his or her ranged weapon, even after an extended combat. This might be a final bullet in a gun, arrow in a quiver, power cell in a laser, or stone in a sling. This option does not remove the need to reload weapons in a game that uses realistic ammunition rules, but rather assures that the character will not be forced to reload at a critical moment. One Shot Left does not affect weapons or attacks built using the Limited Shots Disability (page 64).

Portable Armoury

The character will always have easy access to any weapon required for a particular task, including illegal weapons and accessories not available to the general public. The actual weapons and accessories must still be acquired via the Gadgets Attribute (page 49), but remarkably, the character can access them whenever he or she needs them instead of being forced to return to where they are normally stored. Characters with Portable Armoury may also make field modifications on their weapons, switching options such as laser sights or scopes in a single round.

Reflection

If the character has the Deflection Combat Technique (see above) and makes both a successful Deflection defence and a successful attack roll (which uses an attack action), he or she can reflect a standard melee or ranged attack towards any target within range (including the attacker) without damaging the blocking object. This Reflection is treated as a normal attack against the target using standard attack rules. The GM may decide that some types of attacks cannot be reflected.

Steady Hand

This is the ability to use Attack Combat Skills with ease while the character is moving quickly (running at full speed, flying at high speeds, riding in a vehicle, etc.) or otherwise engaged in complex stunts. This greatly reduces the penalties a character normally suffers for attacking while in motion. Each penalty is reduced by 2 (to a minimum of 0). A character with this ability may also use weapons in conjunction with the Acrobatics Skill, and may aim while they are moving.

Two Weapons

The character can effectively fight with two melee or ranged weapons at once against the same or different targets, provided both weapons are designed for one-handed use. When using two weapons, the character can attack twice using the normal Two Weapons rules (page 93), but the penalty for doing so is reduced by 2 (to a minimum of 0). Alternatively, the character can attack with one weapon and defend with another receiving a -2 penalty to attack checks he or she makes but adding a +2 bonus to his or her defence checks vs. melee or unarmed attacks. This bonus lasts until the character's turn in the following round.

Weapons Encyclopaedia

A character has the ability to recall the vital statistics and important quirks of practically all known commercially available weapons. This includes, but is not limited to, its general level of reliability as well as all vital statistics — material composition, manufacturer, ammunition capacity, calibre, model year, possible outfitted accessories, etc. Characters without this ability will only have such information on weapons they actually own or use regularly and will need to successfully roll a Mind-based Military Science (Hardware Recognition) Skill check to recall important details. In addition, Weapons Encyclopaedia also includes knowledge on acquiring weapons, so characters will have a +4 bonus on any Street Sense or Business Management Skill checks needed to locate or buy legal or illegal weapons.

Contamination

Type:	Special
Cost:	2 or 4 Points/Level
Relevant Stat:	Body
Required PMVs:	Targets
Optional PMVs:	Area, Range
Progression:	Time Progression Chart Reversed, starting at 6 months
Reduction:	Partial effectiveness
Restrictions:	Under certain conditions; specific targets; temporary change

This Attribute represents the character's ability to transform other people (or animals, or objects) into entities like him or herself. Frequently, this victim can then contaminate even more people. The method should be specified when the character is created. Perhaps the character's blood or software carries an agent or virus that, when ingested or run, mutates the person over a matter of hours or days. Alternatively, the character might lay an egg or seed (real or metaphorical) in the body of his or her prey, which will later hatch within the victim, killing him or her as a new entity is born. Whatever the case, the conditions under which the victim can become "contaminated" must be specified.

For 2 Points/Level, contamination is "difficult" — the victim must be willing, unconscious, or restrained for deliberate contagion to occur, or the target must perform an unusual activity (such as removing the target's brain and inserting it in a robot body, or deliberately installing a new chip in someone's head. Computer viruses that are routinely stopped by normal anti-virus systems might also count as difficult).

For 4 Points/Level contamination is "easy" — the contagion might be the cyberpunk equivalent of a traditional werewolf attack, where a scratch or bite results in a victim becoming transformed. This could be suitable for exotic nanotechnology or super-effective computer viruses. The GM can add special conditions, limitations, or effects to ensure that becoming a monster is a curse and not a blessing.

The higher the Level of Contamination, the faster the transformation occurs. There should always be some means of curing or delaying the eventual mutation, however. Possible cures include the death of the creature that inflicted the contaminant, radical surgery, blood transfusion, or a successful mystical healing.

The GM will decide whether a player character who is turned into a new entity remains in the player's control or is reclassified as an NPC. Any retention (dreams, memories, etc.) of the victim's former existence depends on the nature of the contamination and whether the victim has been "transformed," "devoured," or "reborn" in the process. A person who has been successfully contaminated will usually gain a certain number of Attributes "paid for" with the Bonus Points acquired by assigning new character Defects (often including Cursed, Ism, Marked, Permanent, and Owned, the last one representing servitude to his or her new master). Thus, an artificially intelligent computer virus might infect other computers and take them over, or turn them into entities like itself. The GM should be wary of potentially undesirable possibilities such as a free willed nanotech-based robot character infecting the entire group of characters, thereby creating an entire group of super-nanobots.

The Contamination Attribute usually allows the creator or mother some measure of control over the newly transformed character. In these instances, the Level of Contamination is added as a favourable modifier to any Mind Control attempts performed against the subject.

A variation to Contamination inflicts the target with some sort of curse or disease, rather than transforming him or her into a different type of creature. Examples of these afflictions include rapid ageing, debilitating diseases, sensitivity to specific elements, etc.

Creation

Type: Special
Cost: 2 or 3 Points/Level
Relevant Stat: Mind or Soul
Required PMVs: Duration
Optional PMVs: Range
Progression: Medium Progression Chart, starting at 1 kg
Reduction: Very specific utility
Restrictions: Under certain conditions; creation is visually flawed; limited control over actual object created

This Attribute allows a character to create a non-living object (or set of connected objects, like clothing or a gun and its ammunition). Creation costs 3 Points/Level if the character can create anything (within the limits of his or her Level). It costs 2 Points/Level if the creation is limited to a general class of objects such as "metal," "weapons," "clothing," or "food."

The character cannot create new objects outside his or her experience. The character could create a book, painting or videotape, but the content must be something with which he or she was already familiar. Likewise, a character who had no familiarity with guns could not create one using Creation. The GM may choose to require a Mind Stat check (or relevant Skill check) if the character attempts a particularly complex creation. Failure may indicate the created object does not function properly, or is otherwise flawed; this is especially applicable when creating complex technological devices. Unless the GM decides otherwise, Creation is only able to make objects that could be classified as Gadgets; it cannot create Items of Power.

The created object will remain in existence for a period of time indicated by the Duration PMV.

Defence Combat Mastery

Type: Mundane
Cost: 2 Points/Level
Relevant Stat: None (uses Combat Value)
Required PMVs: None
Optional PMVs: None
Progression: Linear; +1 Defence Combat Value each Level
Reduction: None
Restrictions: None

Defence Combat Mastery denotes either an innate "danger instinct," or the character's intimate knowledge of a wide range of defensive combat techniques covering all aspects of armed and unarmed encounters (including Special Attacks and ranged weapons). Individual Defence Combat Skills (page 75) let a character specialise with particular weapons or specific styles, but Defence Combat Mastery allows a character to pick up any weapon (or use none at all) and still proficiently defend. See page 84 for more information on the Defence Combat Value.

Divine Relationship

Type: Mundane
Cost: 1 Point/Level
Relevant Stat: None
Required PMVs: None
Optional PMVs: None
Progression: Linear; +1 dice re-roll per game session each Level
Reduction: None
Restrictions: Time limitation; combat checks; Stat/Skill checks

A character possessing a Divine Relationship may have powerful forces acting as his or her guardian, which can beneficially influence the outcome of important events. Alternatively, the character may be really lucky, have great karma, or can subtly influence his or her surroundings with thought alone. This relationship is represented through the re-rolling of undesirable dice rolls (this includes undesirable re-rolls as well). The player may choose to use the original roll, or any of the re-rolls, when determining the success of the action. The Level dictates the number of times dice can be re-rolled in a single role-playing session, though the GM can alter this time frame as desired.

Elasticity

Type: Special
Cost: 2 Points/Level
Relevant Stat: Body
Required PMVs: None
Optional PMVs: None
Progression: Descriptive
Reduction: Attribute always used in same way
Restrictions: Time limit; naked form only; stretching inflicts pain

The character can stretch or contort his or her limbs and/or body to a superhuman degree, perhaps as a result of telescoping robot or cybernetic limbs. Increased Levels not only provide greater flexibility, but also the control over fine manipulation (such as using a stretched finger to move specific tumbling mechanisms on a key lock). At high Levels, characters can squeeze under doors and through small holes, as well as mimic crude shapes. While stretched, the character receives +1 Unarmed Attack/Defence (Grappling) Skill bonuses for each Level of Elasticity. Extremely malleable characters — who can contort their bodies into a virtually unlimited number of shapes to gain the benefits of other Attributes — should acquire the Power Flux Attribute (page 58), rather than Elasticity.

Level 1-3 The character can stretch 1 (L1), 2 (L2), or 3 (L3) body parts up to 5x their regular dimensions.

Level 4+ The character can stretch his or her entire body. The length the body can be stretched follows the Medium Progression Chart, starting at 10 metres (Level 4).

Enhanced [Stat]

Type: Special
Cost: 2 Points/Level
Relevant Stat: None
Required PMVs: None
Optional PMVs: None
Progression: Linear; +1 Stat Value each Level
Reduction: None
Restrictions: Only under certain conditions, time limit, does not apply to all dice rolls

This Attribute is useful when a character should have one or more high Stat Values, but the player wants to indicate that the elevated Stats were gained after a

particular event (such as cybernetic enhancement) occurred. For most instances, assigning Character Points to the Enhanced [Stat] Attribute or to the Stat directly results in the same benefit: a character with a Body of 15 or a Body of 7 with Enhanced [Body] at Level 8 both have a Body of 15.

Environmental Influence

Type: Special
Cost: 1 Point/Level
Relevant Stat: Soul
Required PMVs: Area, Duration
Optional PMVs: Range
Progression: Linear; influence over +1 environment each Level
Reduction: None
Restrictions: Very specific influence effect, only under certain conditions, easy to counteract

The character can initiate minor influence over environmental conditions such as light, darkness, heat, cold, sound, specific weather conditions, etc., as determined by the GM. The control is not sufficient to inflict significant damage on individuals or objects within the Area PMV of influence unless the target is particularly susceptible to damage from that environment (such as delicate plants dying from cold air). For damaging environmental effects, the character should acquire the Special Attack Attribute (page 60) with the Dependent Defect (page 78). For enhanced influence over the environment (such as weather control), see Power Flux (page 58).

Extra Arms

Type: Special
Cost: 1 Point/Level
Relevant Stat: None
Required PMVs: None
Optional PMVs: None
Progression: Slow Progression Chart, starting at 1 extra arm
Reduction: None
Restrictions: Extra arms are cumbersome; arms only function sometimes; arms are awkwardly placed

Unless indicated otherwise, all characters possess two arms and hands. By assigning this Characteristic Attribute, the character can acquire more. An "arm" is defined loosely as an appendage that can reach out and manipulate objects. A trunk, tentacle, or prehensile tail is an arm; an appendage that simply ends in a gun-barrel, melee weapon, stump, or tool mount is not. Legs with paws or feet are not usually considered to be "arms" unless the character has good manipulation ability when using them (such as the way chimpanzees can use their feet to grasp objects). Extra arms are useful for holding onto several things at once, but do not give extra attacks (for that ability, see Extra Attacks Attribute, below).

Possessing only one arm or no arms is reflected by the Physical Impairment Defect (page 81).

Extra Attacks

Type: Mundane
Cost: 8 Points/Level
Relevant Stat: None
Required PMVs: None
Optional PMVs: None
Progression: Linear; +1 attack per round each Level
Reduction: Less often than each round
Restrictions: Extra attacks must all be similar in nature; only extra melee attacks; only extra ranged attacks

This Attribute reflects the character's ability to use every offensive combat situation to his or her benefit. Each round, the character may make one or more additional offensive or non-combat actions. In addition, unless two or more opponents are very close together, armed or unarmed hand-to-hand attacks must target the same person.

The GM must decide when the character can use his or her extra attacks. The suggested method spreads the actions roughly evenly over the character's Initiative range. For example, if a character had three attacks and rolled an Initiative of 18, he or she would attack on Initiative numbers 18, 12, and 6. If the enemy rolls an Initiative of 35 and has 5 attacks, he or she can attack on Initiative numbers 35, 28, 21, 14, and 7. This option has the advantage that it spreads actions over the entire combat round, but it involves the player paying closer attention to the Initiative numbers. Alternatively, the attacks may be carried out at the same time during the character's single Initiative.

Extra Defences

Type: Mundane
Cost: 3 Points/Level
Relevant Stat: None
Required PMVs: None
Optional PMVs: None
Progression: Linear; +1 defence per round each Level
Reduction: Less often than each round
Restrictions: Extra defences must all be similar in nature; only extra melee defences; only extra ranged defences

This Attribute reflects the character's ability to use every defensive combat situation to his or her benefit. Each round, the character may make one or more additional defensive or non-combat actions. Additionally, penalties for performing more than one defensive action each round only apply after the extra defences are used. For example, a -4 penalty is applied to the fifth defence for a character with Level 3 Extra Defences.

Features

Type: Mundane/Special
Cost: 1 Point/Level
Relevant Stat: None
Required PMVs: None
Optional PMVs: None
Progression: Linear; +1 feature each Level
Reduction: None
Restrictions: None

The character possesses various secondary abilities that grant useful, but minor, advantages.

Special Features are typically possessed by non-humans or humans who have undergone bioware or cyberware modifications and reflect various, minor biological or technological advantages. Examples of racial features include homing instinct, secondary eyelids, longevity, a pouch, feathers, soft fur, moulting ability, scent glands, diagnostic equipment, gyrocompass, etc. A wide range of other Attributes covers other more useful features such as gills, wings, fangs, and enhanced senses.

A Mundane Feature is appearance, representing beauty, cuteness, or good looks. Assigning appearance multiple times indicates heightened levels of extreme beauty.

Note: A minor Gadget (page 49) that is implanted into the body is a Feature; an implanted major Gadget counts as four Features.

Flight

Type:	Special
Cost:	2, 3, or 4 Points/Level
Relevant Stat:	Body
Required PMVs:	None
Optional PMVs:	None
Progression:	Medium Progression Chart, starting at 10 kph
Reduction:	Limited control
Restrictions:	Under certain conditions; time limit; Stat/Skill check required to fly safely

A character with Flight can fly through an atmosphere or in space. The method used to achieve flight can vary greatly: wings, rotors, rockets, or some other technique. Flight can also represent the ability to move three-dimensionally in cyberspace.

Depending on the speed at which the character is moving, opponents may suffer a penalty to hit the character (see Attacking Moving Targets, page 96). A fast-moving character may have an attack penalty as well.

Flight costs 4 Points/Level if the character can hover and fly at variable speeds, take off and land vertically, or stop in mid-air. This is the most common type of flight possessed by characters.

Flight costs 3 Points/Level if the flyer cannot hover, but instead flies like a normal airplane. Thus, the character needs a smooth surface or running start for landing and take off, and must maintain a minimum speed (at least 1/10 of his or her maximum speed) once airborne to avoid crashing.

Flight costs 2 Points/Level if the flyer is either a Skimmer/Hovercraft or a Glider:

Skimmer / Hovercraft

The character is limited to skimming no more than a metre or two off the ground or water. He or she may be riding on a cushion of air, magnetic lines of force, for example.

Glider

The flyer can only become airborne if he or she launches from a high place (like a tree or rooftop) or from a fast-moving vehicle. Additionally, he or she can only gain speed by diving, or gain altitude by riding thermals.

Gadgeteer

Type:	Mundane
Cost:	2 Points/Level
Relevant Stat:	Mind
Required PMVs:	None
Optional PMVs:	None
Progression:	Slow Progression Chart, starting at 2x normal building rate
Reduction:	Very specific utility
Restrictions:	Under certain conditions; specific types of machines; requires expensive/consumable equipment

The character has an innate knack for creating, modifying, and working with complex machines. Unlike someone who is merely well trained in a particular technical skill, a Gadgeteer is a natural and is able to flip through a tech manual for an advanced technology in 30 seconds and figure out a way to repair the machine in an hour or so. Most Gadgeteers have high Levels in Electronics and Mechanical Skills as well.

A character with this Attribute can also build new and modify existing Gadgets at an astonishing rate, provided he or she has appropriate parts and facilities. In game terms, this means he or she can modify existing Gadgets or technology-based Items of Power by exchanging Attributes and Defects, as long as the overall Point total is unchanged. A Gadgeteer can also build Gadgets and Items of Power, but their creation requires the character to allocate the appropriate number of Character Points.

Alternatively, the GM may describe this Attribute as "Software Gadgeteer," that allows a character to reprogram software Items of Power by exchanging Attributes and Defects.

Gadgets

Type:	Mundane
Cost:	2 Points/Level
Relevant Stat:	None
Required PMVs:	None
Optional PMVs:	None
Progression:	Linear; +1 major and +4 minor Gadgets each Level
Reduction:	Only major or minor Gadgets
Restrictions:	Limited functioning; poor workmanship; consumable

The Gadgets Attribute represents a character's access to useful equipment. A key feature of cyberpunk is brand-name technology. Almost every *Ex Machina* character should take at least one Level of Gadgets, and many will take multiple Levels.

Characters do not need to spend Character Points for items that are legal, inexpensive, and mundane in the campaign setting (such as clothing, a backpack, a knife, or consumer goods), unless taken in quantity (GM's option). For example, "a complete tool box" would be a single minor Gadget; a single wrench is mundane. GMs may ask players to allot Points to this Attribute, however, if their characters will begin the game with numerous pieces of equipment to which the average person might not have easy access such as weapons, body armour, or specialised professional equipment.

Gadgets cannot include secret prototypes or other equipment that is significantly more technologically advanced than what is standard in the setting (instead, see Item of Power Attribute, page 52). It can include common civilian vehicles appropriate to the setting (for example, a car, truck, motorbike, or even helicar in many cyberpunk worlds). Less common or more expensive vehicles should count as several items of gear. The GM always has the final say on whether or not an item is available to the characters. Some examples of Gadgets can be found in Chapter 10; using these as a base, the GM can create the statistics of other items.

Although characters may have items that are owned by the organisations to which they belong, they still must acquire these items as Gadgets if they will make regular use of them (though the Conditional Ownership Defect may apply; page 78). Thus, a police officer would use Gadgets for a pistol, police car, or handcuffs, although these items are property of the police department. This rule is intended mainly for play balance and, naturally, the GM has final say on this issue.

Each Level in this Attribute permits the character to take one major and four minor Gadgets. Alternatively, the character can exchange one major Gadget with an extra four minor Gadgets (or vice-versa). Use the guidelines below to differentiate between major and minor Gadgets:

Minor

The item is somewhat hard to get, or rather expensive. It is something available in a shop or store or from a skilled artisan, but it costs as much as an average person's weekly or monthly wage. Alternatively, the item can be less expensive but needs a license or black market contact to acquire. Non-standard items that modify or improve other items of gear, but are not functional by themselves (for example, a scope for a rifle, silencer for a pistol, or a supercharged engine for an automobile) are also minor Gadgets.

Classic cyberpunk examples of minor Gadgets include: weapon and vehicle modifications, handguns, premium medical kits, night vision goggles, designer drugs, burglary tools, expensive tool kits, and a wearable com or personal deck.

Major

The gear is usually illegal for civilians, but it may be issued to an elite law enforcement agency, a soldier, or a government agent. Examples of major Gadgets include sniper lasers, tactical armour, and grenade launchers. Major gear can also include quite expensive but commercially available equipment such as a supercomputer, workshop, air car, or motorbike. Very expensive items (such as an airplane, utility helicopter, science lab, or medical facility) counts as two or more items (GM's discretion).

Note: A Gadget that is implanted into the body is a Feature (page 48).

Healing

Type:	Special
Cost:	4 Points/Level
Relevant Stat:	Body or Soul
Required PMVs:	Targets
Optional PMVs:	Area, Range
Progression:	Linear; +20 restored Health Points each Level
Reduction:	Fewer Health Points restored
Restrictions:	Specific targets; specific wound types; character suffers damage when Healing others

This Attribute allows a character to heal a target's injuries (including him or herself; for continuous healing, see the Regeneration Attribute, page 59). At higher Healing Levels, the character can also revive someone who is "clinically" dead but not actually brain-dead (Level 3+), repair massive trauma such as lost limbs or organs (Level 5+), or restore a character who was cut in two (Level 7+). No healer can repair someone who was blown to bits, disintegrated, or dead for more than a few minutes, however.

The Attribute Level dictates the maximum number of Health Points that healers can restore to a particular target in a single day. This cannot be exceeded, even if multiple healers work on a subject; the combined Health Points restored cannot exceed the maximum Health Points that the character with the highest Level of Healing could restore. The subject must have at least a full day's rest before he or she can benefit from any additional healing.

Heightened Awareness

Type:	Mundane
Cost:	1 Point/Level
Relevant Stat:	Body or Mind
Required PMVs:	None
Optional PMVs:	None
Progression:	Linear; +2 Check Value bonus each Level
Reduction:	None
Restrictions:	Under certain conditions; situations detected by only one sense; specific situations

The character possesses a high degree of situational awareness. He or she is usually very alert and receives a Check Value bonus to notice nearby hidden things, such as concealed objects, ambushes, or anything else related to sensory awareness. The bonuses of Heightened Awareness are cumulative with those of Heightened Senses (page 50).

Heightened Senses

Type:	Special
Cost:	1 Point/Level
Relevant Stat:	Body or Mind
Required PMVs:	None
Optional PMVs:	None
Progression:	Linear; +1 sense or technique each Level
Reduction:	None
Restrictions:	Under certain conditions; weakened technique; adverse effects upon detection

A character with Heightened Senses has one or more senses that have been sharpened to a superhuman level of acuity. It can represent either the preternatural sharpening of a specific sense honed by special training (such as a blind person's trained sense of touch) or the enhanced senses of a technologically augmented character. Additionally, several Levels of Heightened Senses can reflect the capabilities of sensors built into spaceships and other commercial or military vehicles. For each Level of the Heightened Senses Attribute, the character will either gain one enhanced sense (Type I) or one sense technique (Type II). The character must make a successful Body Stat check to detect and pinpoint a specific target within a large area (for example, to listen to a specific conversation thought the background noise of the city).

The Heightened Awareness Attribute (page 50) allows for a lower Level of enhancement for all of a character's senses.

Type I

One of the character's five senses — hearing, smell, vision, taste, or touch — is enhanced, and can operate over an area of several city blocks (as appropriate). The character may take the same sense twice, which doubles the effect and extends the area of detection. A character using a Heightened Sense has a +4 bonus (+8 if the sense was heightened twice) on Stat checks that relate to using that sense to perceive things that someone with human-level senses might conceivably notice.

Type II

The character has one Heightened Sense technique, which extends beyond human capabilities. Examples of techniques include: electric current detection; infravision; magnetic field detection; microscopic vision; radar sense; radio reception; sonar detection; ultrasonic hearing; ultravision; vibration detection; X-ray vision. Most techniques only work at short range, often requiring line of sight.

Henchmen

Type:	Mundane
Cost:	1 or 2 Points/Level
Relevant Stat:	Soul
Required PMVs:	None
Optional PMVs:	None
Progression:	Slow Progression Chart, starting at 1 henchman
Reduction:	Fewer Henchmen available
Restrictions:	Limited to specific type of henchmen; henchmen consume the character's resources; henchmen have further limited Stats/Attributes/Defects/Skills

The Henchmen Attribute represents the extent of a character's loyal and dedicated human resources. Henchmen — sometimes known as groupies, stooges, toadies, or flunkies — are always eager to carry out the character's commands, and ask for very little in return. They always aim to please, even at their own expense.

For 1 Point/Level, the Henchmen are not warriors; they may get in the way of an enemy, or fight in self-defence, but will not attack. For 2 Points/Level, the Henchmen will take up arms at the request of their master. For specific talented and loyal battle-ready followers, see the Agents or Servant Attribute (page 43 and 60). Mercenaries who the character hires for specific tasks are not Henchmen, since they have an agenda and expect compensation.

Individual Henchmen are NPCs. All of the character's Henchmen normally have identical Stats and Attributes, although Skills may vary. A character may have followers with varied Stats or Attributes, but each one counts as two Henchmen. Each Henchman should be built on 20 Character Points (plus any Defects) and 10 Skill Points. Clearly, most Henchmen have focused abilities and numerous Defects (often including Inept Attack, Inept Defence, Less Capable, Marked, Not So Tough, Owned, and Wanted) to raise their Stats and Attributes to competent levels. The 1 Point/Level Henchmen should not possess the Attack Combat Mastery, Massive Damage, or Special Attack Attributes, nor should they have Combat Skills.

Highly Skilled

Type: Mundane
Cost: 1 Point/Level
Relevant Stat: None
Required PMVs: None
Optional PMVs: None
Progression: Linear; +10 Skill Points each Level
Reduction: None
Restrictions: None

A character with this Attribute is more experienced or better trained than an ordinary person, and as a result has more Skill Points (page 72) than an average adult. Acquiring several Levels of the Highly Skilled Attribute is the ideal method for creating a versatile character.

Illusion

Type: Special
Cost: 1-4 Points/Level
Relevant Stat: Mind
Required PMVs: Area, Duration, Targets
Optional PMVs: Range
Progression: Fast Progression Chart, starting at 10 cm radius area
Reduction: Illusion always the same
Restrictions: Under certain conditions; illusions are flawed in some way; usage inflicts pain

The character can create mental Illusions that fool one or more senses. An Illusion appears to be real to the targeted observers but is not really there; it has no physical substance, and characters who are not the target of the Illusion are unaffected. In *Ex Machina*, an Illusion is normally taken with a Restriction that limits it to working in cyberspace or a virtual reality.

An Illusion may be of a particular object or entity, or of a complete scene (such as a furnished room or crowd). It may also be created over an existing person, scene, or object to make it appear different than it really is. An Illusion that is untended is normally static, either remaining in one place or (if created over something) moving as the underlying object or entity moves. To give an Illusion the semblance of independent activity (such as an illusionary person or crowd that moves and speaks) the character must actively concentrate on manipulating the Illusion, and perform no other actions. The maximum amount of time an Illusion will remain in existence is dictated by the Duration PMV.

For 1 Point/Level the character can create Illusions that deceive one sense, usually sight (sense must be determined during character creation). For 2 Points/Level the Illusions can deceive two senses, usually sight and hearing. For 3 Points/Level they can deceive three senses, usually sight, hearing, and smell. For 4 Points/Level they can deceive all senses. No matter how realistic the Illusions, however, they can never cause physical sensations intense enough to inflict damage. An illusionary fire may feel hot, and a character may believe that he or she is burning, but the fire cannot actually deliver damage. To create Illusions capable of injuring targets, the character should possess a Special Attacks Attribute (page 60) which is tied to the Illusion Attribute through the Dependent Defect (page 78).

A character can normally maintain only a single Illusion at a time. The ability to maintain multiple Illusions at once costs the character an extra 1 Point for every distinct Illusion the character can sustain simultaneously after the first. Thus, "Illusion Level 3 (Sight only, four Illusions)" would cost six Points: three Points for Level 3 (one sense) and three more Points for being able to sustain four Illusions at a time. A group of objects or entities within the Area PMV, such as a furnished room, a swarm of insects, or a horde of charging opponents, counts as a single Illusion rather than several. If a character is already sustaining his or her maximum number of Illusions and wishes to create another one, an existing Illusion must first be dispelled.

An Illusion may have two types of areas: the Area PMV, and the area determined by the Attribute Level. The Area PMV reflects the maximum area in which the Illusion may be created, while the Level-related area dictates the actual size of the Illusionary image. Thus, an Area PMV of Rank 6 (10 km) with Attribute Level 3 (10 metres) means that any image up to 10 metres in radius (such as a school bus) can be created, and moved around within a location that has a 10 km radius (such as a medium-sized city).

In order for the character to create a convincing Illusion of something complex, the GM may require a Mind Stat check. The GM can add modifiers depending on how familiar or unfamiliar the character is with the scene that is being simulated. The GM may also give the character a +1 bonus for every Level he or she has in excess of the minimum Level needed to create an Illusion. For example, if a character with Illusion Level 5 decides to create an image with an area radius of one metre (a Level 2 effect), a +3 Check Value bonus applies (Level 5 — Level 2 = +3). If the check fails, the character's Illusion has some subtle flaw in it; the character creating it may not be aware of this until someone else points it out, however.

Whether or not an observer recognises an Illusion for what it actually is depends on the circumstances and should be adjudicated by the GM. For example, if a character creates a visual-only Illusion of a tiger, it may easily fool everyone if it is a few hundred metres away, but if it comes close to the characters, the fact that it is not making any sounds will be obvious. Its lack of a tiger's scent will probably only be a clue to someone who has Heightened Senses (Smell). The audio-only Illusion of a tiger roaring from behind a closed door, however, should fool just about anyone ... at least until they open the door and see that there is nothing actually there. If appropriate, the GM can require Body or Mind checks to "see through" an Illusion; if successful, the Illusion disappears.

Invisibility

Type: Special
Cost: 3 Points/Level
Relevant Stat: Body
Required PMVs: None
Optional PMVs: Area, Targets
Progression: Linear; invisibility to +1 sense or technique each Level
Reduction: Partial effectiveness
Restrictions: Time limit; invisible to certain types of characters; naked form only

This Attribute will completely hide the character from one or more senses or detection methods. In *Ex Machina* it usually represents a technological cloaking

device of some sort. To represent the ability to jam or obscure senses over an area, see the Sensory Block Attribute (page 59).

For each Invisibility Level, the player selects one sense or technique to which the character is "invisible." Senses include the human range for sight, hearing, taste, touch, or smell. Detection techniques include: astral; ethereal; infrared; mental; radar; radiation; sonar; spiritual; ultraviolet; vibration. In *Ex Machina* it is suggested that the most common forms of Invisibility — sight and hearing — cost 2 Attribute slots rather than only 1.

While the character may not be detected using specific methods, indirect evidence can still reveal the character's presence. For example, a character who is invisible to sight will still leave footprints in muddy ground. Similarly, a vase that is knocked from a table by a character who is invisible to sound will still make noise as it smashes on the floor.

In normal combat situations involving human or nearly human opponents, a character who is invisible to sight has a great advantage. Once the invisible character gives away his or her general position (for example, by firing a gun, attacking with a sword, or shouting) he or she can be attacked, but there is a -4 penalty for anyone within melee range and -8 for anyone at a greater distance. Heightened Awareness and Heightened Senses can reduce this penalty, as can the two Combat Techniques, Blind Fighting and Blind Shooting (page 45). This penalty is halved if using an Area or Spreading attack on the invisible character.

Item of Power

Type:	Mundane
Cost:	3 or 4 Points/Level
Relevant Stat:	Soul
Required PMVs:	None
Optional PMVs:	None
Progression:	Linear; +5 Character Points for item building each Level
Reduction:	Fewer Character Points awarded
Restrictions:	Under certain conditions; limited functioning; item's Attributes are only partially conferred

This Attribute describes any exotic, usually portable item that directly enhances a character in some way (perhaps by conferring Attributes), or one that serves as a useful tool or weapon. An Item of Power usually represents advanced technology or new prototypes. More ordinary but useful items (such as a car or gun) are covered by the Gadgets Attribute (page 49) unless using the optional rules on creating vehicles with Item of Power. Special weapons that others can use are often designed with Item of Power, with Points allocated to the Special Attack Attribute (page 60).

In *Ex Machina*, Items of Power represent state-of-the-art or experimental technology fresh out of corporate or military labs: cutting-edge computers or computer programs, secret weapons, designer drugs, even modular implants that can slot into cyborg bodies. Items of Power can be a defining element of some character archetypes, such as hackers and street samurai.

Each item is built using up to 5 Character Points per Level of the Item of Power Attribute, which can be used to assign Attributes. Assigning Defects to the item earns Bonus Points, which are used to acquire additional Attributes for the item. Defects that cannot usually be assigned include: Conditional Ownership, Famous, Ism, Marked, Nemesis, Owned, Red Tape, Significant Other, Skeleton in the Closet, and Wanted. Players selecting this Attribute must have a discussion with the GM to determine what abilities the Item of Power possesses and how it works. The player, with GM approval, may also create specific abilities for Items of Power using the Unique Attribute (page 68). An Item of Power may be combined with a mundane, minor, or major Gadget (such as a car that can fly).

The item costs 4 Points/Level if it is difficult for the character to misplace or for an enemy to steal/knock away, or it is almost always with the character. Examples include jewellery, frequently worn clothing, or equipment the character carries with them always. The item costs 3 Points/Level if it is easier for the character to misplace or for an enemy to steal/knock away, or it is often distant from the character. Examples include thrown weapons, armour that is stored when not in use, and vehicles or equipment that stay at the character's home until needed.

Additionally, the total Point cost (not cost per Level) for the Item is increased by 1 if it can only be used by a small subset of individuals (Restricted Use). For example: only characters with a superhuman Body Stat, only Artificial Intelligences. The total Point cost is increased by 2 if the Item can only be used by the character (Personal Use); this restriction cannot be reconfigured by someone with the Gadgeteer Attribute.

Items that cannot be lost or stolen, such as objects that are implanted in or fused to the character's body, are not Items of Power. In these cases, the items are considered part of the character and thus the player should use Character Points to acquire the relevant Attributes directly. If a character requires a specific object, or group of objects, to act as a focus when using one or more of his or her innate Attributes, Item of Power does not apply; see the Special Requirement Defect (page 82).

Jumping

Type:	Special
Cost:	1 Point/Level
Relevant Stat:	Body
Required PMVs:	None
Optional PMVs:	None
Progression:	Medium Progression Chart, starting at 5 times normal distance
Reduction:	None
Restrictions:	Under certain conditions; need running start; damage inflicted upon landing

With this Attribute, the character can jump great distances (and land without injury) but cannot actually fly. Jumping does not enable a character to exceed the character's normal maximum running speed (or swimming speed for aquatic characters capable of leaping). Consequently, unless the character also has the appropriate Level of the Speed Attribute (page 66), long-distance jumps may require several round, minutes, or hours to complete. For example, a character with a Body Stat of 10 can sprint approximately 60 metres/round . If the character jumps a distance of 120 metres, he or she will be airborne for two rounds rather than finishing the jump in just one (120 ÷ 60 = 2). The advantage to jumping, rather than running, however, is the character can ignore terrain and is not fatigued as the character would be if he or she had to run the same distance. See Jumping (page 52) in Chapter 9: Game Mechanics for additional jumping rules.

Land Speed

Type:	Special
Cost:	1 Point/Level
Relevant Stat:	Body
Required PMVs:	None
Optional PMVs:	None
Progression:	Slow Progression Chart, starting at 8 kph
Reduction:	Limited control
Restrictions:	Half-speed off-road; road-bound; time limit

The Land Speed Attribute allows the character to move at a reasonable pace when travelling on the ground. The method used can vary greatly: bionic legs, powered armour, wheels, tracks, or some other technique.

Levels 3 and lower (typically slower than a normal person can move) are useful for vehicles built as Items of Power, which have no running speed, but can still be helpful for characters since someone who opts to use Land Speed can travel all day without getting tired.

Depending on the speed at which the character is moving, opponents may suffer a penalty to hit the character (see Attacking Moving Targets, page 96). A fast-moving character may have an attack penalty as well.

A character with Land Speed cannot accelerate to his or her top speed immediately (this distinguishes Land Speed from the Speed Attribute); this also applies to deceleration. Maximum acceleration or deceleration is one Level of Land Speed per round. Land Speed is non-cumulative with the Speed Attribute; use whichever gives the highest speed (which may change from round to round, if accelerating).

Typical Restrictions (usually used to represent wheels) are half-speed off-road (1 BP) or road-bound (bogs down when off a road; 2 BP).

Massive Damage

Type: Mundane
Cost: 2 or 5 Points/Level
Relevant Stat: None
Required PMVs: None
Optional PMVs: None
Progression: Linear; +10 damage each Level
Reduction: Less damage delivered
Restrictions: Under certain conditions; against specific opponents; one attack type is excluded

A character with the Massive Damage Attribute knows precisely how and where to hit any opponent in order to inflict incredible amounts of damage.

For 2 Points/Level, additional damage is only inflicted when the character uses one specific weapon type, Special Attack (page 60), or method of attack; this attack is defined during character creation. For example, it might represent a special talent with a weapon (such as guns, blades, blunt weapons), knowledge of a particular martial arts technique, or ability with a specific Special Attack.

For 5 Points/Level, this knowledge can be applied to all forms of physical combat including armed, unarmed, martial arts, and ranged weapons, as well as Special Attacks or vehicle weapons.

Naturally, the character's attack must be successful to inflict any damage. Physical strength is not the key to delivering massive damage in an attack; the ability to sense a weakness is far more important. The capacity of Massive Damage to augment any kind of attack makes it a very useful Attribute for a combat-oriented character. For more information on physical combat and damage, see page 97.

Metamorphosis

Type: Special
Cost: 5 Points/Level
Relevant Stat: Mind or Soul
Required PMVs: Duration, Targets
Optional PMVs: Area, Range
Progression: Linear; adding +1 Character Point or adding/removing +3 Bonus Points each Level
Reduction: Change fewer Character Points and/or Bonus Points
Restrictions: Specific targets; limitations on Attributes/Defects that can be changed; limited to several distinct changes

The Metamorphosis Attribute allows a character to transform others into alternate forms by adding Attributes to, or adding/removing Defects from, the target character. This usually represents the use of advanced nanotechnology. The maximum duration of this change is dictated by the Duration PMV. Additionally, this Attribute requires a Targets PMV at Rank 1 minimum. If the target character successfully makes a Body or Soul Stat check (whichever is higher), the Metamorphosis attempt does not work. The GM may rule that Metamorphosis automatically fails if the subject's new form could not survive in the present environment. Consequently, a character could turn an enemy into a goldfish, but the attempt would only work if the target was currently in water. This prevents this ability from being used as a quick way to instantly kill an opponent. Again, GMs may waive this restriction where appropriate (such as for a villain in a cyberpunk horror campaign). In order to transform him or herself, the character needs the Alternate Form Attribute (page 44).

For each Level of Metamorphosis, the character can assign 1 Character Point to a target's Attributes (or PMV Rank). This can either raise the target's current Attribute Level, or result in the target gaining a new Attribute. Alternatively, for each Level the character can add 3 Defect Bonus Points to, or remove 3 Defect Bonus Points from, a target. To negate Attributes, see the Nullify Attribute (page 57). Cosmetic changes that confer no additional abilities on the target, but do not fall under the Marked Defect, are considered a 1 Bonus Point change total (for all changes). This includes: change of sex, 50% apparent age increase or decrease, colour changes (eye, skin, or hair), and minor physical changes (shape of ears, facial features, or bodily proportions).

Unless the GM indicates otherwise, Character Points gained through Metamorphosis can only be used to add Levels to the following Attributes: Adaptation, Armour, Elasticity, Extra Arms, Features, Flight, Heightened Senses, Jumping, Natural Weapons, Regeneration, Special Defence, Special Movement, Speed, Superstrength, and Water Speed. Additionally, only the following Defects can be changed: Awkward Size, Diminutive, Ism, Less Capable, Marked, Not So Tough, Physical Impairment, Sensory Impairment, and Unappealing. Metamorphosis is not intended for transforming people into stone or other forms where they would be effectively immobilised. In order to do that, use the Special Attack Attribute (page 60) with the Incapacitating Ability.

Mimic Powers

Type: Special
Cost: 7 or 10 Points/Level
Relevant Stat: Mind
Required PMVs: None
Optional PMVs: Duration, Range
Progression: Linear; +1 Attribute each Level
Reduction: More than one but less than all
Restrictions: Trade Attribute with target; specific targets; limitation on Attributes/Defects that can be mimicked

Upon a successful Stat check, the character can temporarily mimic any Attribute, Stat, or Skill Level of any single target character within the Range PMV distance. The Mimic Powers Attribute Level determines the maximum Attribute or Skill Level that can be mimicked. Stats Values (at any rank) can be imitated when Mimic Powers reaches Level 5 or higher. The Level of a mimicked Attribute/Stat/Skill only replaces the character's corresponding Level (if applicable) if it is higher; the character's Attribute/Stat/Skill Level cannot decrease through Mimic unless a specific Restriction is assigned. The character gains the benefits of a mimicked Attribute as long as indicated by the Duration PMV; it is recommended that GMs not allow Duration past Level 6 for Mimic Powers.


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For 7 Points/Level the character can only mimic one Attribute/Stat/Skill at any single time. For 10 Points/Level, the character can mimic all Attributes/Stats/Skills simultaneously at the appropriate Levels (as indicated above), from one character or many. To create a character that steals a target's Attributes for his or her own use, assign both the Mimic and Nullify (page 57) Attributes, linked through the Dependent Defect (page 78).

Mind Control

Type:	Special
Cost:	2-5 Points/Level
Relevant Stat:	Mind
Required PMVs:	Duration, Targets
Optional PMVs:	Area, Range
Progression:	Variable; see below
Reduction:	One aspect of thought only
Restrictions:	Under certain conditions; usage inflicts pain; target remembers the control

This Attribute allows the character to mentally dominate other individuals. The Duration PMV Rank cannot exceed the Attribute Level without GM permission. In *Ex Machina*, Mind Control is usually only applicable if restricted to software entities (representing the forced reprogramming of them) or individuals who are jacked into computers, chipped, connected to a brainwashing device, etc.

Mind Control costs 5 Points/Level if it can be used on any entity with a Mind Stat of 2 or higher (animals are excluded). It costs 4 Points/Level if it works on broad categories ("any computer" for example). It costs 3 Points/Level if the category is more specific and less useful ("anyone using a neural jack"). Finally, it costs 2 Points/Level if the category is very specific ("any robot with a ZyMax operating system"). The effects of Mind Control should be role-played. If necessary, the GM can take over the character, although it is more fun if the player (with GM guidance) continues to play the character.

Initiating Mind Control requires a non-combat action (page 96). Rather than making an attack check, however, the character must successfully make a Mind Stat check (if attacking multiple targets, roll only once). If the Mind Stat check is successful, the target gets a defence check, but, instead of using Defence Combat Value (page 84), the base Check Value is his or her Mind or Soul Stat (whichever is greater). When controlling a large number of people, an estimated Mind and Soul Stat average for the entire group could be used. At every odd Level (1, 3, 5, etc.), the character receives a +1 bonus to his or her Check Value when attempting to Mind Control a target. At every even Level (2, 4, 6, etc.), the target also receives a -1 penalty to his or her Check Value when attempting to defend against Mind Control (or when trying to break established contact; see below). At Level 7, for instance, the character gains a +4 bonus while the target suffers a -3 penalty. A character needs to defeat an opponent in Mind Combat (page 100) to toy with his or her emotions (for example, giving the opponent new fears or a prejudice).

Once Mind Control is established, it remains in effect until either the Duration PMV expires, or until the target breaks free from the control. A target may attempt to break control under two circumstances: whenever he or she is given a command that conflicts with the nature of the character, and whenever the GM deems it appropriate for dramatic effect. To break control, the target must make a successful Mind or Soul Stat check (whichever is higher), modified appropriately by the Mind Control Level of the initiating character.

Against Target's Nature

If a Mind Controlled target is commanded to perform an action that he or she would not willingly do under normal circumstances, the target can attempt to break control. Additionally, the target may receive a bonus if the action goes against his or her nature. The more distasteful the target finds the command, the greater the Check Value bonus. For mildly distasteful actions (such as licking an enemy's boots), no bonus is given. For highly distasteful or undesirable actions (such as stealing from an ally or disobeying an owner a robot is programmed to protect), a +4 bonus is given. Finally, for exceptionally distasteful or undesirable actions (such as attacking an ally), a +8 bonus is given. Note that these bonuses are cumulative with penalties associated with the controlling character's Mind Control Level.

When the GM Deems Appropriate

If the character commands his or her target to perform a number of mundane activities (clean the house, fetching a drink of water, etc.), the GM may decide the target does not receive an opportunity to break established control. Even a seemingly inoffensive command such as "sit in the closet" or "go to sleep," however, may have a drastic impact on the lives of others if a bomb is about to explode in the train station or the target is piloting an airplane at the time. In these instances, the GM may give the target a chance to break free of the Mind Control even if the target does not regard a command as dangerous or distasteful (which would present an opportunity to end the control). This option puts the GM in direct control of the situation, which will benefit the campaign. Naturally, the GM can also apply modifiers to the Stat check that are cumulative with penalties associated with the controlling character's Mind Control Level.

A character need not control every thought and action of his or her victims but can allow them to live normal lives until they are needed; these targets are known as "sleepers." Additionally, people who have been Mind Controlled will not remember events that occurred during the time period they are controlled and will have a gap in their memories (unless a Restriction is assigned).

The GM may allow a character to temporarily boost his or her Mind Control Attribute by one or two Levels against a single individual who is his or her captive by "working" on the subject for a day or more. This bonus can represent concentrated brainwashing techniques or dedicated study of a subject.

Player Characters should only be placed under Mind Control for extended periods of time in exceptional circumstances.

Mind Shield

Type:	Special
Cost:	1 Point/Level
Relevant Stat:	Mind or Soul
Required PMVs:	None
Optional PMVs:	Area, Range, Targets
Progression:	Linear; effective increase of +1 to the Mind and Soul Stats each Level
Reduction:	None
Restrictions:	Time limit; against specific characters; against one type of intrusion

A character with Mind Shield is protected against mental intrusion. In *Ex Machina* this usually refers to attempts to "hack into" his or her mind (or reprogram a computer or robot) using some technologically-based form of Telepathy or Mind Control, and represents a defensive device or software. A character with Mind Shield can detect and gain Check Value bonuses to block attempts to read or control his or her mind by a character with the Telepathy or Mind Control Attributes (pages 67 and 56). The bonuses also apply during mind combat (page 100), and against a Special Attack with the Mind or Soul Attack Ability (page 63). Additionally, each Mind Shield Level provides 10 points of "Mind Armour" that are used for defence during mind combat or against attacks with the Mind or Soul Attack Special Attack Ability.

Natural Weapons

Type: Special
Cost: 1 Point/Level
Relevant Stat: None
Required PMVs: None
Optional PMVs: None
Progression: Linear; +1 Natural Weapon each Level
Reduction: None
Restrictions: Against specific targets; less damage; slow to use (Initiative penalty)

The character has one or more relatively mundane natural weapons, such as sharp teeth, claws, tentacles, etc. Natural weapons are normally possessed by animals, but could also represent technological capabilities that mimic such abilities, such as an android or cyborg with retractable claws. More powerful Natural Weapons can be designed using the Special Attacks Attribute (page 60), with the Melee Disability.

The character possesses one Natural Weapon per Level. Possessing more than one such natural weapon gives the character a wider variety of attack forms. Normal damage inflicted by a successful attack is outlined in Chapter 8: Game Mechanics (page 85).

Hands, feet, a heavy tail, ordinary teeth, or hooves are not normally counted as Natural Weapons since they are (relatively) blunt, and thus only inflict normal unarmed damage (equal to the character's Attack Combat Value).

Claws or Spikes

The character possesses sharp talons or spikes on his or her fingers, paws, or feet. In addition to regular damage, the claws inflict 10 additional damage when used in melee combat. This attack uses the Unarmed Attack (Strikes) Skill.

Fangs, Beak, or Mandibles

The character has very sharp teeth, or alternatively, a beak or insect-like mandibles. This natural weapon inflicts only 5 damage above normal damage in melee combat, but a successful strike that penetrates Armour gives the character the option to maintain a biting grip and continue to inflict equivalent damage in subsequent rounds. These additional attacks are automatically successful, but the opponent can break the hold with a successful defence check. While the attacker is maintaining a biting grip, his or her own ability to defend is impeded: the attacker cannot use weapons to defend, and suffers a -4 defence check penalty against all attacks. This attack uses the Unarmed Attack (Bites) Skill.

Horns

These are large horns on the head, used for butting or stabbing. Horns add 5 extra damage to normal damage in melee combat but are exceptionally effective if the character charges into battle. If the character wins Initiative against an opponent and has room for a running start, he or she can lower his or her head and charge. A successful attack will deliver normal attack damage, plus 20 (rather than 5) damage. If a charge fails to connect (the character fails the attack check or the opponent makes a successful defence check), the charging character will be off balance and suffers a -2 penalty on defence checks for the remainder of the round and a -4 Initiative roll penalty on the following combat round. This attack uses the Unarmed Attack (Strikes) Skill.

Spines

The character is covered in nasty spikes, quills, or sharp scales. Anyone who wrestles with the character automatically takes damage equal to the character's Attack Combat Value each round. This damage is in addition to any attack damage delivered. During these struggles, the opponent's clothes will also be ripped and shredded unless they are armoured.

Tail Striker

If the character has a combat-ready tail it can be equipped with spikes, a stinger, or other similarly nasty weapon. It is difficult to strike with a swinging tail (-2 attack check penalty), but, since it is flexible, it is usually harder to dodge (opponent suffers a -4 defence check penalty). The attack inflicts normal unarmed damage. This attack uses the Unarmed Attack (Strikes) Skill.

Tentacles

One or more of the character's limbs — or possibly his or her hair — are actually tentacles. A character with tentacles gains a +2 bonus to his or her Unarmed Attack and Unarmed Defence Skill Level when engaged in a grappling attack or defending against one. Tentacles are also difficult to avoid in combat (opponent suffers a -2 defence check penalty).

Nullify

Type: Special
Cost: 7 or 12 Points/Level
Relevant Stat: Soul
Required PMVs: Targets
Optional PMVs: Area, Duration, Range
Progression: Linear; +1 Attribute each Level
Reduction: More than one but less than all
Restrictions: Under certain conditions; against specific targets; against specific Attributes

With a successful Soul Stat check, the character can temporarily render the Attributes of other characters unusable within the Area PMV. This is usually taken with a restriction that limits the targets to software or electrical machines to represent either viruses or electromagnetic pulse attacks. The Nullify Attribute Level determines the maximum Attribute Level that can be nullified. The character can nullify an Attribute as long as indicated by the Duration PMV; it is recommended that Duration not extend past Level 6 for Nullify.

For 7 Points/Level the character can only nullify one Attribute each combat action. Thus, a character with Extra Attacks Level 3 can Nullify four Attributes each round. For 12 Points/Level, the character can nullify all Attributes simultaneously at the appropriate Levels (as indicated above).

Nullify (Drain)

For an additional 3 Points/Level, this Attribute can be specified as a Nullify (Drain). At each Attribute Level, the target's single Attribute (at 10 Points/Level) or multiple Attributes (at 15 Points/Level) are reduced by one Level, to a minimum of Level 0. For example, if a character with Level 5 Nullify (Drain) at 15 Points/Level targets a character who has Level 3 Armour, Level 7 Flight, and Level 8 Tough, the target is reduced to Level 0 Armour (3-5=0), Level 2 Flight (7-5=2), and Level 3 Tough (8-5=3). If, instead, the character only had regular Nullify, the Flight and Tough Attributes would be unaffected since they are above Level 5 Attributes.

If the character uses Nullify (Drain) on the Special Attack Attribute, only damage is reduced (-20 damage for each Nullify Level). None of the Attack Abilities are affected directly, though the effectiveness of Abilities that depend on the amount of damage delivered will be reduced.

To create a character that steals a target's Attributes for his or her own use, assign both the Nullify and Mimic (page 53) Attributes, linked through the Dependent Defect (page 78).

Organisational Ties

Type: Mundane
Cost: 1-3 Points/Level
Relevant Stat: Soul
Required PMVs: None
Optional PMVs: None
Progression: Descriptive
Reduction: Very specific utility
Restrictions: Favourably connected with only part of the organisation; character's connection results in conflict; high price to pay

Organisational Ties represents a character's close relationship with a hierarchy of some sort that grants him or her access to respect and privileges. Monetary advantages are usually covered by the Wealth Attribute (page 68), while access to special equipment may be represented by the Gadgets Attribute (page 49). Examples of organisations include mercenary outfits, powerful corporations, organised crime rings, secret guilds and societies, governmental positions, and some religions. For campaigns in which all players belong to the same organised group, the GM may decide that Organisational Ties are not required. Consequently, this Attribute is optional; the GM may prefer to treat organisation membership as a background detail instead.

The value of Organisational Ties depends on its importance in the setting. An organisation that exerts moderate power within the setting is worth 1 Point/Level, one that has significant power costs 2 Points/Level, and one that has great power in the setting costs 3 Points/Level. Players should not assign this Attribute to represent organisations that have very little power. The GM determines the extent of the organisation's influence. In a teen hacker campaign, the autocratic School Administration might wield "significant power," while in most other settings it would be completely trivial and not worth any points. Similarly, a criminal organisation like the Mafia or Yakuza might count as "great power" (3 Points/Level) in a traditional street level game, but merely as "moderate power" (1 Point/Level) in a high-powered conspiracy game.

Normal organisations should be limited to a geopolitical area, such as a single country. Global organisations, or those that span multiple geopolitical areas, function at 2 Levels lower. For example, the president of a global megacorporation needs to assign Level 12 to gain access to the Controlling Rank category (2 Levels lower). Some organisations may be ostensibly limited to a single country, but the higher ranks still have global influence. For example, the President of the United States is a Controlling Rank (Level 10). Since the US has great influence across the world, however, the position would be Level 12 (as if it was a global organisation).

Though only five Attribute Levels are described below, GMs can easily extrapolate intermediate or higher Levels as required.

Level 2 Connected. Examples include a powerful political supporter, street level Mafia contact, or a valued corporate employee.

Level 4 Respected Status. Examples include a Mafia "Wise Guy," a junior executive in a corporation, a city council member, an idol's manager's assistant, or an enlisted army soldier.

Level 6 Middle Rank. Examples include a Mafia "Captain," a departmental vice-president in a corporation, a junior congressional representative, or a low- to middle-ranking army officer.

Level 8 Senior Rank. Examples include a senior vice-president in a corporation, a US senator, or a high-ranking army officer.

Level 10 Controlling Rank. Examples include the boss of a crime syndicate, the president of a corporation, US state governor, president of a small nation, or leader of an independent, covert intelligence agency.

Organisation Examples

Here are some example organisations, with Point costs, from three of the four campaign worlds (IOSHI uses Cred, page 291, instead of Organisation Ties). They are taken from the campaigns' sample characters.

Heaven Over Mountain

Forward Dance Company	1 Point/Level
Telvarson Hazard	2 Points/Level
Orbital Development Consortium	3 Points/Level

Underworld

Bloodworms	1 Point/Level
The Pack	1 Point/Level
Razor Saints	1 Point/Level
Mafia Family	2 Points/Level
PRIDE	2 Points/Level
Yakuza Clan	2 Points/Level
The Corporations	3 Points/Level

Deadalus

Domestic Bureau	1 Point/Level
La Liberte	2 Points/Level
Regional Patrol (The Government)	3 Points/Level

Power Flux

Type: Special
Cost: 5, 10, 15, or 20 Points/Level
Relevant Stat: Variable
Required PMVs: Special (Duration reversed; see below)
Optional PMVs: None
Progression: Linear; +5 Flux Points each Level
Reduction: One aspect of category
Restrictions: Under certain conditions; only raise or lower existing Attributes, limitations on Levels exchanged

Power Flux represents extensive control over an element, ideology, natural phenomenon, or sphere of influence. This is a very open-ended Attribute and should be discussed with the GM at length to determine the effects and limitations in his or her game. Proper use of Power Flux will not unbalance the game, but rather can provide many opportunities for character innovation.

A character with this Attribute has a pool of reserve Character Points (called Flux Points) that can be allocated to different Attributes as needed, within the thematic category chosen by the player. This is most often taken to apply only in cyberspace, and represents the ability of a powerful computer entity or super-skilled hacker to reconfigure the "laws" of a particular virtual reality or cyberspace. It can also reflect a character who has several different powered forms, or a character who has little control over his or her range of Attributes (in conjunction with the Unreliable Power Defect, page 83).

Power Flux uses a special PMV that follows the reverse of Duration, starting at 6 months (Rank 1) and decreasing to 1 round (Rank 10). The GM may limit the

Duration PMV to Rank 8 (1 minute) to ensure that the flow of combat is not impeded by characters fluxing Attributes too frequently. This PMV represents how frequently a character can change the allocation of Flux Points from one group of Attributes to a different group, and not how long a character can use Power Flux. At low Ranks, the character will be forced to use the same group of Attributes for extended periods of time before he or she can use the Flux Points for alternates. At high Ranks, the character can gain a complete new set of Attributes almost at will. Stats and Defects cannot be raised or lowered with Power Flux (though the Enhanced [Stat] Attribute may be altered). Fluxing some Attributes may require GM permission.

Minor or small thematic categories cost 10 Points/Level. Examples include a classical element (water, fire, wind, earth), a limited concept or idea (lust, protection, charm, pride), a minor aspect of nature (temperature, insects, sunlight, clouds, orbits, sea creatures), or a limited sphere of influence (silence, cats, writing, guns, a small locality, nutrition).

Major or large thematic categories cost 15 Points/Level. Examples include a broad concept or idea (love, travel, strength), a major aspect of nature (weather, magnetism, gravity, electricity, animals), or a broad sphere of influence (cities, computer data, health, truth, manufacturing, fertility, weapons, drugs).

Primal or universal thematic categories cost 20 Points/Level. Examples include core concepts and primary spheres of influence: Time, War, Death, Life, Earth, Thought, Magic, Force, Math, Self, Law, Chaos, Creation, Heaven, Hell, Dimensions, Dreams, and others.

If the character makes a successful Stat check (the relevant Stat is determined by the GM), he or she can assign Flux Points to one or more Attributes that grant powers that fit within the thematic category. A Flux Point is equal to one Character Point, which can be assigned to the cost of the Attribute directly, or to the cost of raising an Attribute's PMV Rank. Under normal circumstances, Power Flux cannot imitate the Transfer Attribute.

Limited Point Exchange

An alternate method of Power Flux only costs 5 Points/Level, but limits the character to a small assortment of Attributes among which Character Points can be exchanged. At Level 1, Character Points can be exchanged in any way between the Level cost and PMV cost of any two Attributes, which are determined during character creation. From Level 2 on, each Level adds one additional Attribute to the list of Attributes that can be fluxed. For instance, if a character with this Level 3 Power Flux and Rank 4 Duration (1 day) has allocated 47 Character Points to four fluxable Attributes (Armour, Flight, Special Attack, and Superstrength), he or she can redistribute the 47 Points in any way over the four Attributes and their PMVs once every 24 hours.

Regeneration

Type:	Special
Cost:	6 Points/Level
Relevant Stat:	Body
Required PMVs:	None
Optional PMVs:	None
Progression:	Linear; restoration of +5 Health Points per round each Level
Reduction:	Fewer Health Points restored
Restrictions:	Under certain conditions; specific wound types; regeneration is not automatic

Characters with this Attribute automatically heal their own injuries, whether the characters are awake, asleep, or unconscious. The character's Health Points cannot exceed their original total. At higher Healing Levels, the character's body will revive itself if "clinically" dead but not actually brain-dead (Level 3+), repair massive trauma such as lost limbs or organs (Level 5+), or restore the character if cut into several pieces (Level 7+). The body cannot repair itself if it is blown to bits or disintegrated, however.

Reincarnation

Type:	Special
Cost:	2 or 4 Points/Level
Relevant Stat:	Soul
Required PMVs:	None
Optional PMVs:	None
Progression:	Time Progression Chart Reversed, starting at 6 months
Reduction:	Very specific utility
Restrictions:	Reincarnate after injury from specific weapons; alive for a limited time; limited to a specific target group

If the character is destroyed, some of his or her essence may still survive. In *Ex Machina*, this is usually the result of technology: a digital memory backup, or the ability to extract memories and tissue samples from a corpse and grow a new body. If this remnant or backup can be salvaged, inserted into a new body, or otherwise restored, in a matter of days or weeks and with proper care the character will be restored to life in a new body similar to the original.

Reincarnation can be prevented in some way. This may be as simple as burning, blowing up, or dismembering a body, or as difficult as hunting down a backup copy from a secure memory bank protected within a fortified vault. For 2 Points/Level, the Reincarnation is easy to stop; for 4 Points/Level, the Reincarnation is difficult to stop. The GM and player must work together to determine the parameters involved in preventing the rebirth.

Sensory Block

Type:	Special
Cost:	1 Point/Level
Relevant Stat:	Mind
Required PMVs:	Area, Duration
Optional PMVs:	Range
Progression:	Linear; +1 blocked sense or technique each Level
Reduction:	None
Restrictions:	Under certain conditions; against specific targets; time limit

A character with Sensory Block can cover the Area PMV with a field that blocks specific senses or detection techniques. In *Ex Machina* this will usually represent a technological enhancement such as a smoke grenade or radar jammer. For each Level of the Sensory Block Attribute, the character can either block one sense or enhanced sense (Type I) or one detection technique (Type II), which is determined during character creation. The GM may allow multiple assignments to the same sense or technique, which results in cumulative penalties. To fully block a detection technique, see the Invisibility Attribute (page 51).

Type I

One of the five senses — hearing, smell, vision, taste, or touch — is partially blocked. This may mean that individuals within the Area PMV cannot see well (vision), cannot hear well (hearing), etc. Checks made by these individuals when pertaining to the specific senses suffer a -4 penalty, which is cumulative with any Heightened Senses bonus (page 50).

Type II

A detection technique is partially blocked. Examples of techniques include: electric current detection; homing weapons; infravision; magnetic field detection; microscopic vision; radar detection; radio reception; sonar detection; a specific Sixth Sense technique; ultrasonic hearing; ultravision; vibration detection; X-ray vision. Stat checks relating to these detection techniques suffer a -4 penalty.

Servant

Type:	Mundane
Cost:	2 or 6 Points/Level
Relevant Stat:	None
Required PMVs:	None
Optional PMVs:	None
Progression:	Linear; Servant built using +8 Character Points each Level
Reduction:	Fewer Character Points awarded
Restrictions:	Servant leads active life and is not always available; Servant has conflicting agenda; communication barriers

The character has a sidekick or companion entity. It serves as a familiar, pet, companion, or bodyguard. Examples of Servants could include: an augmented animal companion, a robot, a sentient computer program, a dedicated and talented henchman. Servants are NPCs controlled by the GM, but they will normally work toward the character's best interests. Nevertheless, they should have their own personalities and may occasionally get into trouble of their own. Low Levels of this Attribute best represent animal or mechanical Servants; high Levels are required to create competent human (and superhuman) Servants.

This Attribute costs 2 Points/Level if the character is limited to one particular Servant. If the character can dismiss the Servant and replace him or her with a different one between adventures or during an adventure with suitable effort (GM's option, such as reading a program, training a new recruit, or taming a new animal), then the Attribute costs 6 Points/Level. A character can take the Attribute several times to have multiple Servants.

Each Level of the Servant Attribute gives the player up to 8 Character Points and 10 Skill Points with which to design the Servant. The Servant is created exactly as a character with two exceptions. First, it may not possess the Servant Attribute. Second, some relationship-based Defects should not be assigned due to the Servant's innate role as a character's assistant. Thus, it is usually inappropriate for a Servant to have the following Defects: Famous, Involuntary Change, Owned, or Red Tape.

Sixth Sense

Type:	Special
Cost:	1 Point/Level
Relevant Stat:	Soul
Required PMVs:	Area
Optional PMVs:	None
Progression:	Linear; +1 Sixth Sense each Level
Reduction:	None
Restrictions:	Under certain conditions; must actively use Sixth Sense; vague or partial detection

Some characters have the ability to detect things that may be hidden to normal senses or technological sensors, while others have affinities for specific objects or people. Sixth Sense can reflect trained and acute senses or divine intervention.

The character may sense one particular category of phenomenon per Level. The player should define the category with the GM's approval (Sixth Sense is very much a GM-defined ability). As a guideline, the character is automatically alerted when something his or her Sixth Sense detects is in close proximity (minimum of Area PMV 1 - 10 cm radius area). The GM may require a Soul Stat check to do this, with difficulty modifiers depending on the strength of the source of whatever emanations the character can sense. The GM should give a bonus (+2 modifier or more) if the character is touching the source.

A character who specifically concentrates on using his or her Sixth Sense may gain more precise information on a successful Soul Stat check. The exact content of this information is up to the GM. If the check succeeds, the GM may provide the character with a few extra clues about the source such as "you think he is lying to protect his wife." If the check fails, the character will not gain any additional information unless something happens, such as the phenomena becoming stronger, or coming much closer. The GM should always try to use Sixth Sense to plant clues that make a story more exciting, but not allow it to circumvent the process of discovery in a mystery plot.

Examples of phenomena to which the character may be sensitive include danger, electricity, elements, emotions, interpersonal dynamics, lies, magnetics, or the use of specific Attributes or Defects.

Precognition and Postcognition

Alternatively, Sixth Sense can be assigned to represent precognition and postcognition — the ability to access visions of past and future events. This option is a GM-defined Special Attribute, however, which allows him or her limit its application and scope within the campaign. For precognition, the Attribute's Level reflects the difference in time between the present situation and the future event follow the Time Progression Chart, starting at 1 round. For postcognition, the character can see back an amount of time equal to double the Attribute's Level in Rank on the Time Progression Chart, starting at 1 round (Level 1). For example, a character with Level 5 Precognition can see 1 hour into the future, or 1 month into the past with Level 5 Postcognition.

Special Attack

Type:	Special
Cost:	1 or 4 Points/Level
Relevant Stat:	None
Required PMVs:	None
Optional PMVs:	None
Progression:	Linear; +20 attack damage each Level
Reduction:	Less damage delivered
Restrictions:	Under certain conditions; usage inflicts pain; against specific opponents

Some characters, such as cyborgs or robots, may have guns, missiles, or beam weapons built into their bodies.

Special Attacks deliver a maximum of 20 damage per Level; actual damage inflicted is determined by a roll on Table 9-6: Damage Percentage (page 97). Assigning one or more attack Abilities from the list on page 61 further customises a character's Special Attack. Each attack Ability taken reduces the damage by 20 but adds an additional capability. Attacks may also be assigned one or more attack Disabilities from the list on page 64. Each attack Disability increases the damage by 20 but reduces the attack's utility by imposing some form of limitation.

The player must assign the Abilities and Disabilities when the Special Attack is designed. He or she may assign a combination of Abilities and Disabilities that reduces the attack's damage to a minimum of 20. For example, suppose a character has a special Attack at Level 2. He or she would only be able to purchase one Ability, which would reduce the attack's damage from 40 to 20. If the character wanted to purchase a second Ability, he or she must first assign a Disability, which would raise the attack's damage back to 40. The character could then purchase a second Ability, reducing the damage back to 20.

When designing a Special Attack, the player (with GM input) should determine what Skill and Specialisation is appropriate for its use. For most built-in guns it will be Gun Combat. Any weapon with the Melee Disability uses the Melee

Attack or Unarmed Attack Skills, depending on its description. For example, Melee Attack (Improvised Weapons) is appropriate for a chainsaw arm, while Unarmed Attack (Striking) would be suitable for a character who discharged an electrical zap with a touch.

Alternate Attacks

Although a character often uses his or her highest-Level "primary" weapon, alternate or backup ones may also be possessed. The Point cost of these additional "secondary" attacks are one quarter the cost of the primary attack at 1 Point/Level. The primary attack — the attack with the highest Level — is the only one that costs the standard 4 Points/Level. Secondary attacks may each possess different damages, Abilities and Disabilities.

Special Effects

The special effects of Area Effect, Drain (Any), Flare, Incapacitating, Irritant, Spreading, and Tangle are determined by the Level of the Special Attack only. Massive Damage, Superstrength, and critical hit multipliers are not included in the calculation. Additionally, Armour does not normally protect against Drain (Any), Flare, Incapacitating, Irritant, or Tangle. Before making an attack, a character can choose to inflict less damage than the normal 20/Level, or reduce the power of their special effects.

Effects Based on Damage Inflicted

The scope of the special effects for attacks with the Area Effect, Drain (Any), Flare, Incapacitating, Irritant, Linked, Spreading, or Tangle Abilities depend on the Level of the Special Attack. For example, Drain (Mind) reduced the target's Mind Stat by 1 for every Special Attack Level; similarly, Tangle creates restraints that have 10 Health Points for every Special Attack Level. To introduce randomness into these special effects, their scopes could instead be based on every 10 damage that the attack inflicts (or would have inflicted in the case of attacks with the No Damage Disability). For the above examples, Drain (Mind) would reduce a target's Mind Stat by 1 for every 10 damage, and Tangle would create restraints that have 10 Health Points for every 10 damage. If this alternate rule is used, damage must be rolled for all attacks — including ones with the No Damage Disability — to determine the special effect scope.

Table 4-4: Special Attack Abilities

Ability	# of Slots	Ability	# of Slots
Accurate	1	Incurable	4
Affects Incorporeal	1	Indirect	1
Area Effect	1	Irritant	1
Aura	2	Linked (Attack)	2 or 4
Auto-Fire	3	Long Range	1
Burning	1	Mind or Soul Attack	5
Concealable	1	Muscle-Powered	1
Contagious	2 or 4	No Healing	1
Drain Body	1	Penetrating (Armour)	1
Drain Mind	1	Spreading	1
Drain Soul	1	Stun	1
Enduring	1	Tangle	2
Flare	1	Targeted	1 or 2
Flexible	1	Trap	1
Homing	1	Undetectable	4
Incapacitating	3	Unique Ability	Variable

Special Attack Abilities

The following Abilities may be assigned to a Special Attack. The GM may disallow any inappropriate Ability combinations.

Accurate

The attack is unusually accurate, giving a +2 bonus to attack checks (or Stat checks if the attack has the Mind or Soul Attack Ability). This ability can be assigned two or three times for a +4 or +6 bonus, but may not be combined with the Linked (Attack) Ability. This Ability is usually assigned to hand-held weapons created as Items of Power (page 52) only, since Attack Skills (page 75) better represent a character who is adept at using his or her Special Attack.

Affects Incorporeal

This attack will affect characters who have very low densities — or are currently astral, ethereal, or incorporeal — as if they were solid.

Area Effect

This is an attack, like an explosive blast, that affects not only the direct target, but also anyone in the immediate area. The area of effect is a sphere with a radius of 1 metre for every Special Attack Level. All affected characters are allowed a defence check (diving for cover, swerving out of the way), but a successful defence check may not be enough to escape completely (GM's discretion; depends on how target avoids attack). The target of the attack (or anyone at the centre of the effect) can reduce the damage percentage by one rank when successfully defending (page 97). All other individuals caught in the area of effect can reduce the damage percentage by two ranks when successfully defending. Area Effect can be assigned multiple times; each Ability doubles the area radius.

Aura

Rather than having to make an actual attack, the character instead automatically damages anyone who touches his or her body. An example might be a character who was electrified. If this Ability is combined with the Area Effect Ability, it automatically damages anyone in the designated area around the character. Aura counts as two Abilities.

Auto-Fire

The attack consists of a burst of multiple shots like a machine gun or rapid sequence of energy bolts. Instead of scoring one hit when an attack is successful, the attacker scores hits (minimum of one, maximum of 10) equal to the difference between the attack check and his or her Check Value (Attack Combat Value plus relevant Combat Skill). For example, if a character's attack Combat Value is 6 and relevant Combat Skill at Level 1, and the player rolled 5 (after all modifications), he or she would score 2 hits. The defender's chance to avoid the attack is derived in a similar way, however: a successful defence check will defend against a number of hits equal to the difference between the defence check and Check Value (Defence Combat Value plus relevant Combat Skill), with a minimum one hit avoided on a successful defence. Each hit delivers separate damage (important when considering Armour). Bonuses from Combat Value, Massive Damage, Superstrength, and critical hit multipliers are only applied to the first hit in an Auto-Fire burst — all others only inflict the percentage of base damage of the Special Attack. Auto-Fire counts as three Abilities.

Burning

This represents acid, flaming liquid, or similar attacks that deliver continuing damage over several rounds. If the initial attack damage penetrates the opponent's Armour, the target will suffer an additional 1/10 of the base damage for five rounds or until the effect is somehow neutralised (GM's discretion; it should depend on the type of attack, and may require several rounds for full neutralization). Armour does not protect against the extra Burning damage in subsequent rounds. Alternatively,

Burning can be defined as an "hourly burn," which inflicts 1/10 of the base damage each hour after the attack, or "slow burn," which inflicts 1/5 of the base damage each day (rather than round-by-round). This ability may best represent a disease or slow poison attack. Unlike a regular Burning attack, the hourly and slow burn damage will continue until the victim is dead or makes a successful check with at -4 penalty against the average of his or her Soul and Body (made on an hourly or daily basis).

Concealable

This option is only available for hand-held weapons. The weapon is small enough to be used with one hand and concealed under clothing. Most pistol-sized or knife-sized weapons are Concealable. For more cinematic games, larger weapons such as swords and machine guns can be designed as Concealable as well.

Contagious

Some or all of the attack's damage or other effects will be passed on to others who touch (or otherwise contact) a victim. If mildly contagious, not everyone will be infected; a prospective victim must fail a Stat check at a +4 bonus to be affected. If taken twice, it is highly contagious; someone must fail a Stat check (without modifiers) in order to be affected, or possibly contagion may be automated under some circumstances. The base Check Value is normally the Body Stat, but cybernetic contagion may use Mind or Soul. The GM should adjudicate effects and countermeasures. The Ability is usually combined with the Toxic Disability. Contagious counts as two abilities if mildly contagious or four abilities if highly contagious.

Drain Body

The attack causes the victim to suffer weakness and/or loss of co-ordination. The victim's Body Stat is reduced by 1 for every Special Attack Level. The Body Stat drain is in addition to any Health Point losses from the attack. To design an attack that only drains the Body Stat, but inflicts no other punishment, the No Damage Disability should also be assigned. A character who is reduced to a 0 Body Stat is unable to move. Lost Body Stat Points are recovered at one Point per hour of rest. Losing Stat Levels will also lower the Combat Value, but Health Points will not be affected.

Drain Mind

The attack causes the victim to lose his or her sanity. The attack may be a mind "hack," a tranquilliser or similar drug, or another form of attack. The victim's Mind Stat is reduced by 1 for every Special Attack Level. This Mind Stat drain is in addition to any Health Point losses from the attack. To design an attack that only drains the Mind Stat, the No Damage Disability should also be assigned. A character reduced to 0 Mind is "mindless" and will act in an illogical and animalistic fashion. The drained Points return at the rate of one every hour. Losing Stat Levels will also lower the Combat Value.

Drain Soul

The attack affects the victim's spirit. This attack may be chemically induced fear, despair, or some other willpower-destroying emotion. The victim's Soul Stat is reduced by 1 for every Special Attack Level. This drainage is in addition to any Health Point losses from the attack. To design an attack that only drains the Soul Stat, the No Damage Disability should also be assigned. A character reduced to 0 Soul is "broken," and lacks all drive or volition. The drained Points return at the rate of one every hour. Losing Stat Levels will also lower the Combat Value, but Health Points will not be affected.

Enduring

Enduring can only be assigned in conjunction with Area Effect. The attack remains active within the affected area over multiple rounds. Examples of this type of attack include chemical clouds, sheets of fire, electrical charges, or supercooled vapours. Anyone entering or remaining in the area is immediately subject to the attack; defence checks are outlined under Area Effect. Each time Enduring is assigned, the Area Effect attack remains active for 1 additional round.

Flare

If the target is hit (or in the radius of an Area Effect weapon attack) the defending character may be blinded. Every target looking in the vicinity of the attack must roll a Body Stat check at a -1 penalty for every Special Attack Level, ignoring Armour. To design an attack that only blinds opponents, the No Damage Disability should also be assigned. If a target character rolls greater than his or her Body Stat, he or she is blinded for a number of combat rounds equal to the difference between the Check Value and the dice roll. Flare may be taken multiple times; each time it is taken, add an extra -2 penalty to the Stat check. Flare can also be generalised to cover other sense-overloading attacks. For example, an acoustic attack might cause deafness.

Flexible

This ability represents long, flexible, or extendible attacks such as a prehensile whip, energy-lash, razor-ribbon, or similar attack mode. The target defends at a -2 penalty. If the attacker is strong enough to physically lift the target, a successful attack can trip or disarm an opponent (snagging a hand-held weapon) in lieu of delivering damage. Such non-damaging attack stunts are made at a -2 penalty to the attack check since they require great skill to execute accurately.

Homing

The attack or weapon fires a projectile that can track and follow its target. The character receives a +4 bonus to his or her attack check, and if the attack misses or the target successfully defends, the weapon will return to try again (only one more time) in the next combat round. A Homing attack may be vulnerable to Sensory Block, however (page 59).

Incapacitating

This represents any form of attack that can instantly incapacitate a foe even if it does not inflict actual damage. This includes putting an opponent to sleep or turning him or her to stone. Regardless of whether the attack does physical damage, the victim must make a Stat check (Body, Mind, or Soul — decide when the attack is designed) to avoid being completely incapacitated. The check is made at a +4 bonus with a -1 penalty for every Special Attack Level. For example, a Level 4 Attack would require a Stat check at 0 penalty; a Level 1 Attack would be made at a +3 bonus. When designing the attack, specify the form the incapacitation takes: asleep, awake but paralyzed, turned to stone, transformed into an inert doll, etc. The effects will wear off in several minutes, unless the Incurable Ability is also taken. To design an attack that only incapacitates the target, the No Damage Disability should also be assigned. Incapacitating counts as three Abilities.

Incurable

The attack produces wounds or other effects that do not heal naturally, and are incurable by normal methods. Rather than recovering at a normal rate or being amenable to medical treatment, recovery cannot take place until some exotic event or treatment has occurred. This requirement must be specified when the attack is designed, subject to GM approval. Incurable counts as four Abilities.

Indirect

The weapon can fire shots in a high ballistic arc. Examples include grenade launchers and plasma artillery guns. This allows the attacker to shoot at targets hidden behind buildings, hills, or other obstacles (or even shoot over the horizon, if the Long Range Weapon Ability is also taken). Indirect fire is tricky, however. To effectively fire at an indirect location, the attacker must be able to "see" the target

(sensors can be used), or someone else must spot the target and relay its position to the attacker. Indirect fire results in a -2 penalty to the attack check; firing at a target the attacker cannot "see" results in an additional -6 penalty (-8 total). A weapon with the Indirect Weapon Ability can be used under normal mid-range conditions without any penalty.

Irritant

This represents pepper spray, a skunk's musk, or similar effect. Whether or not damage penetrated Armour, the subject must make a Body Stat check at -1 penalty for every Special Attack Level. If the target fails, the character is partially blinded and distracted (-2 penalty on all checks to do anything) for a number of rounds equal to the amount by which he or she failed the check. Irritant is usually taken in conjunction with the Toxic Disability to simulate an attack against which a gas mask offers protection.

Linked (Attack)

An attack with this Ability is "attached" to another (or "master") attack. The master attack may be an ordinary weapon (such as a Gadget, like a sword or a gun), a Natural Weapon or unarmed attack, or a different Special Attack. If that attack is successful, this "linked" attack automatically hits as well (no defence allowed), but if it misses or fails to penetrate Armour, the linked attack automatically fails too. If the master attack hits and delivers enough damage to successfully penetrate Armour, then the Armour does not protect at all against the damage of the second linked attack. Damage bonuses from Combat Value, Massive Damage, Superstrength, and critical hit multipliers only apply to the master attack, not to each attack. An attack with the Linked Ability may not be given the Accurate or Long Range Abilities or the Inaccurate, Melee, or Short Range Disabilities; its range and accuracy are dependent on the attack to which it is linked. Linked (Attack) counts as two Abilities. If damage bonuses from Combat Value, Massive Damage, Superstrength, etc. are applied to both attacks, this counts as four Abilities.

Long Range

An ordinary attack has an effective range of about 500 metres (10 km in space). This Ability extends the range to 5 km (100 km in space). It can be assigned multiple times: each time it is taken after the first doubles the actual range. Since the Earth's horizon limits line-of-sight for characters standing on the ground, multiple Long Range Abilities are often combined with the Indirect Ability (page 62). The Long Range Ability is incompatible with the Melee or Short Range Disabilities.

Mind or Soul Attack

The attack is not a physical attack but rather is a mental assault (Mind Attack) or contest of spirit or will (Soul Attack). During character creation, the player must specify either Mind or Soul as the focus of the Ability. Instead of the attack requiring Attack or Defence Combat Value checks, the players must roll successful Mind or Soul Stat checks for their characters to attack or defend (though appropriate Skills can modify this). Mind or Soul Attack ignores Armour and Shields. Both versions count as five Abilities.

Muscle-Powered

This ability normally is only appropriate for melee or thrown weapons. The character may add any damage bonus from the Superstrength Attribute (page 66) to the attack's basic damage.

No Healing

This is a lesser form of Incurable. The damage from the attack cannot be restored using the Healing or Regeneration Attributes but can otherwise recover or be repaired normally.

Penetrating (Armour)

The Armour Attribute does not stop damage from these attacks as efficiently as usual. Each time Penetrating (Armour) is assigned, the Armour stops 20 less damage than normal from the attack (up to the Armour's maximum rating). For example, assigning Penetrating (Armour) to a Special Attack 3 times reduces the amount of damage the target's Armour stops by 60.

Spreading

This type of attack spreads to cover an expanding area like a cone of energy or a spray of projectiles. The defender receives a -1 penalty to his or her defence check. Multiple adjacent targets in the attack path may also receive damage if they are lined up or in a dense formation, up to a maximum of one extra target for every Special Attack Level. The Spreading Ability can be acquired multiple times; each one further penalises the target's defence check by -1 and doubles the number of possible adjacent targets. Spreading is often assigned in conjunction with the Short Range Disability.

Stun

An attack with this Ability inflicts temporary damage such as an electric shock that shorts out electronics and renders people unconscious. Lost Health Points are recovered at one Point every minute. Stun damage cannot kill. Although the attack does less damage than a regular attack of a comparable Level, it has the advantage that it may be used to incapacitate a foe without the risk of killing him or her.

Tangle

Attacks that can entangle the victim may include an assault that freezes the target in ice, or traps him or her in the branches of an animated plant, or simple webbing. The entanglement has 10 Health Points for every Special Attack Level. If a target does not successfully defend against a Tangle attack, he or she is trapped until sufficient damage is delivered to the entanglement to reduce its Health Points to zero or lower (at this point, it is destroyed). A trapped character has restricted movement and: attacks physically at a -4 penalty, cannot defend, and cannot perform actions that require complex gestures. The character is usually able to speak, however. A victim who has partially destroyed an entanglement may regain additional body movement, however (GM's discretion). A Tangle attack also inflicts damage as normal unless the No Damage disability is also assigned to the attack. An "Incurable" entanglement can only be damaged by some special means (such as fire or water), defined when the Tangle attack is created. Tangle counts as two Abilities.

Targeted

The attack inflicts double damage to a specific group of targets and normal or no damage to everyone else. Thus, an attack could be targetted against software (a destruction virus), or against all electronic devices (an EMP). Targeted counts as one Ability if no damage is delivered to non-Targeted opponents, or two Abilities if normal damage is delivered.

Trap

The attack lays a mine, booby trap, or some other similar device, which "sits and waits" until someone triggers it. A successful Mind Stat check will reveal the trap's presence. The Trap Ability can be paired with the Melee Disability (page 64) to simulate a booby trap that must be carefully planted. Without the Melee Disability, the trap can be deployed at a range; a successful attack check indicates that the Trap was fired or tossed into the correct area.

Undetectable

Most Special Attacks have a visible component that makes it easy for targets to determine who is attacking them. An attack with the Undetectable Ability does not provide any indication that it is about to strike and cannot be traced back to the

attacker using normal methods. This may result in the attacker gaining surprise, which prevents the victim from making a defence check. If the target knows he or she is under attack, however, a defence check can still be made at a -8 penalty (as though the attack were invisible; page 97). This Ability is most often associated with non-physical attacks such as ones with the Drain (Any), or Mind or Soul Attack Abilities. Undetectable counts as four Abilities.

Unique Ability

The attack has some other unspecified Ability that is not listed, and is subject to GM approval. Examples can include an attack that alters the target's memories, one that affects the appearance of the target, and many more. The number of Ability slots is determined by the GM based on the benefit the Unique Ability provides.

Attack Disabilities

Some, none, or many of these Disabilities may be assigned to a Special Attack. The GM may disallow any combination that seems inappropriate.

Table 4-5: Special Attack Disabilities

Disability	# of Slots	Disability	# of Slots
Backblast	1 or 2	Self-Destruct	4
Hand-Held	1 or 0	Short Range	1
Inaccurate	1	Slow	1-5
Internal	1	Static	2
Limited Shots	1-3	Stoppable	1-5
Low Penetration	1	Toxic	1
Melee	2	Unique Disability	1
No Damage	1	Unreliable	1
Only In (Environment)	1 or 2		

Backblast

The attack produces some sort of backblast or other side effect that affects anyone or anything standing directly behind the attacker (within 1-2 metres). An example is a rocket launcher that produces a hazardous backblast to anyone standing behind the gunner. The damage of the backblast is normally one-fifth the damage of the actual attack. If this Disability is taken twice, it affects everyone in a 1-2 metre radius around it, including the attacking character. Backblast cannot be combined with the Area Effect and Aura Abilities at the same time.

Hand-Held

Attacks are often built into the character, but they may be designated as hand-held. A hand-held weapon can be lost or grabbed by an enemy, or loaned to an ally. The character using the weapon must have at least one hand free to hold it. Optionally, the GM may decide this Disability takes up zero slots (it's for description only).

Inaccurate

The attack is not accurate, suffering a -2 penalty to all attack checks (or Stat checks, if it is a Mind or Soul Attack). This ability can be taken two or three times for a -4 or -6 penalty.

Internal

The attack is only usable inside a specific structure. This may represent a headquarter's built-in internal security systems or an attack for which the character draws power from a particular virtual reality and channels it through his or her body.

Limited Shots

The attack is only usable for a few combat rounds, after which it either runs out of ammunition or power, or simply burns out. Assigning this Disability once means it can make up to six attacks; if taken twice, up to three attacks; if taken three times, only one attack. If the attack also has the Auto-Fire Ability (page 61), one "attack" means a single Auto-Fire burst.

The base number of Disability slots are for attacks that take several minutes or more to "reload." If the attack can be "reloaded" with one action, the number of Disability slots is reduced by 1 (minimum of 1 slot). If the attack can be "reloaded" instantly (an ammunition source is still required), the Disability is worth two fewer slots (minimum of 1 slot).

Low Penetration

The attack has an inferior ability to penetrate Armour relative to its damage. Examples include shotgun blasts and hollow-point bullets. Any Armour Attribute stops an additional 20 damage. The Game Master must approve multiple assignments of this Disability. This Disability is incompatible with either of the two Penetrating Abilities. GMs must approve Special Attacks with multiple assignments of Low Penetration.

Melee

The attack is only usable against adjacent opponents and may require physical contact. An example of a Melee attack is a physical or energy sword, or a touch that inflicts debilitating effects. Of course, many Melee weapons can be thrown as well in desperate situations, but the attack suffers a -4 attack penalty and the base damage is divided in half. The Melee Disability cannot be combined with the Long Range Ability or Short Range Disability. It is sufficiently limiting that it is equivalent to two Disabilities.

No Damage

The attack does not deliver ordinary physical damage; the attacker's Attack Combat Value and Massive Damage Attribute bonus do not add to damage either. This Disability is usually only taken if combined with Abilities such as Drain (Any), Flare, Incapacitating, Irritant, or Tangle that produce effects that do not rely on physical damage. The damage value of the attack is used only to rate the effectiveness of these special abilities — the greater the damage value, the more effective the attack. Characters that use Special Attacks with the No Damage Disability may still need to roll the damage percentage (page 97), however.

Only In (Environment)

The attack or weapon can only target objects that are on or in a particular limited environment, for example, "only in water" (representing a torpedo) or "only in cyberspace" (representing a powerful virtual weapon). The environment should not be one that is ubiquitous in the campaign (for example, "only in air" is not valid unless a lot of the game action will take place in airless environments). If the environment is very rare in the campaign, the GM may allow this to count as two Disabilities.

Self-Destruct

Use of this attack destroys the weapon (characters obviously take this Disability very rarely). This Disability is often combined with Melee and Area-Effect to represent an explosive self-destruct system. It may not be combined with Limited Uses. It counts as four Disabilities.

Short Range

This attack is only usable at close range (effective range of about 50 meters). The Short Range Disability cannot be combined with the Long Range Ability or the Melee Disability.

Slow

The attacker must use one combat action to aim, charge, recode on the fly, load the weapon, or perform some other necessary activity before each attack. Someone with the Extra Attacks Attribute (page 48) can use one of his or her extra actions to prepare the attack rather than wasting the entire round. The Slow Disability can be taken more than once to represent an attack that takes even longer to initiate. Assigning it twice increases the time to three rounds; three assignments increase the time to 10 rounds (about a minute); four increases the time to two-six hours; five increases the preparation to days. This Disability may not be used with the Linked (Attack) Ability.

Static

The attack cannot be used while the character is moving. This could be due to a need for precise aim or total concentration. The weapon might also require all power to be diverted to its energy supply, or might be static because of recoil, or another reason. The character may not even make defence checks on the round a Static attack is used; if he or she has already made a defence check, the character cannot attack with a Static weapon until the following round. Static is worth two Disabilities.

Stoppable

The attack fires a projectile or energy bolt that is massive or slow enough to be shot down and does not reach the target until Initiative zero. Consequently, the attack can be stopped in mid-flight. A cannon shell would probably not qualify, but a missile or plasma-ball might. Anyone with an unused combat attack action during the same round may make a ranged or melee attack against the projectile. To stop the attack, a successful hit (or hits) must deliver 5 damage for every Special Attack Level. Stoppable may not be combined with the Melee Disability. Stoppable may be purchased more than once to reflect an attack that takes even longer to reach the target. Each additional Stoppable rating grants one additional round where characters may attempt to intercept or otherwise stop the attack. Weapons using the Indirect or Long Range Abilities can take minutes or hours to reach their targets; in these cases, the Stoppable Disability is assigned a maximum of five times.

Toxic

The attack is a gas, toxin, biological weapon, sound, radiation, or other harmful effect that only damages living things. Non-living material or characters who have the appropriate Adaptation or Special Defence Attributes are immune to its effects.

Unique Disability

The attack has some other unspecified limitation, which is subject to GM approval. Examples could include a weapon that fires in a random direction, one that is extremely costly to operate, an attack that drains Heath Points from the user, etc.

Unreliable

Any time this attack is used and the attack check is an unmodified (or "natural") roll of 16, the attack fails to take place and the weapon or ability burns out, jams, overheats, or otherwise malfunctions. The Special Attack will not work again until some condition is fulfilled. For example, repairing a technological weapon requires a skilled individual to make a successful Mind Stat check (one attempt each round), and while the character is making repairs, he or she cannot carry out other activities. Other remedies might be appropriate for recovering different attacks.

Special Defence

Type: Special
Cost: 1 Point/Level
Relevant Stat: Variable
Required PMVs: None
Optional PMVs: None
Progression: Linear; +1 Special Defence slot each Level
Reduction: None
Restrictions: Under certain conditions; time limit; partial defence (for 2 Slots only)

A character with this Attribute is resistant or completely immune to a specific type of uncommon ailment or injury, normally one whose effects are otherwise insidious in nature. Special Defence can be acquired multiple times to represent a character who is resistant or immune to different kinds of attacks/events.

If a category is assigned one slot, the character is partially resistant; for two slots, the character has complete or enhanced resistance. For ability to survive under harsh physical conditions, see the Adaptation Attribute (page 42). For characters who have defences against particular Attributes, see the Block Power (page 45) Attribute.

A character may have any number of Levels of Special Defence — it is not limited to 8.

Several examples of Special Defences and their effects are shown below. The GM and players are encouraged to develop their own as well.

Table 4-6: Special Defence

Effect	1 Slot	2 Slots
Ageing	Ages slowly	Does not age
Air/Oxygen to Breathe	Survive in low-oxygen environment	Does not breathe
Disease	Half damage or effect	Immune
Hunger	Need to eat once every 2-4 days	Never need to eat
Own Attributes	Stat check to avoid effect	Immune
Pain	Unwanted sensation is reduced	No pain is felt
Poison	Half damage or effect	Immune
Sleep	Sleep once every 3-7 days	Never need to sleep
Specific Attack Ability	+3 Stat/Stat checks	+6 Stat/Stat checks

Special Movement

Type: Special
Cost: 1 Point/Level
Relevant Stat: Body
Required PMVs: None
Optional PMVs: None
Progression: Linear; +1 type of movement each Level
Reduction: None
Restrictions: Under certain conditions; movement is exhausting to the character; involving particular surfaces

The movement abilities may be the result of genetics, intense training, or built-in gadgetry. The character may select one Special Movement Ability for every Level of this Attribute. Several examples are given below; the GM and players are encouraged to develop additional abilities as well. See Flight (page 49), Jumping (page 52), Speed (page 66), or Water Speed (page 68) for other methods of movement.

Balance

The character never loses his or her balance, even when running on a narrow rope or beam.

Cat-Like

The character will take half damage (round down) from most falls and always lands on his or her feet.

Dataflow

This is the ability of software, avatars, and so on to move around the net at the speed of light via normal dataflow connections (phone lines, satellite uplinks, and so on). It may not function, or may slow to a crawl, in certain areas of the net (notably inside databases or the like that are being infiltrated). An entity that is using Dataflow cannot do anything else on that round. Not all software entities may have it: it may be completely unavailable to particular entities that are bound within a particular part of the net — for example, an entity that lives entirely within a virtual reality simulation that has "real physics" may not possess this Attribute.

Dimension Hop

Upon a successful Stat check, the character can instantly travel between his or her home dimension to one other dimension. This is normally used in *Ex Machina* to represent the ability of certain entities to shift their consciousness into or out of cyberspace. Each time this method is assigned, the character can travel to another single dimension; more than one Level is only necessary if there are multiple different cyberspace realms in the world, rather than a single unified network.

Light-Footed

The character can skim over sand, snow, or ice at full speed.

Slithering

The character can slither along the ground at normal walking/running speeds. This allows a character to move quickly while maintaining a very low profile.

Swinging/Brachiating

The character can swing through forests and cities (areas with natural or artificial structures above swinging height) using vines/ropes/webbing or simply his or her arms.

Untrackable

The character never leaves footprints, tracks, or a scent when he or she walks or runs.

Wall-Bouncing

The character can move at regular walking speed without touching the ground by bounding back and forth between nearby vertical surfaces (walls). For example, he or she can proceed down hallways or climb an alleyway between two buildings (bouncing from wall to wall).

Wall-Crawling

The character can cling to walls or ceilings as though they were on the ground or floor. This counts as two Special Movement abilities.

Water-Walking

The character can walk or run over water as if he or she was on land. This counts as two Special Movement abilities.

Zen Direction

When the character opens his or her mind to the natural world, he or she will always move in the "right" direction. The "right" direction is not always the desired direction, however.

Speed

Type:	Special
Cost:	6 Points/Level
Relevant Stat:	Body
Required PMVs:	None
Optional PMVs:	None
Progression:	Medium Progression Chart, starting at 100 kph
Reduction:	Very specific utility
Restrictions:	Under certain conditions; time limit; Stat/Skill checks required to run safely

On average, a character can sprint up to 6 metres per round (4.3 kph) times his or her Body Stat. A character with Speed can move much faster than this, as well as perceive the world at an increased pace. At Speed Level 5+, the character moves quickly enough to run over any liquid surface as well.

In most genres, a fast-moving character can still interact with the world. This means that the character will not run into buildings along city streets because he or she can perceive them early enough and make sharp turns to avoid them. Speedsters can also read books quickly, write at incredible speeds, and perform normal chores and activities at enhanced rates. In addition to gaining +2 Initiative at each Level, the character is harder to hit due to the incredible speed at which the character is moving. For more information about Speed and its influence on combat, see page 95.

Speed is a modular Attribute that does not provide the character with many other benefits typically associated with speedsters, however. Many characters with Speed will also possess one or more Levels in the following Attributes: Combat Technique (Lightning Reflexes), Extra Attacks, Extra Defences, Heightened Awareness, Incorporeal, Massive Damage (Speed attacks), Regeneration, Special Movement, and Special Attack (Tied to Speed through the Dependent Defect).

Superstrength

Type:	Special
Cost:	4 Points/Level
Relevant Stat:	Body
Required PMVs:	None
Optional PMVs:	None
Progression:	Medium Progression Chart, starting at 1 tonne
Reduction:	Very specific utility
Restrictions:	Under certain conditions; no extra combat damage; Superstrength in single limb only

On average, a character can lift 30 kg times his or her Body Stat, but some characters are far stronger than their Body Stats indicate. This Attribute can represent the muscular strength of a large or powerful non-human, or the hydraulic systems of robotic or cybernetic muscles. Each Level of Superstrength determines the maximum mass the character can lift. Each Level also adds +10 close combat damage when using punches, kicks, body slams, melee weapons, Special Attacks with the Muscle-Powered Ability, or the Natural Weapon Attribute (page 57). Each Level also grants a +4 bonus for Body Stat checks where pure strength is involved.

A character's Superstrength is independent of his or her Body Stat. When someone or something has Superstrength, strength moves beyond the Stat scale; the Body Stat now represents fitness, durability, and agility rather than actual muscle. Thus, a player could create someone with a Body Stat of 2, but Levels of Superstrength (clumsy but powerful!).

Telepathy

Type:	Special
Cost:	1-3 Points/Level
Relevant Stat:	Mind
Required PMVs:	Targets
Optional PMVs:	Area, Range
Progression:	Descriptive
Reduction:	Attribute always used in same way
Restrictions:	Under certain conditions; time limit; usage weakens character

Telepathy is the ability to read thoughts, transmit thoughts, or invade minds. In *Ex Machina* it is normally limited to affecting computers and individuals whose minds have been connected to computers via implants, neural jacks, or the like. More universal forms of Telepathy may exist, but usually only if contained in an Item of Power (page 52) to represent certain types of mechanical mind probe. The latter use usually has no optional Range PMV.

Telepathy costs 1 Point/Level if its utility is quite restricted (for example, "only works with computers"). It costs 2 Points/Level if its utility is somewhat restricted (for example, "computers or anyone jacked into a computer"). It costs 3 Points/Level if it has universal utility.

This Attribute allows the character to read and transmit thoughts, and at higher Levels, to actually "invade" a person's mind and probe their memories or alter their thoughts. Telepathy works only if a subject is in very close proximity, unless the Range or Area PMV Rank is 2 or higher. Pinpointing a single target in a crowd can be difficult; the GM may require a Mind Stat check, modified by any Levels the character has in the Heightened Awareness (page 50) or Heightened Senses Attribute (page 50).

A subject cannot detect a telepath reading thoughts or sensory impressions unless he or she has the Telepathy or Mind Shield Attributes at an equal or higher Level. If so, he or she can choose to block the telepath, in which case the only way to get through is via mental invasion. A subject will always be aware of a mental invasion (although a non-telepath may not understand exactly what is going on). See the Mind Combat rules (page 100) in Chapter 9: Game Mechanics for details of mental invasions.

Once contact is made, a telepath at Level 6 or higher can temporarily gain a target's specific knowledge that is associated with a Skill. The actual Skill is not learned in full, however. For example, a telepath can scan the mind of a nearby surgeon to learn how to perform a specific operation on an ally, but he or she does not gain the Medical Skill. The telepath will soon forget this newly learned Skill-based knowledge.

Unlike most Attributes, Telepathy only has listed entries for Levels 2, 4, 6, 8, and 10. If necessary, the GM can interpolate the intermediate and higher Levels. When performing a Mind Stat check to determine if the Telepathy attempt was successful, the character receives a Check Value bonus equal to half the Attribute's Level (for example, a Level 8 Telepath makes his or her Mind Stat checks with a +4 Check Value bonus).

Level 2 The character can, by concentrating, use mind reading to pick up the "loud" surface thoughts of a subject. A "loud" thought is something about which the subject is thinking intensely or that has a very strong emotional content. The character can also transmit a single feeling, such as "fear" or "love" to another person.

Level 4 The character can, by concentrating, use mind reading to pick up the ordinary surface thoughts of a subject. The character can only read what a person is actually thinking at the time. Two telepaths can communicate with one another at conversational speeds by reading each other's thoughts. The character can also transmit a word, simple image, or simple concept (like "flower," or a person's face) to a non-telepath on which he or she concentrates. It requires an entire round of concentration to convey one concept, which makes telepath to non-telepath communication slow.

Level 6 The character can easily read a subject's surface thoughts and sensory impressions (for example, seeing through a subject's eyes, feeling what the subject feels, etc.). The character can choose to ignore some senses if desired. The character can send and receive mental speech to a non-telepath at normal conversational speeds. If the Targets PMV is raised to Level 2 or higher, the character can broadcast the mental speech of one subject to others in the range/area as well.

Level 8 The character has the same capabilities as at Level 6 Telepathy. In addition, he or she can invade another person's mind. This counts as an attack, and if the subject is unwilling or unaware, the character will enter Mind Combat with him or her (page 100). If the subject is willing or loses the mental combat, the telepath can probe his or her memory for information he or she needs. The character will also automatically read surface thoughts of anyone within the telepathy area.

Level 10 The character has the same capabilities as Level 8 Telepathy. He or she automatically shares the sensory experiences of anyone within the telepathy area without need for concentration, unless he or she deliberately tries to block this ability. Additionally, a successful mental invasion can probe memories that the subject can no longer consciously remember, delete existing memories, and plant false ones.

Tough

Type:	Mundane
Cost:	2 Points/Level
Relevant Stat:	None
Required PMVs:	None
Optional PMVs:	None
Progression:	Linear; +20 Health Points each Level
Reduction:	None
Restrictions:	None

Possessing this Attribute increases the Health Points of the character, allowing him or her to withstand more damage in combat. The Tough Attribute, along with the Body Stat, also reflects a character's resistance to sickness, disease, and other physical ailments. See page 84 for more information on Health Points. Note that characters with high Body or Soul Attributes may be very healthy even without this Attribute.

Transfer

Type: Special
Cost: 5 or 10 Points/Level
Relevant Stat: Soul
Required PMVs: Duration
Optional PMVs: Range
Progression: Linear; transfer of +1 Attribute Level each Level
Reduction: More than one but less than all
Restrictions: Character loses Attribute while it is transferred; transfer to specific type of targets; transfer of specific Attributes

Upon a successful Stat Soul check, the character can temporarily grant the use of any one of his or her Attributes to any single willing target character within the Range PMV distance. Power Flux cannot be transferred under normal circumstances. The Transfer Attribute Level determines the maximum Attribute Level that can be granted. The Level of a transferred Attribute replaces the target's corresponding Level (if applicable), which can be an increase or decrease. The target gains the benefits of a transferred Attribute as long as indicated by the Duration PMV. The GM may also decide that Stats, Skills, and/or Characteristic Attributes can be given to a target when Transfer reaches Level 5 or higher. To grant Attributes to multiple targets, the Transfer Attribute can be assigned multiple times.

For 5 Points/Level the character can only transfer one Attribute at any single time. When the character grants a new ability, the target ceases benefiting from any currently transferred Attribute. For 10 Points/Level, the character can transfer all desired Attributes simultaneously to a single target. When an Attribute is Transferred, the receiving character is in complete control of its abilities.

Unique Attribute

Type: To be defined
Cost: 1-10 Points/Level
Relevant Stat: Variable
Required PMVs: Variable
Optional PMVs: Variable
Progression: Variable
Reduction: Any
Restrictions: Any

This Attribute covers any and all powers and special abilities not detailed in the rules. Often one single Point in a Unique Attribute is sufficient to give the character "flavour," but more Points can be allocated to enhance the effects on game play and must be added if the Attribute would be of considerable benefit. Discuss the Attribute with the GM to determine what specific game effects the Unique Attribute possesses.

The GM should assign a Point cost per Level based on how the Attribute compares to other Attributes and how useful it is. An Attribute that is somewhat useful in the game should cost 1 Point/Level; one that is very useful should cost 2-3 Points/Level; one that is extremely useful should cost 4-6 Points/Level; and one that is exceptionally powerful and useful should cost 7-10 (or more) Points/Level.

Water Speed

Type: Special
Cost: 2 Points/Level
Relevant Stat: Body
Required PMVs: None
Optional PMVs: None
Progression: Medium Progression Chart, starting at 5 kph
Reduction: Limited control
Restrictions: Under certain conditions; only surface travel; time limitation

A character with Water Speed can float and travel on or under water. Aquatic creatures or amphibious non-humans such as mermaids usually possess this Attribute. The character can swim on the surface at high speeds and dive underwater for brief periods by holding his or her breath, or indefinitely if he or she has the Adaptation (Underwater) Attribute. To survive the pressure associated with deep diving, the Adaptation (Pressure) Attribute must also be assigned. Also, depending on the speed at which the character is moving, opponents may suffer a penalty to hit the character (see Attacking Moving Targets, page 96).

Wealth

Type: Mundane
Cost: 3 Points/Level
Relevant Stat: None
Required PMVs: None
Optional PMVs: None
Progression: Medium Progression Chart, starting at $500,000 (equivalent)
Reduction: Very specific utility
Restrictions: Difficult to access funds; less non-liquid assets; spending limits on single items

The character is more financially stable ("liquid") than an average person. This will allow him or her to easily acquire commercially available goods, and bribe or hire people. Note that hirelings that are intensely loyal to the character should still be acquired through the Henchmen or the Servant Attributes. The character usually has non-liquid assets (like houses or real estate) commensurate with his or her wealth as well. In order to have access to things that are illegal or difficult to acquire without special licenses, the character should still acquire the Organisational Ties or Gadgets Attributes (pages 58 and 49).

Chapter 5: Select Skills (Step 6)

Your character's Skills represent his or her extensive training and experience in a particular field. Skill Points, not Character Points, are used to acquire them.

A starting character receives 30 Skill Points, plus an additional 10 Skill Points for each Level of the Highly Skilled Attribute (page 51) that he or she possesses. A character with the Unskilled Defect (page 83) has 10, 20, or 30 fewer Skill Points.

Occupational templates come with a pre-selected set of Skills, but you will have to select Specialisations (see below) for most of the Skills they include. Additional Levels of Highly Skilled may be acquired if you wish to add more Skills, or you may customise the template by removing some of the chosen Skills and using these Skill Points to acquire different ones.

Non-player characters created by the GM may have any number of Skill Points. Minor characters will usually have only 5-15 Skill Points, for example, while a major, recurring opponent may have 100 or more. The character's power level also indicates the maximum Skill Level he or she can achieve under normal circumstances (Level 4 in *Ex Machina*; GM's discretion).

The different Skills are divided into Levels 1 through 4. Increasing the value of a Skill by one Level requires 1-12 Skill Points, depending on the Skill. The higher the Skill Level, the better your character is and the broader his or her knowledge within the field. Characters with high Stats (or Combat Values) can be exceptionally proficient within a field even without high Skill Levels; they are considered "naturals."

Table 5-1: Skill Level Descriptions

Skill Level 1	Well-Trained. The character has some training and practice with the Skill.
Skill Level 2	Scholar. The character has moderate training and practice with the Skill.
Skill Level 3	Expert. The character has significant training and practice with the Skill.
Skill Level 4	Veteran. The character has comprehensive training and practice with the Skill.

Skills and Specialities

General and Combat Skills have a number of associated Specialisations, which describe the different ways that the Skill may be used. For example, Gun Combat is divided into Auto-fire, Pistol, and Rifle. When you assign a Skill to your character or select an occupational template that does not specify a particular specialisation, either choose one of the listed Specialisation or create a new Specialisation with GM approval. Your character will be significantly better in the chosen Specialisation than he or she will be in the other aspects of the Skill. A Specialisation is usually recorded in parentheses after the Skill, for example, "Gun Combat (Pistol) Level 3."

Instead of improving a Skill by one Level, it is possible to take an extra Specialisation. Each extra Specialisation costs only one Skill Point regardless of the Point cost of the Skill. If your character has Skill Points to spare, however, you may find it more advantageous to add an extra Skill Level rather than take many extra Specialisations.

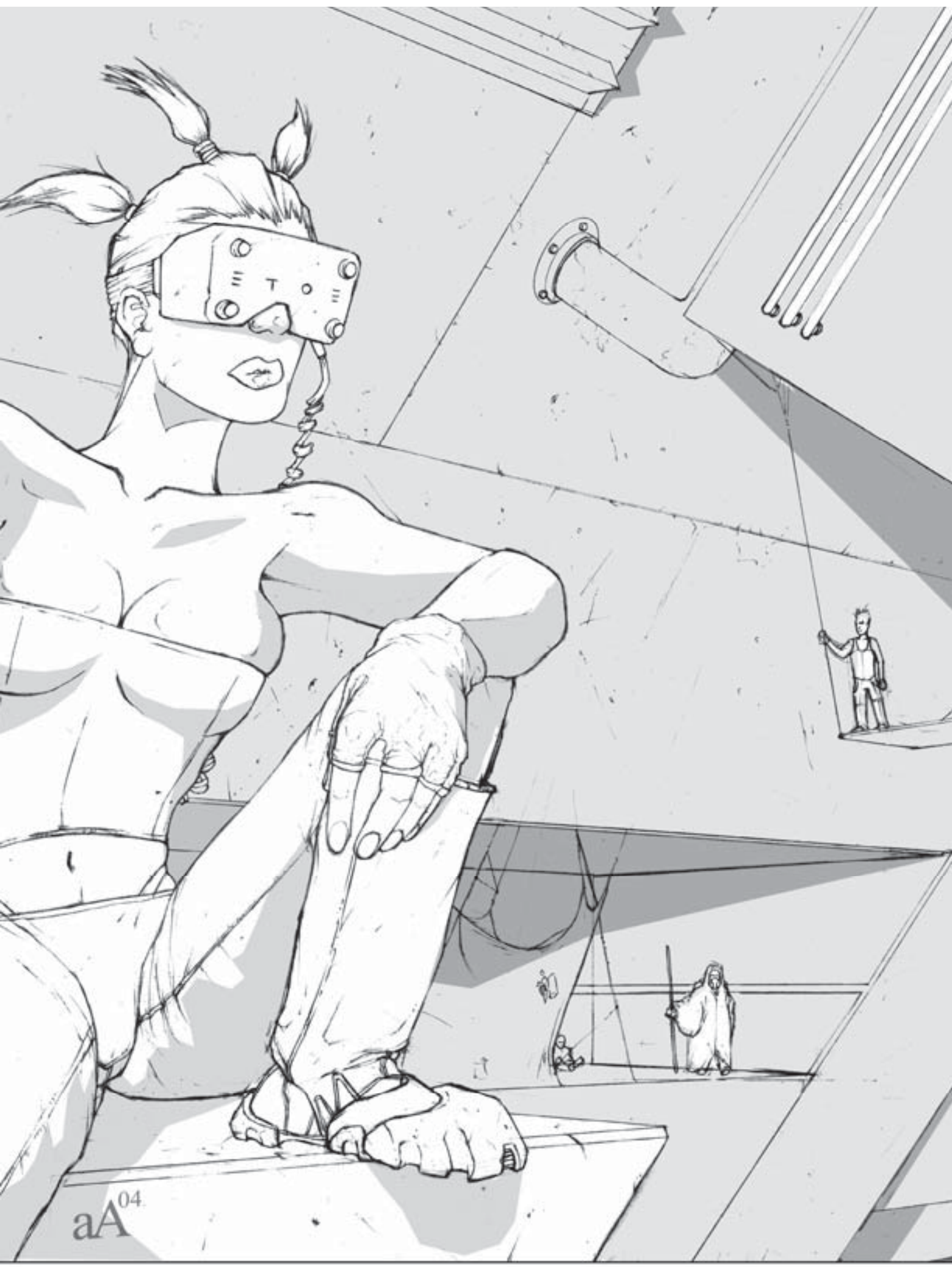
Using Skills

Each Skill has its own description, which indicates game effects and the Stat which is usually most relevant to the Skill's use, should a Skill check be needed. Game mechanics for using Skills in play are described under Skill checks (page 87), but there is no need to worry about them while designing a character. Simply choose those Skills that most closely fit your concept.

A player should not assign a particular Skill to his or her character to justify some familiarity within the field. Even a Level 1 Skill assignment reflects a substantial amount of training, and will demonstrate that your character is quite knowledgeable or capable in the chosen area. If a character has only limited capabilities within a specific area, he or she should not possess the relevant Skill. For example, anyone can throw a punch or fire a gun without necessarily having any real talent. A character that knows how to drive a car safely on city streets does not automatically need the Driving (Car) Skill nor does someone with a first year university course in physics necessarily have Physical Sciences (Physics). Conversely, a character may have high Skill Levels without any formal training, because he or she has used the Skill in daily life for many years (such as a brawny

Table 5-2: Skill Point Costs

Skill	Cost
Acrobatics	4
Animal Training	1
Architecture	2
Area Knowledge	4
Artisan	2
Biological Sciences	4
Boating	3
Burglary	3
Climbing	2
Computers	6
Controlled Breathing	1
Cultural Arts	2
Demolitions	4
Disguise	2
Domestic Arts	1
Driving	4
Electronics	6
Etiquette	3
Foreign Culture	3
Forgery	3
Gaming	2
Interrogation	4
Intimidation	4
Languages	2
Law	2
Management/Administration	2
Mechanics	3
Medical	3
Military Sciences	3
Navigation	2
Occult	1
Performing Arts	2
Physical Sciences	4
Piloting	3
Poisons	2
Police Sciences	3
Power Usage	2
Powerlifting	3
Riding	1
Seduction	2
Sleight of Hand	3
Social Sciences	2
Sports	2
Stealth	3
Street Sense	4
Swimming	1
Urban Tracking	4
Visual Arts	2
Wilderness Survival	2
Wilderness Tracking	2
Writing	2
Combat Skills	
Archery	4
Gun Combat	8
Heavy Weapons	6
Melee Attack	6
Melee Defence	6
Ranged Defence	8
Special Ranged Attack	3
Thrown Weapons	4
Unarmed Attack	5
Unarmed Defence	5



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farm worker having the Powerlifting Skill). Characters should rarely possess Skill Levels at Level 4, since this achievement reflects an incredibly high degree of proficiency. A character with a Skill Level of 4 is widely regarded as the best in his or her field.

Skill Point Costs

In the Tri-Stat system, the Point cost of a Skill is based on its utility in the game and not on the difficulty of learning the Skill. Table 5-3: Skill Point Costs provides a list of Skill Point costs for the cyberpunk genre, where skills such as Computers or Gun Combat are emphasised. The Game Master should also adjust Point costs when blending multiple campaign themes. For example, if running a cross-over Occult/Cyberpunk campaign, the Occult Skill is probably best set at higher than the default 1 Points/Level cost to reflect its new importance.

General Skills

Acrobatics

Relevant Stat: Body
Specialisations: Balance, Flexibility, Jumps, Tumbling

The ability to perform feats of agility with minimal chance for injury. Includes jumping, flipping, contorting, and reacting quickly.

Animal Training

Relevant Stat: Soul
Specialisations: Any single animal such as dogs, dolphins, horses, etc.

The ability to teach and train animals with an intellect above that of instinctive insects. An animal usually has a Mind Stat of 1-2.

Architecture

Relevant Stat: Mind
Specialisations: Aquatic, Bridges, Fortifications, Small Buildings, Skyscrapers

Knowledge of construction methods, architectural drafting, etc. A successful use of this Skill can also find weak points in constructions or help in locating old structural plans.

Area Knowledge

Relevant Stat: Mind
Specialisations: One specific locale (city, cyberspace, forest, sea, desert, mountain) within the area

Knowledge of the geography and people of a single area (choose one area) and a specific locale within it. The smaller the area, the more detailed and extensive the character's knowledge. This Skill may be assigned multiple times to indicate knowledge of several areas.

Artisan

Relevant Stat: Average of Body and Soul
Specialisations: Carpentry, Leatherworking, Metalworking, Plumbing, Tailoring, Woodworking

This Skill represents a character's ability to work with a variety of materials to repair or produce useful or aesthetically pleasing objects not electronic or mechanical in nature.

Biological Sciences

Relevant Stat: Mind
Specialisations: Bacteria/Viruses, Botany, Ecology, Genetics, Physiology, Zoology

This field covers scientific knowledge of how living things function.

Boating

Relevant Stat: Average of Body and Mind
Specialisations: Hovercraft, Large Ships, Small Boats, Submarines

The ability to safely operate a watercraft.

Burglary

Relevant Stat: Body or Mind
Specialisations: Breaking-and-Entering, Hot-Wiring, Safe Cracking.

The ability to open locks, quietly cut glass, hot-wire car ignitions, etc. The ability does not cover disarming electronic security systems, which is handled by Electronics (Security) Skill.

Climbing

Relevant Stat: Body
Specialisations: Natural Surfaces, Poles, Walls, Vegetation

The ability to scale vertical surfaces with or without the use of specialised climbing equipment.

Computers

Relevant Stat: Mind
Specialisations: Artificial Intelligence, Databases, Electronic Warfare, Intrusion/Security, Networks, Programming, Systems Operation

Practical knowledge of computer use. Computer engineering (hardware) is covered by Electronics. See the Cyberspace chapter (page 136) for examples of how this Skill can be used.

Controlled Breathing

Relevant Stat: Body or Soul
Specialisations: Cyclic Breathing, Holding Breath, Slow Heart Rate

The ability to control respiratory functions in order to maximise breathing efficiency or to perform tricks such as "playing dead."

Cultural Arts

Relevant Stat: Mind
Specialisations: Archaeology, Art Appraisal, History, Literature, Urban Legends

Knowledge of aspects of human culture (or another species' culture).

Demolitions

Relevant Stat: Body or Mind
Specialisations: Artificial Structures, Bomb Disposal, Natural Structures, Safe Cracking, Underwater

The ability to set explosive charges without getting hurt in the process or inflicting undesired collateral damage. It is also used for deactivating explosives set by someone else.

Disguise

Relevant Stat: Body, Mind, or Soul
Specialisations: Costume, Make-up, Prosthetics

The ability to change one's personal appearance in an attempt to deceive others.

Domestic Arts

Relevant Stat: Mind or Soul
Specialisations: Cleaning, Cooking, Decorating, Home Budgeting

The ability to efficiently organise and run a domestic household.

Driving

Relevant Stat: Body or Mind
Specialisations: Big Rig (large tractor/trailer trucks), Car, Motorcycle, Small Truck (vans, pick-ups, hi-cubes), Tank (tracked APCs, tanks)

The ability to operate a powered ground vehicle. Skill checks are only necessary in difficult situations such as performing vehicular stunts, avoiding hazards, etc.

Electronics

Relevant Stat: Mind
Specialisations: Communications, Computers, Consumer Electronics, Cybernetics, Robotics, Security, Sensors

The ability to maintain, repair, build, modify (and at high Levels, design) electronic equipment.

Etiquette

Relevant Stat: Mind
Specialisations: Lower Class, Middle Class, Upper Class

The knowledge of polite, proper, and inoffensive behaviour in social settings.

Foreign Culture

Relevant Stat: Mind
Specialisations: One Specific Culture

Reflects knowledge of the history, religion, ethics, and lifestyle of one or more foreign countries or cultures: one foreign culture at Level 1, two at Level 2, three or four at Level 3, five to eight at Level 4, and more than nine at Level 5. Naturally, less than the maximum number of cultures can be assigned. Thus, multiple Specialisations may be listed for Foreign Culture.

Forgery

Relevant Stat: Mind
Specialisations: Electronic Documents, Handwriting, Paper Documents

The ability to counterfeit documents and papers. This Skill can be used in conjunction with the Computers Skill.

Gaming

Relevant Stat: Mind or Soul (Body for some video games)
Specialisations: Board Games, Computer Games, Gambling/Card Games, Military Simulations, Role-Playing Games

The ability to play various games and simulations well.

Interrogation

Relevant Stat: Mind or Soul
Specialisations: Drugs, Psychological, Physical

The ability to convince someone to provide information against their will. Can also be used to help withhold information when being Interrogated by an enemy.

Intimidation

Relevant Stat: Body, Mind, or Soul
Specialisations: Business, Political, Street

The ability to convincingly project a "tough guy" image. A successful check means someone witnessing your performance is convinced you mean any threats you make. How they react after that will depend on how tough they are themselves in relation to the kind of threat you present — they may respond with respect, fear, hatred, or amusement.

Languages

Relevant Stat: Mind
Specialisations: Any one language, Braille, Code Language, Lip Reading, Sign Language

Reflects an aptitude for languages and their historical usage. Additionally, a character will be able to speak and write one foreign language at Level 1, two at Level 2, three or four at Level 3, five to eight at Level 4, and more than nine at Level 5. Thus, multiple Specialisations will be listed for Languages — the first is the character's native language (a free Specialisation), while the others are foreign languages.

Law

Relevant Stat: Mind
Specialisations: Civil, Criminal, Customs, Family, International, Political

Knowledge of legal procedure and practice. GMs may assume that anyone with Level 3 or more has a license to practice law. In addition to lawyers, many police officers, politicians, and superbeings have the Law Skill at Level 1 or 2. All Specialisations, except International, are specific to one country or region only (for example, "American Criminal Law").

Management and Administration

Relevant Stat: Mind
Specialisations: Accounting, Banking, Executive, Fraud, Government, Marketing, Small Business

The ability to organise, run, and understand part or all of an organisation (such as a business, government, or association). This Skill is also useful for locating new employees.

Mechanics

Relevant Stat: Mind (sometimes Body)
Specialisations: Aeronautical, Armourer, Automotive, Gunsmith, Locksmith, Micro, Traps

The ability to maintain, repair, or build mechanical and electro-mechanical devices. This also includes knowledge of tool use, welding, etc. Armourer applies to heavy vehicle-mounted weapons while Gunsmith covers personal weaponry. Use Artisan for archaic weapons.

Medical

Relevant Stat: Mind (sometimes Body)
Specialisations: Acupuncture, Dentistry, Diagnosis, Emergency Response, Homeopathy, Pathology, Pharmacy, Surgery, Veterinary

Knowledge of how to heal the body. GMs may assume that anyone with Level 3 or more has a license to practice medicine. A typical general practitioner would Specialise in Diagnosis, while most police officers or paramedics Specialise in Emergency Response.

Military Sciences

Relevant Stat: Mind
Specialisations: Hardware Recognition, Intelligence Analysis, Logistics, Strategy, Tactics, Teamwork

The character has military-style tactical, staff, or leadership training. In addition, SWAT (or other tactical police units) often include individuals who pick up similar Skills (and often recruit ex-military personnel).

Navigation

Relevant Stat: Mind
Specialisations: Air, Highway, Sea, Space, Urban, Wilderness

The ability to read maps or use specialised navigation equipment. The Navigation Skill will help a character find the fastest/safest route to a destination.

Occult
Relevant Stat: Mind
Specialisations: Astrology, Channelling, Numerology, Rituals, Spirits, Tarot, Voodoo, Witchcraft

Knowledge of the arcane and mystical arts, and their applications in both historical and modern society.

Performing Arts
Relevant Stat: Average of Body, Mind, and Soul
Specialisations: Comedy, Dance, Drama, Music, Public Speaking, Singing, Fast Talking

The ability to perform well before an audience, and to evoke an emotional response through the art form.

Physical Sciences
Relevant Stat: Mind
Specialisations: Astronomy, Biochemistry, Chemistry, Engineering, Geology, Mathematics, Physics

Scientific training in the way the universe works, including the necessary background knowledge.

Piloting
Relevant Stat: Average of Body and Mind
Specialisations: Heavy Airplane (usually multi-engine), Helicopter, Jet Fighter, Light Airplane (usually single-engine), Lighter than Air Craft, Spacecraft, VTOL

The ability to operate air or space vehicles. Skill checks are normally only necessary when performing an unusual manoeuvre, avoiding a hazard, piloting an unfamiliar aircraft, etc.

Poisons
Relevant Stat: Mind
Specialisations: Alien, Natural, Synthetic

The ability to recognise, concoct, apply, and neutralise a variety of poisons and toxins.

Police Sciences
Relevant Stat: Mind
Specialisations: Ballistics, Criminology, Forensics

This is the science behind detective work. Ballistics is the study of the wounds inflicted by projectiles; criminology focuses on studies of criminal behaviour and strategies; forensics covers evidence gathering (including hair-and-fibre, fingerprint and DNA-based identification techniques).

Power Usage
Relevant Stat: Body, Mind, or Soul
Specialisations: One specific Attribute only

Unlike other Skills, Power Usage only offers a Check Value bonus to the Stat check (not Combat check) for one specific Attribute, which is also the Specialisation. To receive a bonus on multiple Attributes, this Skill must be assigned multiple times at 8 Points/Level. The Skill is useful to a character who may not have a high Stat (such as Mind) that is associated with one of his or her Attributes (such as Mind Control or Telepathy). When the character must make a Stat check for the specific Attribute, the Power Usage Skill adds a bonus to the Check Value as though the Stat check is actually a Skill check.

Powerlifting
Relevant Stat: Body
Specialisations: Bulky Objects, Free Weights, Humans, Moving Objects, Small Objects (Hand-Held)

The ability to perform feats of strength with minimal chance for injury. Includes lifting or pushing heavy objects, stopping objects in motion, and supporting large masses.

Riding
Relevant Stat: Body, Mind or Soul
Specialisations: By species (Camel, Horse, Tiger, etc.).

This is the knowledge of how to care for a riding beast, how to saddle, mount, and dismount the animal, how to get it to perform difficult or dangerous manoeuvres safely and without balking, and how to best pace it for long distance rides.

Seduction
Relevant Stat: Body or Soul
Specialisations: Exotic, Female, Male

A character with this Skill is adept at exploiting their sex appeal. A successful Skill check will convince another person that the character is genuinely interested in them. Whether or not the subject actually responds will depend on his or her own romantic inclinations and sexual preferences.

Sleight of Hand
Relevant Stat: Body
Specialisations: Card Sharking, Lock Picking, Pick Pocketing, Stage Magic

A character with this Skill (also known as prestidigitation) has superior manual dexterity, greater than that suggested by his or her Body Stat. This includes the ability to perform "magic" tricks, palm small objects, cheat at cards, plant an item on someone, etc.

Social Sciences
Relevant Stat: Mind
Specialisations: Anthropology, Geography, Politics, Psychology, Social Work, Sociology, Theology

Understanding of the way people function in society as well as societal behavioural patterns.

Sports
Relevant Stat: Body (sometimes Mind or Soul)
Specialisations: Baseball, Basketball, Bicycling, Cricket, Football, Hockey, Skateboarding, Volleyball, etc.

The ability to play well with others in a team or individual sporting event with specialised rules, or to practice an individual sport.

Stealth
Relevant Stat: Body (sometimes Mind)
Specialisations: Camouflage, Concealment, Silent Movement

The ability to disguise objects or people so that they blend into their surroundings. This also includes the ability to conceal small objects on one's person and the ability to move silently.

Street Sense
Relevant Stat: Mind or Soul
Specialisations: Gang Activity, Influential Individuals, Territorial Divisions (all by region)

The knowledge of street activity within a particular region or city. This is a vital survival Skill for a person on the streets.

Swimming
Relevant Stat: Body
Specialisations: Competition, Deep-Sea Diving, Free Diving, Scuba, Snorkelling

The character is skilled at swimming or diving. The GM may assume that any character in a modern setting can swim even without this Skill. A swimmer can usually move at a speed equal to his or her Body in kilometres per hour for short distances.

Urban Tracking
Relevant Stat: Mind
Specialisations: Academic, Corporate, Residential, Underworld

Urban Tracking is the ability to "shadow" someone (or follow a vehicle in another vehicle) through an industrialised, populated area or to find certain people in a particular sub-culture or environment by asking the right questions.

Visual Arts
Relevant Stat: Body, Mind, or Soul (often an average)
Specialisations: Animation, Drawing, Flower Arranging, Painting, Photography, SIN, Sculpting, Video

The ability to produce a work of fine or commercial art in a particular visual field. Sensory interface (SIN) specialisation allows an artist to create, edit, and analyse simulated sensory experiences.

Wilderness Survival
Relevant Stat: Mind (sometimes Body)
Specialisations: Aquatic, Arctic, Desert, Forest, Jungle, Mountain, Plains

The ability to find food and shelter in the outdoors, to avoid natural hazards, and to identify wild plants and animals.

Wilderness Tracking
Relevant Stat: Mind (sometimes Soul)
Specialisations: Aquatic, Arctic, Desert, Forest, Jungle, Mountain, Plains

The ability to successfully trail or track someone or something while outdoors in a rural or wilderness setting.

Writing
Relevant Stat: Average of Mind and Soul
Specialisations: Academic, Fiction, Journalistic, Poetic, Technical

The ability to communicate ideas or emotions in a written work.

Combat Skills

Archery
Relevant Stat: None (uses Attack Combat Value)
Specialisations: Bow, Crossbow

The ability to accurately shoot with a bow or crossbow. This is an Attack Combat Skill.

Gun Combat
Relevant Stat: None (uses Attack Combat Value)
Specialisations: Auto-fire, Pistol, Rifle

The ability to accurately shoot with a hand-held firearm and to keep it properly maintained. Auto-fire applies to firing bursts of fully automatic fire from any gun, whether it is a small submachine gun, a big assault rifle, or a heavy machine gun. Pistol applies to firing single shots from a handgun. Rifle covers firing single shots from guns with a shoulder stock including rifles, railguns, sniper lasers and shotguns. This is an Attack Combat Skill.

Heavy Weapons
Relevant Stat: None (uses Attack Combat Value)
Specialisations: Artillery (indirect fire weapons such as Howitzers), Gunnery (heavy machine guns, tank guns and other vehicle-mounted direct-fire weapons), Launchers (rocket and missile launchers)

The ability to accurately fire vehicle-, shoulder-, or tripod-mounted weapons such as a tank cannon or heavy machine gun, and to perform routine maintenance. This is an Attack Combat Skill.

Melee Attack
Relevant Stat: None (uses Attack Combat Value)
Specialisations: Axe, Baton/Club, Knife, Improvised Weapons (chairs, lamps, ladders, etc.), Polearms (spears, naginata, etc.), Shield, Sword, Whips/Chains

The ability to attack effectively with a hand-to-hand melee weapon. This is an Attack Combat Skill.

Melee Defence
Relevant Stat: None (uses Defence Combat Value)
Specialisations: Axe, Baton/Club, Knife, Improvised Weapons, Needle, Polearms (spears, naginata, etc.), Shield, Sword, Whips/Chains

The ability to defend well with a hand-to-hand melee weapon. This is a Defence Combat Skill.

Ranged Defence
Relevant Stat: None (uses Defence Combat Value)
Specialisations: Personal, Air Vehicle, Ground Vehicle, Water Vehicle, Space Vehicle

The ability to avoid ranged attacks, but this does not enable a character to actually dodge bullets. Rather, it is a combination of situational awareness and tactical movement as well as knowing when to keep moving (to present a more difficult target) and when to drop for cover. This is a Defence Combat Skill.

Special Ranged Attack
Relevant Stat: None (uses Attack Combat Value)
Specialisations: One specific Special Attack

This Skill is used for weapons created using the Special Attack Attribute (page 60) that emanate from the character's body, rather than a device or weapon. This is an Attack Combat Skill.

Thrown Weapons
Relevant Stat: None (uses Attack Combat Value)
Specialisations: Blades, Cards, Grenades, Rocks, Shields

The ability to accurately throw weapons or objects at a target. This is an Attack Combat Skill.

Unarmed Attack
Relevant Stat: None (uses Attack Combat Value)
Specialisations: Strikes, Holds, Throws, Grappling

The ability to attack without weapons. This is an Attack Combat Skill.

Unarmed Defence
Relevant Stat: None (uses Defence Combat Value)
Specialisations: Strikes, Holds, Throws, Grappling

The ability to block armed or unarmed melee attacks without using a weapon. This is a Defence Combat Skill.

Chapter 6: Select Defects (Step 7)

Defects are disadvantages through which your character must suffer in order to overcome the hardships of day-to-day life. Defects serve as an excellent and often comical role-playing opportunity. They only impede your character to a limited extent and are not intended to totally negate his or her many abilities.

Defects are classed as Mundane, Special, or Linked to Attribute. The distinction between Mundane and Special Defects is the same as that of Attributes: Mundane Defects are available to anyone; Special Defects require GM permission and in some settings may be only available via templates. The Defects that have "Linked to Attribute" in their description are direct limitations on your character's Attributes, rather than more general disadvantages (BP returned by linked Defect cannot equal or exceed Attribute cost). They are available if the corresponding Attribute is available.

By taking a Character Defect you can gain up to three (or occasionally more) Bonus Points (BP) to use when acquiring Stats or Attributes. The number of Points you receive is directly proportional to how much the Defect hinders your character; Defects that do not inflict a significant disadvantage (such as a weakness to bullets made from the earth of planet Mars) are not worth any Bonus Points. After you have selected your character's Defects, return to the previous steps to use your Bonus Points.

If your character was created using an occupational template, some Defects are already assigned. You may also have other Defects as a result of species or ware templates. You may choose more and in any case should look up each of the Defects included in your character's templates, since many require further specification. If the template included Nemesis, for example, you will need to decide who that enemy is and why they are after your character.

It is recommended that you assign no more than eight Defects to your character, including those in occupational templates. Any more will risk turning your character into a bundle of insecurities and flaws that is no fun to role-play. This limit does not apply to Defects linked to an Attribute or incorporated in species or ware templates. In most cases 2-5 Defects are appropriate.

Defects and Dual Identities

If a character maintains a dual identity through the Skeleton in the Closet (Secret Identity) Defect, some other Defects may not affect him or her in one of the identities. For example, a serial killer may be wanted by the police on murder charges (the Wanted Defect), but his or her alternate identity may be a respected politician. In these instances, the character will receive Bonus Points at a reduced amount.

If either the character's normal or secret identity (but not both) suffers from a Defect, the Bonus Points granted are reduced by 1 BP. If both identities suffer from the identical Defect, at the same or different BP Levels, the character is granted Bonus Points equal to the higher BP Level. If a character only has one identity, the Defects return Bonus Points as normal.

Defects Cut from dX

Certain Defects were cut for they did not fit the cyberpunk genre. The following were removed: Burns Energy; Cursed; Involuntary Change.

Any of these can be added from *Tri-Stat dX* with the GM's permission (see The Tri-Stat dX Family, page 14).

Defects associated with an Alternate Form (page 44) usually provide Bonus Points directly to the Form's Point total. The GM may decide that some of these Defects function the same as they do for the Skeleton in the Closet Defect, though (at low BP ranks), rather than apply to the Alternate Form directly.

Table 6-1: Defects

Defect Name	Progression	Type	Page
Achilles Heel	1-3 BP	Special	77
Activation Time	1-10 BP	Linked	77
Awkward Size	1-10 BP	Special	77
Backlash	1-3 BP	Linked	77
Bane	1-3 BP	Special	77
Blind Fury	1-3 BP	Mundane	77
Concentration	1-3 BP	Linked	77
Conditional Ownership	1-3 BP	Linked	78
Confined Movement	1-3 BP	Mundane	78
Dependent	2,4,6 BP	Linked	78
Detectable	1-3 BP	Linked	78
Diminutive	2,4,6 BP	Special	78
Easily Distracted	1-3 BP	Mundane	78
Famous	1-3 BP	Mundane	79
Inept Attack	3,6,9 BP	Mundane	79
Inept Defence	2,4,6 BP	Mundane	79
Ism	1-3 BP	Mundane	79
Less Capable	1-10 BP	Mundane	79
Limited Use, Instantaneous	1-3 BP	Linked	79
Limited Use, Ongoing	1-3 BP	Linked	79
Marked	1-3 BP	Mundane	80
Maximum Force	1-3 BP	Linked	80
Nemesis	1-3 BP	Mundane	80
Not So Tough	1-3 BP	Mundane	80
One-Way Transformation	1-3 BP	Linked	80
Owned	1-3 BP	Mundane	80
Part of Body	1-3 BP	Linked	80
Permanent	1-3 BP	Linked	81
Phobia	1-3 BP	Mundane	81
Physical Impairment	1-3 BP	Mundane	81
Recurring Nightmares	1-3 BP	Mundane	81
Red Tape	1-3 BP	Mundane	81
Restriction	1-3 BP	Linked	81
Sensory Impairment	1-3 BP	Mundane	82
Significant Other	1-3 BP	Mundane	82
Skeleton in the Closet	1-3 BP	Mundane	82
Special Requirement	1-3 BP	Mundane	82
Unappealing	1-3 BP	Mundane	83
Unique Defect	1-3 BP	Varies	83
Unreliable Power	1-3 BP	Linked	83
Unskilled	1-3 BP	Mundane	83
Vulnerability	1-3 BP	Special	83
Wanted	1-3 BP	Mundane	83
Weak Point	1-3 BP	Special	83

Achilles Heel

Special. The character loses twice as many Health Points as normal from a particular attack form, which must fit with the character concept. It will often reflect the character's nature such as a robot's weakness to electrical or electromagnetic attacks. The GM must approve any Achilles Heel Defects. A character may have an Achilles Heel to either a common, uncommon, or rare attack form (in the context of the campaign).

1 BP The attack form is rare.
2 BP The attack form is uncommon.
3 BP The attack form is common.

Activation Time

Linked to Attribute. A character with this Defect cannot use one of his or her Attributes whenever desired because the Attribute requires a short time to activate. Once activation has started, only the character can stop it from becoming active when the appropriate time is up. This could represent a physical change that is not instantaneous, the collection of spiritual energies to perform a task, a device that takes time to "power up," or an Attribute that only works when the character is mentally prepared (or angry, or overcome with another emotion).

Activation Time extends to 10 BP following the Time Progression Chart, starting at 10 Initiative (1 BP) and increasing to 1 month (10 BP). Additionally, the Defect may return an additional 1 or 2 Bonus Points to the character. 1 additional BP is granted if the activation can be interrupted temporarily, but restarted where it left off. One example of this is an Item of Power body suit that the character must put on. If the character stops activating the Attribute (i.e. stops dressing) to make a phone call, he or she can continue afterwards. 2 additional BP are granted if the activation must start again from the beginning if it is interrupted before the Activation Time has elapsed. The Concentration Defect (page 77) is often linked to these two applications of Activation Time.

Awkward Size

Special. This Defect means the character is notably larger than an ordinary human. A character with Awkward Size may have trouble fitting through doors and moving through narrow hallways, and does not fit into many vehicles. A character with Awkward Size is also much easier to notice. The larger the character, the more BP this Defect will be worth. In most cases, Awkward Size above 1 BP is not appropriate for human characters, only for robots, large animals, or similar entities.

Awkward Size extends to Level 10 following the Slow Magnitude Chart, starting at 2.5 to 4 metres tall (x2 height; Level 1) increasing to 2000 metres tall (1000x height; Level 10). Mass increases proportionately as a cubed function of the height multiplier, starting at 0.8 tonnes (Level 1) increasing to 27,000 tonnes (Level 5), and finally to 1 billion tonnes (Level 10). An elephant, for example, would be Awkward Size Level 2.

Backlash

Linked to Attribute. The character suffers from an unfortunate side effect whenever an associated Attribute fails to work. If the character fails his or her Stat check when using the Attribute, the character is hit with the energy or essence that would have powered the Attribute's use. The Backlash could be physical damage, memory loss, Stat drain, disorientation, or many other effects that make the character's life more difficult. The player and GM should determine the game effect of the Backlash.

1 BP The backlash occurs if the character fails the check by 6 or more.
2 BP The backlash occurs if the character fails the check by 3 or more.
3 BP The backlash occurs if the character fails the check by 1 or more.

Bane

Special. A character with the Bane Defect is vulnerable to an otherwise non-damaging substance such as water, Earthlike gravity, or a specific element, material, or object. The Bane should relate to the character's background or Attributes in some way. An example would be a robot that shorted out when immersed in water, or a human, who, through a neural jack or other cyberware, leaves himself or herself open to maladies that normally only affect computers, such as computer viruses. The character suffers damage if his or her skin is physically touched by the Bane. If the Bane does not require direct physical contact (such as gravity or a Bane that can be transmitted over the net) the damage is halved. Alternatively, if the Bane only affects the character when ingested, the damage is doubled. Finally, the damage rating assumes that the Bane is common, such as water, gravity, sunlight, steel, or wood. If it is less common, such as a rare element or computer virus, the damage is also doubled. If it is even more rare, such as one particular artefact, the damage may be tripled or quadrupled, although the GM may decide that a Bane that is too exotic is worth no BP.

1 BP The Bane causes minor damage (20 points/round of exposure).
2 BP The Bane causes moderate damage (40 points/round of exposure).
3 BP The Bane causes severe damage (60 points/round of exposure).

Blind Fury

Mundane. Under specific conditions selected by the player (and approved by the GM), the character will enter a state of unbridled anger. While enraged, the character will furiously attack the closest person, whether that individual is a friend or foe. Once that person is defeated or flees, the berserk character will attack the next closest "threat." Examples of conditions that might initiate Blind Fury include: receiving a certain amount of damage, sight of blood, a specific sound or smell, being outnumbered in combat, seeing a friend in mortal danger, confrontation with a specific opponent, etc.

The character can only return to a normal emotional state under another specific condition. This return could involve a Soul Stat check, or could be an automatic reversion. Examples of return conditions include: no opponents in the vicinity, a specific calming technique performed by an ally, solitude, injection of a particular drug, being knocked unconscious, etc.

1 BP Initiating the Blind Fury is difficult; reverting to normal emotional state is easy.
2 BP Initiating the Blind Fury and reverting to a normal emotional state are both moderately difficult.
3 BP Initiating the Blind Fury is easy; reverting to normal emotional state is difficult.

Concentration

Linked to Attribute (or the Activation Time Defect, page 77). The character must concentrate while using a specific Attribute that functions over a period of time; it does not apply to Attributes with an instantaneous effect. If the character's concentration is interrupted voluntarily or by an outside event, the Attribute ceases to function.

1 BP The Attribute requires slight concentration. The character can still perform other non-combat actions, but cannot engage in combat or use other Attributes that also require Concentration.
2 BP The Attribute requires intense concentration. The character can move at a slow speed and talk with others while using the Attribute, but cannot perform any complex actions or use any other Attribute.
3 BP The Attribute requires full concentration. The character cannot do anything else while using the Attribute; he or she must remain still and devote full attention to the Attribute.

Conditional Ownership

Linked to Characteristic Attribute. This Defect can only be acquired by a character who possesses either the Item of Power or Gadgets Attributes (pages 52 and 49). The character's possessions granted by those Attributes actually belong to another person or organisation. They are issued to the character, but the agency imposes "mild," "strict," or "severe" conditions on their use.

"Mild conditions" indicate that the character can use the objects for some personal business (such as travelling), but if he or she is released from the organisation or disobeys direct orders, the objects can be taken away. The character can also be assigned different objects at any time. For example, a police detective might have conditional use of an unmarked police car.

"Strict conditions" indicate that the character is only permitted to use the objects for activities as ordered by the organisation. This is the way most military and police equipment is issued. If the character is caught using the objects for personal activities, he or she will receive a severe reprimand.

"Severe conditions" indicate that the character can only use the objects under specific orders. A government owned time travel device would probably fall under these conditions. Using the objects at any other time results in incarceration, physical punishment, or even death.

1 BP Mild conditions are imposed on the objects' ownership and usage.
2 BP Strict conditions are imposed on the objects' ownership and usage.
3 BP Severe conditions are imposed on the objects' ownership and usage.

Confined Movement

Special. This Defect prevents the character from leaving a narrowly defined area. This could represent a robot that is programmed to follow a specific guard route, or a prisoner with a chip in his or head that causes extreme pain if he or she leaves a particular region.

1 BP Restricted to a large area (100 km radius), such as a single county or large city.
2 BP Restricted to a small area (1 km radius), such as a small town, major urban neighbourhood, or large, multi-structure complex.
3 BP Restricted to a tiny area (100 m radius), such as a city block or single building.

Dependent

Linked to Attribute. The character cannot use the chosen Attribute without first using a second (or more) Attribute. If the character fails a Stat check to activate the second Attribute, he or she cannot use the other one either. Examples of the Dependent Defect include: a character who gains additional Armour when invisible (Armour Dependent upon Invisibility), a character that can run much more quickly after stretching his or her legs (Speed Dependent upon Elasticity), etc. The player must justify the Dependent Defect to the GM to avoid silly combinations.

2 BP The Dependent Attribute cannot work until 1 other Attribute is activated.
4 BP The Dependent Attribute cannot work until 2 other Attributes are activated.
6 BP The Dependent Attribute cannot work until 3 other Attributes are activated.

Detectable

Linked to Attribute. While using a specific Attribute, the character can be pinpointed and possibly identified by others who have specific detection techniques. For example, the Attribute's use may make a loud noise or a bright flash, send vibrations through the ground, or emanate mental shock waves. Detection techniques include: human sight, hearing, or sense of smell; infrared; mental; radar; radiation; sonar; ultraviolet; vibration; and others. The Special Attack Attribute (page 60) is an exception to this Defect — characters must acquire an Attack Ability to make the attack undetectable.

1 BP The Attribute's use can be detected using 1-2 methods.
2 BP The Attribute's use can be detected using 3-5 methods.
3 BP The Attribute's use can be detected using 6-9 methods.

Diminutive

Special. The character is permanently smaller than a human. This is usually taken for small robots or animals. Although a Diminutive character is physically weaker than an average human, he or she is able to get into spaces that a human cannot and may be small enough to hide in someone's pocket. Diminutive provides 2, 4, or 6 Bonus Points.

2 BP The character is the size of a cat or small dog. His or her running speed and weapon range is reduced to 20%, and he or she can only lift up to one hundredth (1%) normal capacity (for an average human, this is approximately 1 kilogram). Any damage the character inflicts using physical melee attacks is reduced by 10, while attacks from human-sized enemies inflict an additional 10 damage. Enemies making ranged attacks, however, suffer a -4 Attack penalty. Finally, he or she suffers a -6 penalty on any Body Stats checks that require lifting, carrying, or grappling with objects larger than cat size.
4 BP The character is the size of a rodent. His or her running speed and weapon range is reduced to 5%, and he or she can only lift up to one ten thousandth (0.01%) normal capacity (for an average human, this is approximately 10 grams). Any damage the character inflicts using physical melee attacks is reduced by 15, while attacks from human-sized enemies inflict an additional 15 damage. Enemies making ranged attacks, however, suffer a -6 Attack penalty. Finally, he or she suffers a -12 penalty on any Body Stats checks that require lifting, carrying, or grappling with objects larger than cat size (-6 penalty for larger than rodent size).
6 BP The character is the size of a bug. His or her running speed and weapon range is reduced one two hundredth (0.5%), and he or she can only lift up to one ten millionth normal capacity (for an average human, this is approximately 10 milligrams). Any damage the character inflicts using physical melee attacks is reduced by 20, while attacks from human-sized enemies inflict an additional 20 damage. Enemies making ranged attacks, however, suffer a -8 Attack penalty. Finally, he or she suffers a -18 penalty on any Body Stats checks that require lifting, carrying, or grappling with objects larger than cat size (-12 penalty for larger than rodent size; -6 penalty for larger than bug size).

Easily Distracted

Mundane. Some characters are Easily Distracted by events, objects, people, or ideas, which are collectively known as triggers. Notable examples of triggers include attractive members of the opposite (or same) sex, wealth, food, movie stars, hobbies, gossip, hot cars or software, music, one's own looks, and cyberware. A character with this Defect will become enthralled with the trigger until it can no longer influence him or her. Many characters have interests in a variety of triggers but do not possess this Defect because their interest is moderated by their sense of judgement.

1 BP The character is distracted by a trigger that is encountered infrequently.
2 BP The character is distracted by a few infrequent triggers, or by one trigger that is encountered frequently.
3 BP The character is distracted by several infrequent triggers, or by one trigger that is encountered constantly.

Famous

Mundane. The character is recognisable by many people, and thus it is difficult for him or her to keep secrets or maintain a private life. Journalists and photographers (or their robot drones) may hound the character regularly, and report his or her actions on television, in newspapers, and on websites. Obsessed fans may resculpt their faces to resemble the famous character, or seek to acquire clones, software, or android doubles of the celebrity to pursue their own fantasies. While being Famous may have some privileges (preferred seating at restaurants, daily special treatment, etc.), it can be a significant disadvantage for someone who maintains a low profile or secret identity.

1 BP The character has regional fame.
2 BP The character has national fame.
3 BP The character has international fame.

Inept Attack

Mundane. This Defect reflects a character's poor judgement in offensive combat situations, which makes it much more difficult to strike an opponent successfully. A character with the Inept Attack Defect suffers a penalty to the Attack Combat Value. The penalty cannot lower the Value below 1. See page 84 more information on the Attack Combat Value. Inept Attack provides 3, 6, or 9 Bonus Points.

3 BP The character's Attack Combat Value is decreased by 1 Point.
6 BP The character's Attack Combat Value is decreased by 2 Points.
9 BP The character's Attack Combat Value is decreased by 3 Points.

Inept Defence

Mundane. This Defect reflects a character's poor judgement in defensive combat situations, which can often place him or her in precarious positions. A character with the Inept Defence Defect suffers a Defence Combat Value penalty. The penalty cannot lower the Value below 1. See page 84 for more information on the Defence Combat Value. Inept Defence provides 2, 4, or 6 Bonus Points.

2 BP The character's Defence Combat Value is decreased by 1 Point.
4 BP The character's Defence Combat Value is decreased by 2 Points.
6 BP The character's Defence Combat Value is decreased by 3 Points.

Ism

Mundane. Ism is discrimination based solely on one particular aspect of a character. Examples of Ism include: ageism, elitism, racism, sexism, or discrimination based on education, species, genetics, cybernetics, nonhumanity, sexual preference, occupation, religion, physical features, etc. The players and GM are strongly encouraged to discuss these contentious discrimination issues, and their role in the game, before play begins.

1 BP The character experiences a small degree of discrimination.
2 BP The character experiences a large degree of discrimination.
3 BP The character experiences a severe degree of discrimination.

Less Capable

Mundane. Currently, the three game Stats indicate the same level of ability in all aspects of each Stat: the Body Stat represents all physical aspects, the Mind Stat represents all mental aspects, and the Soul Stat represents all spiritual and willpower aspects. Some characters may have one or more aspects of a Stat at a less proficient level than the rest of the Stat aspects, however, and this is where the Less Capable Defect comes in.

For example, a bulky brawler might have a high strength, excellence endurance, fast running speed, good manual dexterity, and healthy immune system ... but be rather clumsy. This would fit a character with a Body Stat of 8 or 10, with the Less Capable (Agility) Defect at 2 BP. Similarly, a witty, perceptive, and insightful academic genius that happens to have a surprisingly bad memory might have a Mind Stat of 9, with the Less Capable (Memory) Defect at 1 BP.

Every Stat has a multitude of aspects associated with it, that are considered either Major Aspects (aspects that arise frequently in a game) or Minor Aspects (aspects that arise infrequently). For each BP Level of the Less Capable Defect, Stat or Skill checks for which the specific Major Aspects is important suffer a -3 penalty, while Stat or Skill checks for which the specific Minor Aspects is important suffer a -6 penalty. Less Capable can typically extend to 6 BP for Major Aspects or 3 BP for Minor Aspects. Derived Values are not recalculated.

Each Stat has three Major and three Minor Aspects listed below. Players may create additional Aspects with the Game Master's input.

Body

Strength, Agility, Endurance (Major); Manual Dexterity, Running Speed, Immune System (Minor)

Mind

Intelligence, Wits, Perception (Major); Memory, Intuition, Savvy (Minor)

Soul

Luck, Willpower, Charisma (Major); Presence, Empathy, Composure (Minor)

All Stat Aspects

There are rare occasions in which a character may need the Less Capable Defect to apply to all aspects of a specific Stat. This usually applies to characters that undergo a radical change from one form to another, such as that induced by the Alternate Form Attribute (page 44). For example, a scientist character with a Mind Stat of 11 who transforms into a hulking beast may need to reduce his or her Mind Stat to 3 with a Less Capable Mind Defect. For this application, a -1 is applied to the character's specific Stat checks for every 2 BP Levels of the Less Capable Defect assigned. All Derived Values must be recalculated for this application of Less Capable.

Limited Use, Instantaneous

Linked to Attribute with an instantaneous effect. The character can only use a specific Attribute occasionally. This may result from a need to recharge the Attribute (or a device), an incredible drain on the character's internal reserves, or a different form of limitation. Only under exceptional circumstances (and at a great sacrifice) can the character use the Attribute more often than indicated by this Defect. This Defect is usually incompatible with the Burns Energy Defect.

1 BP The character can only use the Attribute three times a day.
2 BP The character can only use the Attribute twice a day.
3 BP The character can only use the Attribute once a day.

Limited Use, Ongoing

Linked to an Attribute that can be used on an ongoing basis. After the character uses a specific Attribute, he or she cannot use it again for a specific period of time; the longer the Attribute is used, the longer the rest period must be. For example, the muscles of a character with Superstrength may need time to recuperate after use, or an Item of Power that grants Flight may need to be refuelled

between uses. Only under exceptional circumstances (and at a great sacrifice) can the character use the Attribute again before the waiting period has elapsed.

1 BP For every minute the character uses the Attribute, he or she must wait 1 minute before the Attribute functions once again.

2 BP For every minute the character uses the Attribute, he or she must wait 5 minutes before the Attribute functions once again.

3 BP For every minute the character uses the Attribute, he or she must wait 10 minutes before the Attribute functions once again.

Marked

Mundane. A character is considered Marked if his or her body hosts a permanent and distinguishing design that may be difficult to conceal. The design may be a family symbol, an identifying birthmark, a permanent scar, or a unique tattoo. If the mark is not considered out of the ordinary (such as freckles or a common tattoo), this Defect does not apply. Characters who are obviously non-human in a setting where most people are human (or vice versa) would also have the Marked Defect. In a campaign where cybernetics are ubiquitous, however, Marked may not apply.

1 BP The mark is easily concealable because it is small or in an inconspicuous location.

2 BP The mark can be concealed, but this is difficult because it is large or in an obvious location.

3 BP Under most circumstances, the mark cannot be concealed because it affects the character's entire body.

Maximum Force

Linked to Attribute. The character cannot use a specific Attribute at the lowest end of its power range. This could represent a character who is too talented for his or her own good, an item that only functions within certain parameters, a powerful character who pushes the Attribute's limits so often that he or she has forgotten how to use it at a low Level, or something different.

This Defect is only appropriate for the following Attributes: Creation, Elasticity, Flight, Illusion, Land Speed, Jumping, Special Attack (applies to damage only), Speed, and Water Speed.

Maximum Force extends to Level 10, providing 1 BP each Level. The restriction on an Attribute's use is given below, where Z is the number of Bonus Points granted and (Z+1) is one Level higher than the BP Level.

z BP The character cannot use up to Level Z of the Attribute. The Attribute must be at Level (Z+1) or higher.

Nemesis

Mundane. The character has someone in his or her life that actively interferes with goal achievement on a regular basis. This Nemesis can take several forms. He or she could be a professional rival such as someone competing for the favour of the character's boss. The Nemesis could also be personal; for example, a criminal may be pursued by a specific law enforcement officer who devotes his or her existence to putting the character behind bars. The Nemesis may even be a romantic rival such as someone chasing the same person the character is pursuing.

The Nemesis should be someone who makes the character's life difficult frequently (and cannot easily be removed), but the Nemesis does not need to be a mortal enemy. It might be someone the character loves very much, but one whom they cannot avoid. An overbearing parent who lives at home is an example of this. If for any reason the Nemesis is defeated or goes away, the GM should create another Nemesis, unless the player also wishes to use Advancement Points (page 147) to eliminate the Defect permanently.

1 BP The Nemesis is merely annoying and/or interferes infrequently.

2 BP The Nemesis may actively try to harm the character and/or interferes frequently.

3 BP The Nemesis will always harm the character given the opportunity, and/or interferes constantly.

Not So Tough

Mundane. The character is less durable than his or her Body and Soul Stats would otherwise suggest. This Defect is appropriate for characters with a "glass jaw," or those who succumb to physical trauma easily.

1 BP The character's Health Points are decreased by 10 Points.

2 BP The character's Health Points are decreased by 20 Points.

3 BP The character's Health Points are decreased by 30 Points.

One-Way Transformation

Linked to Attribute. This Defect can only be taken in conjunction with the Alternate Form, Elasticity, or Invisibility Attributes. Once the character has transformed from a normal state, he or she cannot transform back to a prior form without meeting certain conditions. This might include work by mechanics or lab technicians, consuming a specific substance, or simply the passage of time. In *Ex Machina* it usually applies to genetic or robotic constructs that undergo a caterpillar-like metamorphosis.

1 BP It takes several hours of work or special circumstances to enable the character to transform back to an earlier form.

2 BP As 1 BP, but the process requires expensive (or hard to find) replacement components, ingredients, or other prerequisites.

3 BP As 2 BP, but the process takes several days.

Owned

Mundane. Free will has little meaning for a character who is Owned by a corporation, government, crime ring, or other organisation or individual. Control over the character can be exerted through a variety of methods including blackmail, brainwashing, legal contract, technology (such as cybernetic implants), or just highly effective propaganda. Dire consequences await a character whose actions conflict with the mandate of the owning body.

1 BP The organisation has partial ownership of the character; the character is subject to slight punishment for opposing the owners.

2 BP The organisation has significant ownership of the character; the character is subject to moderate punishment for opposing the owners.

3 BP The organisation has total ownership of the character; the character is subject to severe punishment for opposing the owners.

Part of Body

Linked to Attribute. Only part of the character's body is affected by a specific Attribute, most commonly used for: Adaptation, Alternate Form, Armour, Invisibility, and Superstrength. For example, a character might only receive Armour benefits against abdominal attacks, or have bionic legs with Superstrength.

1 BP The Attribute affects a large part of the body (torso, both legs, both arms, etc.).

2 BP The Attribute affects a small part of the body (one leg, one arm, abdomen, chest, head, etc.)

3 BP The Attribute affects a tiny part of the body (one hand, face, one foot, groin, knee, etc.).

Permanent

Linked to Attribute. A specific Attribute is always functioning, and the character cannot turn it off. This Defect only applies to Attributes that would inconvenience the character if the Attribute was always active, such as Invisibility or Nullify. The player and GM should discuss the problems and limitations associated with an eternally active Attribute.

1 BP The Attribute is a slight inconvenience to the character.
2 BP The Attribute is a moderate inconvenience to the character.
3 BP The Attribute is a severe inconvenience to the character.

Phobia

Mundane. A Phobia is a fear (often irrational) of an event, object, or person that can limit a character's choice of actions. Avoiding situations that could trigger the phobia may take a high priority in the character's life. Note that a Phobia that effectively cripples the character with fear does not add constructively to the role-playing experience.

1 BP The character has a slight phobia or one that is encountered infrequently.
2 BP The character has a moderate phobia or one that is encountered frequently.
3 BP The character has a severe phobia or one that is encountered constantly.

Physical Impairment

Mundane. The character has a physical impairment that makes aspects of daily life more challenging. Possible impairments include: one or more missing (or unusable) limbs, loss of speech, constant sickness, nagging injury, severe headaches, an android that requires frequent repairs, etc. The player and GM should discuss the problems and limitations associated with the impairment. In most cyberpunk settings, cybernetics or transplants can usually repair most forms of ordinary disability. A human character who still has a Physical Impairment should have a good reason why this has not been treated. This could be as simple as being destitute, or as complicated as an exotic form of nerve damage (perhaps from an experimental bio-weapon) that results in the character rejecting conventional transplants or replacement parts.

1 BP The impairment is a slight inconvenience to the character.
2 BP The impairment is a moderate inconvenience to the character.
3 BP The impairment is a severe inconvenience to the character.

Recurring Nightmares

Mundane. When the Recurring Nightmare Defect haunts a character, he or she has trouble sleeping at nights and functions at less-than-optimum performance during the day. The nightmare can be a memory of a tragic event or traumatic experience, or it might be something else such as a prophetic vision or warning. The nightmare may not occur every night but it will haunt the character on a regular basis. Additionally, the nightmares do not need to portray the exact same events repeatedly, but the visions should be related in some way. The details concerning the subject matter of the nightmares and why they occur is the responsibility of the GM and the player to create.

1 BP The nightmares occur infrequently and have a slight effect on the character's lifestyle.
2 BP The nightmares occur frequently and have a moderate effect on the character's lifestyle.
3 BP The nightmares occur constantly and have a severe effect on the character's lifestyle.

Red Tape

Mundane. The character must negotiate his or her way through a complicated bureaucracy in order to accomplish tasks. This Defect is often associated with characters who are members of law-enforcement organisations or similar government agencies that require paperwork. A large criminal organisation, however, may also require a character to receive permission from several levels of bosses before undertaking certain high-profile jobs.

Red Tape also includes whatever measures the character must take "after the fact" to appease the organisation to which he or she belongs. For example, a cop may need to fill out a report every time his or her weapon is fired or may have to follow a complicated series of steps to obtain a search warrant. A thug may be required to pay a percentage of his or her take to the regional crime organisation or face some very strict penalties.

The Red Tape Defect is inappropriate for characters created via the Henchmen or Servant Attributes.

1 BP The Red Tape only impedes the character before or after a major action (but not both) and/or the Red Tape is easy to manage most of the time.
2 BP The Red Tape impedes a character both before and after a major action, and/or is difficult to manage most of the time.
3 BP The Red Tape impedes a character before, after, and during a major action, and/or is extremely difficult to manage most of the time.

Reduction

Linked to Attribute. One of the character's Attributes is limited greatly, resulting in a Reduction of its Point cost per Level. This Defect offers a near-endless number of limitations, and consequently the player and GM should discuss the game ramifications and the Attribute's new Level costs.

Each Attribute description provides one sample Reduction. This entry is only a suggestion, and does not represent the only Reductions available. A list of suggested Reductions are shown below.

Unlike other Defects, Reduction does not return Bonus Points to the character; the Attribute cost changes instead. The Point cost change is directly related to the original cost of the Attribute. For example, a Reduction that limits a 4 Points/Level Attribute to half of its power might be a 2 Points/Level Reduction; the same limitation on a 10 Points/Level Attribute could be a 5 Points/Level Reduction. This Defect is not usually appropriate for 1 Point/Level Attributes.

Sample Reductions

Sample include: Fewer sub-Points awarded, Less frequent usage, Limited control, More than one but less than all, One aspect, Partial effectiveness, Attribute always used in same way, Very specific utility

Restriction

Linked to Attribute. One of the character's Attributes is associated with one or more disadvantages that limits its use. This Defect offers a near-endless number of limitations, and consequently the player and GM should discuss the ramifications of the selected Restriction. A list of suggested Restrictions are shown on page 82.

Each Attribute description provides a short list of three of the more commonly associated Restrictions. These entries are only suggestions, and do not represent the only Restrictions available. The GM may increase the Bonus Points returned to the character to an alternate progression (such as 2 BP, 4 BP, 6 BP; or 3 BP, 6 BP, 9 BP) if the Attribute this Defect is restricting has a high Character Point cost at each Level (see Extra Attacks or Power Flux for examples). Severe

limitations on an Attribute, which will affect the Point cost per Level, is covered by the Reduction Defect (see above).

1 BP The Attribute has a minor Restriction.
2 BP The Attribute has a moderate Restriction.
3 BP The Attribute has a major Restriction.

Sample Restrictions

Sample include: Cannot use on oneself, Check needed to maintain control, Cyberspace or online only, During specific times of the day, Easy to counteract, Flawed results, In particular locations, Initiative penalty to use, Limited functioning, Loss of specific effect, Naked form only, Requires consumable focus, Requires maintenance, Requires special equipment, Requires Stat checks, Restricts movement, Specific targets, Time limit, Under certain conditions, Usage inflicts pain, Use weakens character. Note: An Attribute must always cost at least 1 Character Point no matter the number of Linked Defects.

Sensory Impairment

Mundane. One or more of the character's senses (sight, hearing, taste, touch, smell) are either diminished or lost. An example of a diminished sense is being near-sighted or hard of hearing; the GM should take the impairment into consideration when deciding what the character is able to perceive, and may apply a -4 penalty on checks to notice things with that sense. An example of a lost sense is blindness or deafness. Any diminishment or loss is based on the character's status after benefiting from any technological aids such as eyeglasses or hearing aids in the setting. For example, if a character has a hearing aid but is still hard of hearing, he or she has Sensory Impairment (diminished hearing, 1 BP). In a setting where a hearing aid was unavailable or could not correct his or her particular impairment, he or she would have Sensory Impairment (deaf, 2 BP) instead. Cybernetics and transplants can usually repair most forms of ordinary disability. A human character who still has a Sensory Impairment should have a good reason why this has not been treated (see Physical Impairment, page 81, for suggestions).

1 BP The character has a diminished primary sense (such as short-sightedness or being hard of hearing), or has lost a secondary sense (such as taste or smell).
2 BP The character has completely lost a primary sense (sight or hearing), or has two diminished primary senses, or has completely lost multiple secondary senses.
3 BP The character has completely lost a primary sense (sight or hearing) and multiple secondary senses.

Significant Other (S.O.)

Mundane. A character with this Defect has someone for whom he or she will go to any lengths to keep safe from harm, even at the risk of his or her own life. The S.O. should be a regular fixture in the campaign. A one-night stand, or a cousin visiting for two weeks is a plot complication and not an appropriate S.O. The character's sense of obligation towards the S.O. is enough that the character will take great pains to ensure his or her safety and well-being. Examples include spouses and steady boy or girl friends, teammates, immediate relatives (parents and grandparents, brothers and sisters, perhaps very close cousins), and close co-workers (such as a cop's partner). A person might even have a robot or A.I. as a S.O. if they had strong emotional ties toward it (although other people may think them odd). It is acceptable for a character to take another character as an S.O., provided the players role-play this relationship appropriately. In this case, the S.O. relationship is always worth just 1 BP but is treated as a 3 BP Defect by the GM in terms of the frequency with which it affects the game.

The S.O. Defect is inappropriate for most Henchmen and Servant characters.

1 BP The S.O. is rarely placed in grave danger and appears infrequently.
2 BP The S.O. is often placed in grave danger and appears frequently.
3 BP The S.O. is always placed in grave danger and appears constantly.

Skeleton in the Closet

Mundane. The character has a dark secret. Exposure of this secret could cause harm to the character in the form of public humiliation, loss of a job, arrest, injury, or even death. The number of BP gained from this Defect is based on the severity the consequences if the secret is revealed. The secret must be important enough that the character will actively take steps to keep others from learning of it. If the Skeleton is ever revealed, the character will suffer the associated consequences, and the GM should replace it with an appropriate Defect or Defects worth at least as many BP as Skeleton in the Closet.

For example, most criminals have a 1 BP Skeleton in the Closet: they have committed crimes that could send them to jail or worse, but usually there is no easily available evidence. If their secret is discovered, they will usually have Skeleton in the Closet replaced by an equal or higher value Wanted Defect. A 3 BP Skeleton is usually reserved for characters who face destruction or death if their secret is discovered such as a runaway android passing itself off as a human, or an undercover agent that has infiltrated a terrorist organisation.

If a character has a secret identity, the Skeleton in the Closet Defect applies. The number of Bonus Points associated with the identity depends on the consequences if the secret is revealed, and thus is heavily Dependent on the nature and actions of the character. For instance, if a undercover agent's identity is revealed, enemies can target the character and his or her family more easily. Whether this is a 1, 2, or 3 BP Defect depends on the position of the character, popularity of the character, how many enemies he or she has, how easily the character can maintain a normal lifestyle, etc. When in doubt, assume that most characters who have secret identities gain the 2 BP Defect.

The Skeleton in the Closet Defect is inappropriate for most Servant characters.

1 BP The Skeleton is difficult to discover, and/or the consequences of discovery are slight, and/or the character's reputation will be impacted slightly.
2 BP The Skeleton is relatively easy to discover, and/or the consequences of discovery are moderate, and/or the character's reputation will be seriously impacted.
3 BP The Skeleton is very easy to discover, and/or the consequences of discovery are severe, and/or the character's reputation will be devastated.

Special Requirement

Mundane. This Defect forces the character to meet a Special Requirement in order to function normally The Special Requirement may involve a physical object, an event, an action, an environmental condition, or even a state of mind. Everyday activities, such as eating and sleeping, are not considered to be Special Requirements unless they must be carried out under unusual conditions or more frequently for some reason. Only certain types of Special Requirement are appropriate as a mundane Defect in an *Ex Machina* world. The most common example of a Special Requirement would be a regular need for drugs, either due to a serious addiction to recreational narcotics, or in order to hold a debilitating or fatal disease in remission. Another common requirement is a need for electrical power. This Defect covers a wide range of possibilities, and thus the details should be discussed with the GM.

1 BP The Special Requirement is easy to obtain and/or needed infrequently.
2 BP The Special Requirement is difficult to obtain and/or needed frequently.
3 BP The Special Requirement is extremely difficult to obtain and/or needed constantly.

Unappealing

Mundane. An Unappealing character may find it difficult to blend into a crowd because their appearance is distinctive. The term "unappealing" does not necessarily mean ugly but can also refer to a bad smell, manner of speech, or even an unpleasant habit that provokes a consistently negative reaction.

This Defect is often taken in conjunction with the Marked Defect (page 80). A monstrous, ugly creature is usually both Unappealing and Marked. On the other hand, a statuesque chrome-skinned cyborg or robot would be Marked (the chrome skin) but not Unappealing.

1 BP The character is slightly unappealing. He or she receives a -2 penalty on any Seduction Skill use.

2 BP The character is moderately unappealing. He or she receives a -4 penalty on any Seduction Skill use.

3 BP The character is severely unappealing. He or she receives a -6 penalty on any Seduction Skill use.

Unique Defect

Varies. This section covers any and all possible Defects that a character might possess but are not detailed in the rules. The boundaries and limitations of the Defect should be discussed with the GM.

1 BP The Defect occurs infrequently and/or has a slight effect on the character.

2 BP The Defect occurs frequently and/or has a moderate effect on the character.

3 BP The Defect occurs constantly and/or has a severe effect on the character.

Unique Defect Example: Hard Coding

A character with the Attack Restriction Defect has limitations on whom he or she can attack due to a reduction of free will (such as "hard coded" commands). The attack restriction can only be overcome during exceptional circumstances and may result in harsh consequences, including unbearable guilt or punishment by superiors. This Defect obviously does not apply to heroic characters who will not "attack innocent people."

1 BP The character's restriction applies to very few people, or the character has slight reservations.

2 BP The character's restriction applies to many people, or the character has strong reservations.

3 BP The character's restriction applies to a large group of people, or the character has extremely strong reservations.

Unreliable Power

Linked to Attribute. One of the character's Attributes frequently does not function when desired. Before the character can use the Attribute, he or she must make a successful Stat check with a penalty. If the Attribute does not have a "Relevant Stat" entry, the character's Soul Stat should be used as a default. If the Stat check fails, the character can try to use the Attribute again during the next round (when the character is in combat), or in a short period of time (when the character is not in combat).

At the GM's and player's discretion, Unreliable Power can also represent an Attribute that does not always function in the manner desired. For example, a character with unreliable Superstrength might misjudge his or her strength and break things (or injure someone) by accident. For this alternative, the Stat check determines if the Attribute operates properly; a failed check indicates that it activates in an unexpected manner.

1 BP The character suffers a -2 Stat check penalty. In non-combat situations, the character cannot attempt to use the Attribute again for 1-10 minutes.

2 BP The character suffers a -4 Stat check penalty. In non-combat situations, the character cannot attempt to use the Attribute again for 10-30 minutes.

3 BP The character suffers a -6 Stat check penalty. In non-combat situations, the character cannot attempt to use the Attribute again for 30 minutes to 2 hours.

Unskilled

Mundane. An Unskilled character starts with less than the usual number of Skill Points: -10 Skill Points (up to the character's starting Skill Point total) for each BP returned. This Defect cannot be combined with the Highly Skilled Attribute.

Vulnerability

Special. The character has a critical weakness to a specific object, environment, thought, activity, or condition. When in close proximity to the Vulnerability, it can temporarily strip the character of his or her Attributes. The Vulnerability should only affect the character rarely, however, since it impacts him or her so severely.

1 BP The character's accessible Attribute Levels all drop by one-quarter (round up) when affected by the Vulnerability.

2 BP The character's accessible Attribute Levels all drop by one-half (round up) when affected by the Vulnerability.

3 BP The character cannot use any Attributes when affected by the Vulnerability.

Wanted

Mundane. The character is wanted by the law, a powerful criminal, or private organisation that has placed a price on his or her head. Being Wanted is different from having a Nemesis; there is no single person devoting his or her life to annoying or hunting down the character. The character will need to conceal his or her identity or move around regularly to avoid having complete strangers calling the police or pursuing the character (depending on the circumstances).

1 BP The incentive to hunt the character is minor. For example, he or she may be wanted on outstanding warrants, but there may be no actual reward posted, or the reward is fairly small.

2 BP The reward, contract, or other incentive offered to hunt the character is significant.

3 BP The reward, contract, or other incentive offered to hunt the character is extreme.

Weak Point

Mundane. The character's body possesses an abnormal weak point (in addition to the normal human weak points, like the heart and head). If the weak point is ever hit during combat with a Called Shot (page 93), the result is an automatic critical hit (page 99). If the attacker rolls a natural critical hit (a natural 2), the target is immediately reduced to 0 Health Points and falls unconscious. The opponent, or even the character, may not be aware the weak point exists, however, until its presence is discovered by accident or through careful study.

1 BP The weak point is tiny (-6 Called Shot attack check penalty).

2 BP The weak point is small (-4 Called Shot attack check penalty).

3 BP The weak point is large (-2 Called Shot attack check penalty).

Chapter 7: Finishing Touches

Calculate Derived Values (Step 8)

Calculate the character's Derived Values. These numbers are based directly on the Body, Mind, and Soul Stats and thus do not afford any choices of Point distribution.

Combat Value

This value governs all facets of physical conflict including your character's abilities in attacking, defending, and delivering damage. A higher Combat Value reflects fighting spirit and an increased knowledge of all physical combat forms: armed, unarmed, martial arts and ranged weapons. There are two separate components of the Combat Value — Attack and Defence. Character Attributes and Defects may modify either component separately, but unless otherwise noted, the term Combat Value refers to both Attack and Defence.

Increased skill in combat can only be achieved through harmony of the Complete Self. Lack of self-unity through weakness of any facet of the character will restrict his or her ability in combat. Consequently, the Body, Mind, and Soul are all of equal importance to the combat master: Body Stat for a forceful attack and defence, Mind Stat for quick wit, knowledge of combat techniques and anticipation of an opponent's actions, and Soul Stat for the winning spirit and good fortune. For example, a petite female standing five feet tall with martial arts training can take down an opponent nearly twice her size; knowledge and determination is just as important as brute force.

Attack Combat Value

To calculate the base Attack Combat Value, add together all the Stat Values and divide by three, rounding down.

(Body + Mind + Soul) ÷ 3

Defence Combat Value

The base Defence Combat Value is two less than the Attack Combat Value.

(Body + Mind + Soul) ÷ 3 − 2

Health Points

This Derived Value dictates the amount of physical damage your character's body can sustain before it ceases to function (for example, your character is knocked unconscious or even dies). Damage delivered in combat are subtracted from your character's current Health Point total. If the total ever falls below zero, the character is rendered unconscious and may die if he or she does not receive medical attention. Attributes or Defects may further modify Health Points.

The base number of Health Points is equal to the sum of the Body Stat and Soul Stat multiplied by 5.

(Body + Soul) x 5)

Henchmen Rule

To reflect the ease with which unimportant NPCs are dispatched in combat, the GM is encouraged to assign such "extras" as the Not So Tough Defect at 2 or 3 BP, therefore reducing their Health Points by 20 or 30. The GM will decide which characters constitute minor NPCs.

Shock Value

Characters should also calculate their Shock Value. If a character suffers an amount of damage equal to his or her Shock Value, there is a danger that the character will be stunned. If the attack penetrates the skin (such as from a bullet or knife), the Shock Value also represents the damage necessary to inflict a major wound, which, if untreated, can result in the character bleeding to death. For more information on Shock Value and its applications, see page 99.

The Shock Value is equal to the character's maximum Health Points divided by 5.

(Health Points) ÷ 5

Earn Background Points (Step 9)

Now that the numerical component of your character is complete (Stats, Attributes, Defects, Skills, and Derived Values), you should concentrate on fine-tuning his or her personality, while still leaving room for the character to grow in the future. One of the most effective ways to better visualise your creation is to provide detail through a background history, a character story, or a character drawing. Spending time to develop your character without a rule structure will enhance your role-playing greatly, and can give the GM a window into your character's motivations. Additionally, your Game Master might hand out a character quiz for you to answer. As an incentive, the GM will award you from 1 to 4 Background Points for each contribution that you complete, which are then distributed among the Attributes. If any of your character's Stats are changed after using the Background Points, you must recalculate the three Derived Values.

This final step in character creation also serves as your last chance to answer important character questions before game-play begins. What formed his or her outlook on life? Where does he or she live? Work? Earn money? What are your character's likes? Dislikes? What about family? Friends? Romantic interests? Enemies? Details add depth to your character, but you should not become obsessed with them. Leaving room for growth can provide numerous character development opportunities during the course of the adventures.

Chapter 8: Game Mechanics

In a role-playing game, most character or NPC actions do not require any particular rules. A player simply says his or her character walks across a room, picks up an object, drives a vehicle, or talks to someone, etc., and if the GM agrees that it is possible, this simply happens. Personal interaction between characters or NPCs normally consists of the players and GM talking "in character" and describing what their characters are doing. In the GM's case, he or she describes what the characters are seeing, hearing, smelling, touching, and tasting.

In the course of a game, circumstances may arise where specific rules can help determine what happens. This is usually the case when the outcome of an action or event is uncertain and the result is important to the story. If a character needs to fix a broken reactor pump to prevent a nuclear meltdown, can he or she do it in time? If a character's car drives off a cliff, can he or she jump clear in time, and if not, how badly will the crash injure the character? If two people fight, who wins?

A character's Stats, Attributes, Skills, and Derived Values help resolve these dramatic questions. In many cases, dice rolls can add additional hazard and drama to the action. The dice rolls represent elements beyond the direct control of the character or the uncertainty that results when opposing characters interact. In some situations, the GM may elect to determine the results by simple fiat, without rolling dice (see Should I Make My Players Roll Dice?, page 86). The GM may do so if he or she thinks a particular outcome is certain or is dramatically necessary to the game.

One situation the rules cover in greater detail is combat. The rules for combat are extensive, giving players a greater sense that they are in control of their characters' every step. If they lose, they will know the GM has not arbitrarily killed or injured their characters. The GM can also follow a similar procedure with any other actions that affect a character's fate: treat routine activities in passing and delve into more detail whenever an action influences the player character physically or emotionally.

IMPORTANT! Do not hesitate to go beyond the rules if you are the Game Master. If you dislike a rule presented in this book, you are encouraged to modify it to suit your needs and those of the players. Do not let your own vision of a role-playing game be superseded by anything you read in this book. These pages are filled with guidelines and suggestions, but certainly do not reflect the "One True Way" to role-playing success. Use what you like, discard what you do not, and fill in the blanks with your own ideas.

The Passage of Time

"In game" passage of time in a role-playing game is fluid, just as in a book or movie. In some situations, like a conversation between two characters, the movement of game time normally matches real world time. More often, the amount of time that passes depends on the characters' activities as set by the players' actions — things happen as soon as dramatically appropriate. Climbing a high mountain takes a few short minutes. It does not take the several hours that climbing a mountain would really take. The GM should telescope time until something interesting happens: "Two weeks pass while you investigate the crime. Then the terrorist broadcasts a message to the world, announcing his plans to unleash a mutagenic virus if his demands are not met...." Finally, in very dramatic situations such as combat, the GM may keep very precise track of time, using individual "combat rounds" (see Combat, page 89). GMs may go back in time as well to employ flashback scenes. A flashback is a useful tool to establish the background for a story without simply recounting the information in dry lecture fashion, allowing the player to work through the event.

Scene, Round, and Initiative

Three common measures of game time in *Ex Machina* are scene, round, and Initiative. A scene is any situation where the events remain linked, moment-to-moment. Think of it in movie terms — a scene lasts until the camera cuts to an entirely new setting, potentially with new characters. If, for example, a character is speaking with an informant in a diner, the conversation constitutes a scene. Once the GM switches scenes to the character entering a back alley, following up on the informant's lead, the diner scene ends and a new scene begins in the back alley. If the conversation was interrupted by a villain attacking the informant, intent on shutting him up before he could reveal any important information, the scene would not yet end when the character chased after the villain down a back alleyway. Since the events are still linked moment-to-moment, it is still a part of a scene although the setting has changed.

A round is a measure of time of approximately 1-10 seconds in length (usually averaged to 5 seconds), while an Initiative is one specific moment in time. When combat occurs, characters roll Initiative (page 92) and each is allowed to act on his or her Initiative. The round is broken into a number of Initiatives equal to the highest Initiative rolled for the round. For example, in a combat between three characters who roll an 11, 19, and 24, the combat round has 24 Initiatives. The round remains 5 seconds in length, but for the purposes of action within the conflict, there are 24 potential individual moments — 24 instances where a character could decide to act. On the following combat round, when the characters roll 16, 23, and 39, there are now 39 Initiatives within the round.

Taking Action

Every character is capable of performing or attempting a nearly endless list of actions. These can be mundane activities (talking, breathing, thinking), skilled activities (building a suit of power armour, hacking into a computer, moving silently, climbing the side of a building), or combat activities (fighting, dodging, shooting). The Combat section covers combat action in detail and thus is not discussed here. Additionally, players can assume that characters carry out routine skilled activities successfully on a regular basis unless specified otherwise by the GM. For example, the GM can assume that characters with the Gun Combat Skill routinely keep their weapons clean, safely stored, and properly maintained.

Every GM has a preferred method for having players describe their characters' actions. Usually this involves the GM moving from player to player asking, "What is your character doing?" Experienced GMs try to give each person equal role-playing time so that everyone is an important facet of the story (switching between characters as necessary). Conversely, players are responsible for relating their characters' intended actions to the GM. In return, the GM will describe the results of those actions or will request a Stat or Skill check to determine the outcome.

Consider the three action descriptions below:

Action 1: "My character, Hitomi, is going to search for the disk."

Action 2: "My character, Hitomi, is going to search for the disk in the basement of the building."

Action 3: "My character, Hitomi, is going to quickly search for the disk in the basement of the building. She will ransack the place and smash down doors if she has to, in order to find it as fast as possible."

All three accounts involve Hitomi looking for the disk, but the level of detail is quite different. You should not be overly concerned with detail if it is irrelevant to your character's actions (such as exactly how Hitomi is forcing open the doors in Action 3), but sometimes a little detail can greatly alter the GM's interpretation of the event.

Attributes and Actions

In some situations, it is important to know how many Attributes (whether part of his or her body or integrated into gadgets or Items of Power) a character can activate at one time and how quickly he or she can activate the Attribute. Innate Attributes, such as Armour or Superstrength, are considered always active, unless the character selects a Restriction Defect (page 81) whereby the Attribute is not always active. Attributes which must be activated but do not usually require a dice roll, such as Invisibility, can be activated at a rate of one per Initiative starting on the character's Initiative roll; these activations do not require the character to use an action. Attributes that must be activated and do require a dice roll demand focus, and thus the character must spend one or more actions to activate the Attribute. A character can have any number of Attributes active at any moment, though GMs may wish to impose penalties if the character is focusing on too many things. It is usually obvious which Attributes fall into which category, but the final classification is at the Game Master's discretion.

Using Attributes at Reduced Levels

Unless a character assigns the Maximum Force Defect (page 80) to an Attribute, he or she can voluntarily use the Attribute at reduced Levels and PMV Ranks. For example, a character with Level 6 Sensory Block normally could choose to block up to six difference senses. Similarly, if the character also assigned an Area PMV of Rank 4 (100m) to Sensory Block, he or she could use the Attribute on a smaller area if desired.

Fractional Attribute Use

The GM might also allow the character to use a fraction of an Attribute's effect. A character with Level 3 Invisibility, for instance, may only want to turn a single body part, such as a hand or head, invisible. The GM could decide that fractional Attribute use is more or less difficult than using an Attribute's full effect, assigning appropriate Check Value modifiers (see Table 8-1: Check Value Difficulty Modifiers). In some cases (for example, certain Gadgets or Items of Power that possess the Attribute) the GM may rule that fractional use is impossible.

Dice and Dice Rolls

Ex Machina uses polyhedral eight-sided dice during game play. When a random number needs to be generated, two dice are rolled. By adding the two numbers shown on each die, values between 2 and 16 can be generated. The distribution of values almost follows a bell curve, with the middle value of 9 generated most frequently. There are three major types of dice rolls, or checks, a GM or player may use during game play: a Stat check dice roll, a Skill check dice roll and an Attack/Defence Combat check. When a player announces the intended actions of his or her character, the GM must decide if a dice roll is necessary. Should a roll be required, the GM chooses which type of check is most appropriate.

In most cases, a player rolls dice to determine the success of an action his or her character performs, while the GM rolls the dice to determine the results of NPC actions when they impact the characters. In situations where NPCs are only involved with other NPCs, the GM should simply decide what happens rather than rolling dice.

In some circumstances, the GM may roll the dice to determine the results of a character's action instead of having a player roll, keeping the actual dice roll — and the reason for rolling — secret. This is normally done when the player rolling would give away an event that should remain unknown to the character. If, for example, there is something hidden that the character may or may not notice, the GM can secretly roll dice to see if the character spots it. If the GM allowed the player to roll the dice, the player would know that a clue existed even if the character did not succeed in noticing it.

Should I Make My Players Roll Dice?

It is important for the GM to realise that not all actions require a dice roll. Obviously mundane character activities, such as surfing the 'net, riding a bike down a road, or eating lunch, should never need dice rolls unless there are exceptional circumstances surrounding the character's actions. In other situations, the necessity to roll dice is less obvious. If a character is virtually guaranteed to succeed at a task, then the GM should consider whether the check is really necessary. While it is true that the character might fail, having the player roll the dice will slow the game down. Thus, GMs should recognise when a character is almost certainly going to succeed at a task and, in those situations, not request the check and allow game play to continue, uninterrupted.

Conversely, one might think that if a character only succeeds if the player rolls a really high number, then the GM should similarly not request a check and, instead, state that the action fails. This, however, is not the case – player characters should always be given that one slim chance of success, even at difficult tasks that seem doomed to failure (with the exception of tasks that the GM deems impossible). While the dice roll may slow game-play down a bit, that slim chance of success allows characters to accomplish heroic feats that will be remembered for years. GMs may wish to allow only player characters to make this roll, even in the face of near-certain failure – since NPCs are not the stars of the game, they should not be allowed the same chance of pulling off spectacular feats.

The following is a list of suggestions when the dice should and should not be rolled. If a check is unnecessary, the character should gain an automatic success for the action.

Roll dice when...

- the unpredictability of dice adds to the excitement of the game
- the action is foreign to the character
- the action has been a weakness for the character in the past
- the character is distracted or cannot concentrate
- another character or NPC is working directly against the character
- the action is not of trivial difficulty
- outside forces influence the actions
- the player wants to roll the dice

Do not roll dice when...

- a roll would reduce the enjoyment of the game
- the action is routine for the character
- the action requires a trivial amount of talent compared to the character's Skill rank

Stat Checks

A Stat check is used when the GM believes that innate ability is more important than any learned expertise or combat capability. During a Stat check, the GM decides which Stat (Body, Mind, or Soul) would be most relevant to the action in question. If two or three Stats are closely related to the action, an average Stat Value should be calculated instead, rounding up to the closest whole number. For actions that fall under the domain of an Attribute, the relevant Stat is usually given in the Attribute description.

A successful Stat check involves the player rolling less than or equal to the Check Value on two dice. The base Check Value is equal to the appropriate Stat or Stat average, as determined by the GM. The Stat check is unsuccessful if the dice roll generates a value greater than the Check Value. The greater the difference between the Check Value and the dice roll, the greater the degree of success or failure.

Check Value Difficulty Modifiers

The GM has the option of modifying the Check Value should the action the character is undertaking be particularly easy or difficult (see Table 8-1: Check Value Difficulty Modifiers). Difficult actions gain a negative modifier to the attempt, while easier actions receive a positive modifier.

Table 8-1: Check Value Difficulty Modifiers

Check Value Modifier	Difficulty of the Action
+8	Practically Guaranteed (why roll dice?)
+6	Extremely Easy
+4	Easy
+2	Below Average Difficulty
0	Average Difficulty
-2	Above Average Difficulty
-4	Difficult
-6	Extremely Difficult
-8	Practically Impossible

What is an Average Difficulty?

The difficulty term "average difficulty action" more correctly means "action that is considered of average importance in the campaign, for which the GM would actually want the player to make a dice roll." Parallel parking a car is not an average action – even though many drivers cannot do it – since it is unimportant in almost any campaign.

When you are thinking about a specific task, if you cannot say "that's a fairly average action for a player character to accomplish in my campaign," then it's not an average action.

Critical Success or Failure

Regardless of the actual Check Value, an unmodified or "natural" roll of 2 always succeeds (it is considered at least a "marginal success"), and an unmodified roll of 16 always fails (it is considered at least a "marginal failure"). This rule is important in an RPG, because it reflects the extreme possibilities that even the most talented characters sometimes fail in their tasks, while even the most awkward characters can succeed.

Contested Actions

If two or more characters are working directly or indirectly against each other (such as two people pulling on a contested object), each character must make a Stat check. The character with the greatest degree of success (or least degree of failure if both characters fail) is considered to have the advantage over the contested action.

Skill Checks

A Skill check is similar to a Stat check, except it is used when the task is one that the GM decides would be governed by both a particular Stat and a particular Skill. For example, if a task required general intellectual ability (such as remembering the name of a person the character had met), a Mind Stat check would be made. Determining the origin of a new genetically-engineered species would also require a Mind Stat check, but this task is governed by the Biological Sciences Skill (more specifically, the Genetics Specialisation). In game terminology, this task would require a "Mind-Based Biological Sciences (Genetics) Skill check."

The base Check Value of a Skill check is equal to the appropriate Stat. Thus, for a Mind-based Skill check, the base Check Value is the character's Mind. If the character possesses the appropriate Skill (even without the exact Specialisation), he or she receives a bonus to the Check Value. This bonus is equivalent to the character's Skill Level (if the task does not fall under his or her Specialisation) or one more than the character's Skill Level (if his or her Specialisation does apply). A successful Skill check involves the player rolling less than or equal to the modified Check Value on two dice. The degree of the action's success or failure is determined by the difference between the Check Value and the dice roll.

The GM is responsible for deciding which Stat, Skill, and Specialisation are relevant to a particular task, using the Stat and Skill descriptions given in Chapters 2 and 5. Since these questions can often be tricky, the GM should listen to the player's reasoning why a particular Skill or Specialisation might apply. The final decision belongs to the GM, however.

Combining Skill Checks

When more than one character tries the same Skill at the same time towards the same goal, their efforts may overlap — they can work together and help each other out. In this case, one character is considered the leader of the effort and makes master Skill check. Each helper also makes a Skill check, and for every success, the leader gets a +2 circumstance bonus to his or her master Skill check. The GM limits co-operation as he or she sees fit for the given conditions.

Skill Synergy

It is possible for a character to have two Skills that work well together, such as Street Sense and Urban Tracking, or Computers and Electronics for a computerised lock. The GM should apply reasonable Skill check bonuses (up to a maximum of 4) when an appropriate situation arises.

Unskilled Attempts

Often, a character will attempt an action for which he or she does not possess the relative Skill. The Check Value in these situations is dependent on the nature of the action.

Familiar Action

If the character is undertaking a familiar action, the Check Value is simply equal to the relevant Stat. The familiarity should have been established previously, such as in the character's background story, or be consistent with the character's role within the setting. The player should explain to the GM why his or her character is familiar with the current task. The GM, of course, has final say whether the character is sufficiently familiar to avoid an unfamiliar action Check Value penalty (see below).

For example, a student who attends university to study astronomy undoubtedly has at least a cursory familiarity with many academic fields. Similarly, almost all characters living in a big city will be familiar with the process of driving a car, even if they do not possess the Driving Skill; in North America, attempting car-related actions is familiar to nearly everyone. A hermit living in the depths of the Amazon, however, is likely not familiar with motor vehicles and therefore driving would be an unfamiliar action.

Unfamiliar Action

If the character is undertaking an action with which he or she is unfamiliar, the task should be treated as a normal Stat check with an unskilled penalty applied to the Check Value. This reflects how difficult it is for an unskilled character to accomplish the task. The unskilled penalty should range from -1 to -8, depending on how much the GM feels training is required and how background aspects of the character could affect the attempt. This unskilled penalty is in addition to any penalty (or bonus) that is applied as a reflection of how easy or difficult the task itself is to accomplish.

For example, keeping a plane in the air after the cabin crew suddenly falls unconscious is a daunting task for anyone who is not trained as a pilot. An average character might therefore suffer a -4 penalty to the Check Value. A character who is an aficionado of combat jets, realistic flight simulators, and aircraft documentaries might only suffer a -2 Check Value penalty ... even if he or she has never actually piloted a plane before.

Required Skill

The GM may decide certain tasks automatically fail when performed by characters lacking the required Skill. Examples of required Skill activities include: performing cyber surgery, decrypting a password, engineering a designer drug, estimating the value of a rare piece of art, etc.

Power Usage Skills

Some characters may select the Power Usage Skill for one or more of their Attributes. This Skill provides a bonus when the character makes any check involving the specific Attributes. Unlike other Skills, Power Usage does not provide an additional +1 bonus for Specialisations. For example, a character with Telepathy and a Mind Stat of 9 and the Power Usage (Telepathy) Skill at Level 3 makes Telepathy checks against a Check Value of 12 (a Mind Stat of 9 plus 3 for his Level in the Power Usage Skill).

Additional Modifiers

GMs should remember to also apply normal Check Value difficulty modifiers based on how easy or difficult the task is (see Table 8-1: Check Value Difficulty Modifiers). For instance, landing a crippled airliner on an icy runway at midnight during a blizzard might be a quite difficult task. Landing the same crippled jet during daylight in fair weather might not incur a difficulty penalty. Any difficulty modifiers that are assigned to a character's task are cumulative with his or her Skill Level bonus.

Combat Dice Rolls

The combat check resolves any type of physical combat including armed, unarmed, martial arts, and ranged weapons attacks. The combat check is very similar to a Skill check except the Check Value is now the character's Attack Combat Value (for Attack Combat checks) or Defence Combat Value (for Defence Combat checks) rather than a Stat. A successful combat action involves the player or GM rolling less than or equal to the Check Value on two dice. The attack or defence is unsuccessful if the dice roll (after any modifiers) is greater than the Check Value.

A character can attack or defend with a weapon (or unarmed) even if he or she does not possess the relevant attack combat Skill (combat is a Familiar Action). Consequently, attacking or defending characters lacking the appropriate Skill do not suffer a Check Value penalty; a character without the appropriate combat Skill simply does not receive a Check Value bonus.

Skills adjust the Check Value, but other Attributes may also provide modifiers as well. The GM also has the option of modifying the Check Value should the attack or defence be particularly easy or difficult (see Table 8-1: Check Value Difficulty Modifiers, page 87). A natural dice roll of 2 ("snake eyes") is a critical success and cannot be negated by an opponent's defence (the defender does not even have the opportunity to make a defence check)

Using Attributes

If an Attribute does not specifically require a Stat or Skill check or a Combat check, GMs can assume they function automatically in most situations, though the Game Master may decide that a Stat or Skill check is necessary in unusual circumstances. For example, a character with the Features (Appearance) Attribute always looks good, but the GM might require a Soul Stat check were he or she attempting to attract someone's attention.

Certain Attributes occasionally require Stat checks (or sometimes Skill checks) to properly use the Attribute. Other Attributes provide favourable modifiers to Stat checks or Skill checks. If an Attribute interacts with Stat or Skill checks, this is noted in the Attribute's description in Character Creation.

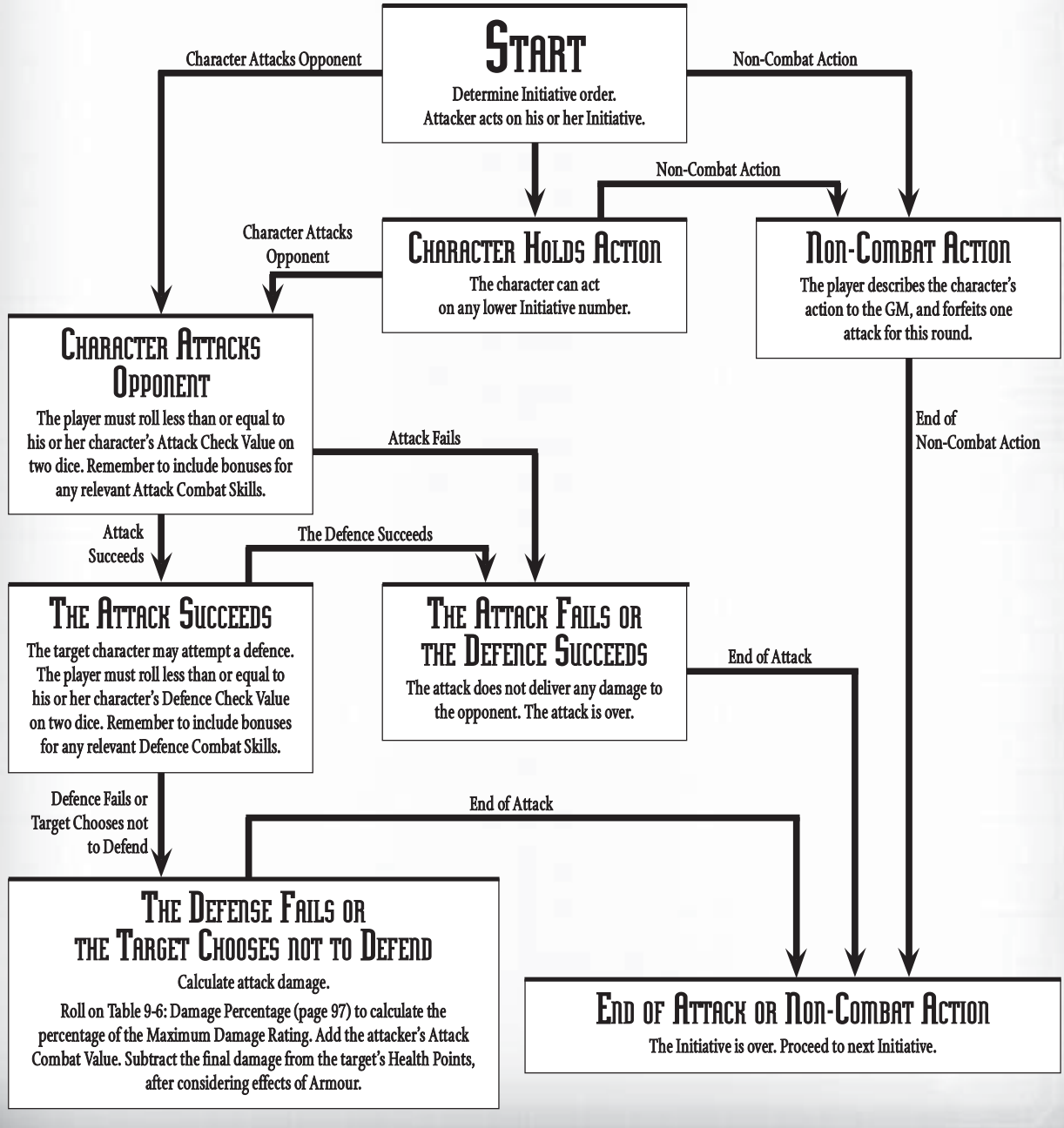
Chapter 9: Combat

Conflict is an essential component of any role-playing game. Physical conflict, or combat, is an important element of the *Ex Machina* RPG, but important is not the same as frequent. Combat should be a vital element of a scene, and not just a distraction that the GM uses to pass the time.

The combat rules are designed to mimic dynamic, fast-paced combat. Whenever a character enters physical conflict with another character or NPC, the physical Combat Phase begins. Each round of combat covers from 1 to 10 seconds of time from the characters' perspectives, depending on the characters' actions and the circumstances (the exact time scale is not relevant; a five-second round is usually appropriate). Characters are permitted to take one offensive and one defensive action each round. They may also choose to take more than one defensive action, but suffer a Check Value penalty to each subsequent attempt (see the Defence section). Alternatively, a character may forfeit his or her attack in favour of one non-combat action. Should the conflict not be resolved at the end of the first combat round, subsequent rounds of combat will follow.

The Physical Combat Phase is subdivided into four parts: Initiative, Character Action, Defence, and Damage.

Combat Flowchart




SUBJECT WARNING
HOSTILE MOVEMENT
IN PROGRESS
SUBJECT WARNING
NEW PRESENCE
ENTERING
BALANCE


SUBJECT MOVEMENT
LATERAL 11KMPH
ANGLE 15 DEGREES
SUBJECT SUSTAINS DAMAGE:
RIGHT ARM IMMOBILIZED
RISK LEVEL DECREASED
EVENT
SOUND SUPPRESION ACTIVATED
ADJUST HEIGHT OF WEAPON
SUBJECT
DISTANCE TO SUBJECT: 4.68 M
COVER FROM SUBJECT: 28%
CORE
CHANCE OF WEAPON DISCHARGE
STRIKING CORE: 0.08%
FATIGUE CORE: 4.68%
BLOOD PRESSURE: 120/80

Initiative

Initiative determines the order in which characters act and is checked at the beginning of each round. Each player involved in the fracas rolls two dice and adds the result to his or her character's Attack Combat Value. A bonus is applied if the character possesses the Combat Technique (Lightning Reflexes; page 46) or Speed (page 66) Attributes. The GM does the same for any NPCs engaged in the conflict. The GM may also grant bonuses or penalties if he or she believes the situations calls for it. Alternatively, the players and Game Master can roll once at the beginning of combat to determine their characters' Initiatives for the entire battle (i.e. their Initiatives will remain the same every round).

The character with the highest total has "gained Initiative" and acts first, followed by others in descending order. Should two or more characters or NPCs have the same Initiative, their actions are simultaneous. This means both characters attack and deliver damage at the same time; if one character drops below zero Health Points as a result, he or she still acts before falling unconscious.

A character may delay his or her action until any time later in the round to see what the other characters intend to do. If all his or her opponents also delay their actions waiting for something to happen, the round ends in a dramatic stand-off and a new one begins.

If a character holds one or more actions until the end of a round and does not act, he or she acts on the first Initiative in the next round. The character does not gain an additional action — he or she simply acts first regardless of Initiative rolls. All held actions occur during the first Initiative. If two (or more) characters hold their actions until the following round, then both characters act simultaneously (assuming neither continues to hold their action) and then everyone else involved in the combat acts based on Initiative rolls.

Character Action

Characters act in the sequence determined by the Initiative roll. When it is time for a character to act, he or she may make one offensive action (i.e. attack) or one non-combat action, unless the character has the Extra Attacks Attribute (page 48). Attacks are normally against a single target, though some weapons or attack Abilities may allow the character to engage multiple targets simultaneously.

Before rolling the dice, the player should clearly describe the method of attack, the weapon his or her character uses (if any), and the target. If the character is trying something unusual (such as a Called Shot or attacking with two weapons), he or she should specify this beforehand.

To successfully attack an opponent, the player (or GM for an NPC) must roll less than or equal to his or her character's Attack Combat Value on two dice as described under Combat Dice Rolls on page 88. Remember to include all relevant Attribute, Skill, Defect, Weapon Ability/Disability, and difficulty modifiers (refer to Table 9-3: Attack Check Modifiers, page 95).

If the attack check succeeds, the character is on target and will hit unless the opponent can defend against the attack. Refer to defence checks, page 96, for more information. If the target fails the defence check or does not defend at all, he or she suffers the effects of the attack. This is normally damage and/or any other special effects associated with the attack. To reflect some of the brutally successful attacks demonstrated in game adventures, a natural dice roll of 2 is a critical success and cannot be negated by an opponent's defence.

If an attack check fails, the character has missed. The attacker's action is over, and the attack has no effect, though a miss with a ranged weapon may cause collateral damage if the shot strikes somewhere else instead (this is up to the GM). A natural roll of 16 (two 8s) will always miss and may result in an exceptional failure, such as hitting an innocent bystander or a weapon malfunctioning.

Melee vs. Ranged Attacks

Some attacks are useful at a distance, while others are limited to close, hand-to-hand fighting. For simplicity, ranges are grouped into the four categories listed below. It is up to the GM to decide whether he or she wishes to track ranges and distances, or abstract them.

The distance given for each attack range is the effective reach of that attack. Many may be fired out to twice that range at -4 penalty or five times the distance at -8, though the GM may decide that some attacks or weapons cannot exceed their listed ranges.

Melee

The attack is only usable against adjacent opponents within touching distance (usually one to five metres). This is the range for swords, melee combat, etc.

Short

The attack has an effective range out to about 50 metres. Most pistols, shotguns, grenades, submachine guns, and hurled weapons such as a thrown rock or throwing knife, are short-ranged.

Medium

The attack has an effective range out to about 500 metres. Most rifles and machine guns are medium-ranged as well as bows and crossbows. This is the default range for weapons if none other is listed.

Long

The attack is effective out to considerable ranges: about 5 km (or more if specifically noted). A surface-to-air missile, an anti-tank rocket, or a tank's main gun are examples of this.

Special Combat Situations

The following are special situations that can occur during combat.

Attacking Multiple Targets with One Attack

When a character absolutely must take down a number of targets but he or she does not have enough Extra Attacks to do so, the character may attempt to use one attack to strike multiple targets. For each additional target beyond the first, the character suffers a -4 Attack Combat penalty. Only one Attack Combat check is made, not one check per target. Each target, however, is allowed to make a Defence Combat check as normal. Additionally, any damage inflicted is reduced by 2 ranks, to a minimum of 0% (see Amount of Damage Inflicted, page 97). Thus, if a character attempted to swing his sword and strike three people in one blow, he would make one attack check with a -8 penalty (-4 for each of the two extra targets). If he successfully hits any of the targets, his damage is reduced by 2 ranks.

Attack Multiple Weaker Opponents (Optional Rule)

Sometimes a character wants to attack multiple significantly weaker opponents with one offensive action. This action is very cinematic (representative of a berserk cyber-samurai battling hoards of lowly minions), and consequently the attack penalties are not as severe. For each additional target who is at least 50 Character Points lower than the attacker, the penalty is only -2 instead of -4. The attacker does not suffer any penalties for each additional target who is at least 100 Character Points lower than the attacker. Obviously the attack description has to be reasonable, and damage is still reduced by 2 ranks.

Attacks With Two Weapons

A character with a one-handed weapon in each hand may use both at once against the same target or attack two different targets (even if he or she does not have Extra Attacks) but at a severe penalty to both checks. A two-weapon attack incurs a -8 Check Value penalty if the attacks are aimed at the same target or a -12 penalty if aimed at different targets. If a character has Extra Attacks, he or she can only use this option with one attack and not every attack.

Called Shots

An attacking character may opt to suffer an unfavourable difficulty modifier to hit in exchange for a Called Shot that provides some special advantage. For example, a Called Shot may ignore Armour (by attacking a small, unarmoured spot) or strike a vital point, inflicting greater-than-normal damage results. Players must specify a Called Shot before rolling the dice.

Called Shot – Disarming

A character may attempt to shoot or knock a weapon out of another person's hand. If using a ranged attack, this requires an attack at a -8 penalty. If the attack hits and the opponent fails his or her defence check, the character knocks away the weapon (probably damaging it). If using a melee weapon or unarmed attack to disarm, the character only suffers a -4, but the target may make a Body Stat check to retain control of the weapon. If the Body Stat check succeeds, the weapon's user still suffers a -4 Check Value penalty on his or her next action with that weapon (since it is off balance), but he or she retains control of it.

Called Shot to Partial Armour

Some armour may provide partial protection, like a flak vest only protecting a person's torso. An attack aimed at a thin or unarmoured area suffers a -4 attack check penalty and ignores the effects of the Armour if successful.

Called Shot to Vital Spot

A character attacking a living being can specify he or she is aiming for a vital spot (heart, brain, spine, etc.) rather than simply shooting at the centre of mass as usual. He or she suffers a -8 attack check penalty, but, if successful, the attack inflicts full, 100% damage. If the character rolls a natural 2 on this attack check, double this damage (see Critical Hits, page 99).

Called Shot to Weak Point

If the character knows his or her enemy has a Weak Point Defect (page 83), a Called Shot can be made to hit it in combat. The attack check penalty depends on the size of the Weak Point: a tiny spot gives a -6 penalty; a small spot gives a -4 penalty; and a large spot gives a -2 penalty.

Extra Aim

A character making a ranged attack may deliberately take extra time to aim. If a character aims a ranged weapon for an entire round and does not move or defend during that period, he or she receives a +2 attack check bonus, or +3 if he or she is using a scope. If an aiming character chooses to make a defence check or suffers any damage before he or she can fire, the character loses the benefit of Extra Aim.

Grappling

Instead of striking to inflict damage in melee combat, a character can attempt to grab someone and pin him or her. This is a grappling attack, and a character must have at least one empty hand free. Grabbing a small, inanimate object not in an individual's Sphere of Control (page 101) does not require a full action.

Game Masters resolve a grappling attempt like a normal attack with the applicable Unarmed Attack (Grappling) Skill. If the attack hits and the target's defence (if any) fails, then the attacker successfully grabbed his or her opponent. The target of a grappling attack defends by making a defence check. The Unarmed Defence (Grappling) Skill is applicable. The attacker gains a grappling advantage if he or she has more free hands than the defender. "Free" means not holding weapons or other objects, or not otherwise incapacitated. In this case, the defender suffers a cumulative -2 attack or defence check penalty for each free hand the attacker uses to grapple in excess of the number of free hands the defender is using. The maximum penalty assigned for this disadvantage is -8.

For example, if a street samurai (two hands) tries to escape from the grasp of a multi-armed robot (four hands), he suffers a -4 defence check penalty (4-2 = 2; 2 x -2 = -4). If the robot is holding an object in one of its four hands, however, the Samurai only suffers a -2 defence check penalty (3-2 = 1; 1 x -2 = -2). Characters with the Elasticity Attribute (page 47) gain a bonus to attempts to grapple.

The attacker can hold a grabbed character relatively stationary. The target suffers a -4 penalty on all attack and defence checks when performing other melee attacks or defences (including grabbing, biting, kneeing, etc.) or -8 when attempting to perform other tasks requiring freedom of movement like using hand-held equipment. Exception: if the grabbed character is much stronger (or more agile, at the GM's discretion) than the opponent, his or her penalty is halved, and the character can still move freely. The GM may consider a character much stronger if his or her Body Stat is at least four Levels higher or if the character has Superstrength at a higher Level. For this purpose, each Level of Less Capable (Strength) counts as a -3 to Body. Thus, a small child (Body 2) could not stop a strong man (Body 6) from pinning him or her while the strong man would be able to move freely if grabbed by the small child. It is, of course, possible for one character to grab an opponent who then grabs the character in return (this is what often happens when grappling).

Grappling Manoeuvres

Once a character grabs an opponent, he or she can attempt a grappling special manoeuvre (Lock, Throw, or Pin) as his or her next attack (see below).

Lock

Instead of attacking normally, a character who (on a previous attack) successfully grabbed his or her opponent can choke, crush, or strangle that foe. This attack automatically hits and inflicts damage equal to the character's Combat Value plus bonuses from Superstrength and Massive Damage.

Throw

Instead of attacking normally, a character who has already grabbed an opponent and is standing can hurl the foe to the ground. A character must make an attack check at a +4 bonus, modified by the Unarmed Attack (Throws) Skill. If successful, the opponent receives a defence check using the Unarmed Defence (Throws) Skill. A throw delivers damage equal to the Attack Combat Value plus 5 additional points of damage (as well as bonuses from Superstrength). Additionally, if the defender fails his or her defence check, the attacker may throw the character out a window or off a ledge, and the GM can assign extra damage based on the situation. If the attacker throws the opponent at another enemy, the target must make a defence check or suffer equal damage as well. A throw normally breaks the grip on the target unless the attacker attempts to maintain a hold and succeeds in an Unarmed Attack (Grappling) check with a -4 penalty (which must be made whether the throw is successful or not).

Pin

A character who has grabbed someone may attempt to improve his or her hold during the next attack by completely immobilising the opponent in a pin. Game Masters may treat this manoeuvre the same as the first grab attack. If the

attack succeeds and the opponent fails to defend, then the foe is pinned, usually under the weight of the attacker's body. Attackers may not attempt a pin if the opponent is much stronger (see earlier for definition of much stronger). Once a character pins an opponent, the target suffers a -6 penalty on checks when attempting to escape. A pinned character cannot attack or defend.

Biting

Since biting does not require the use of hands, it is an effective tactic when a character has either grabbed or been grabbed by an opponent. Game Masters should treat this as a normal attack that inflicts only one half of the Attack Combat Value in damage (round down), unless the aggressor is using a Natural Weapons Attribute (Fangs, Beak, or Mandibles).

Escaping

A grabbed character may attempt to struggle free. On the character's Initiative to act, he or she can attempt to escape instead of attack. Both characters roll a Body Stat check with modifiers for the Unarmed Attack (Grappling) Skill. The character with the highest degree of success (or least degree of failure) wins. If the grabbed character wins, he or she escapes, and may also attack or take another action. If the characters tie, the grabbed character escapes, but forfeits his or her current action. If the grabbed character loses, he or she is immobilised and forfeits one attack action and one defence action that round. If a grabbed character chooses to attack the person who grabbed him or her (with appropriate penalties) and inflicts damage equal to or greater than his or her foe's Body Stat, he or she escapes the grab.

Fighting from the Ground

Fighters thrown to the ground or who are otherwise forced to fight from a prone position defend and make all attacks at a -4 penalty.

Disarming via Grappling

A character can try grabbing an opponent's weapon instead of the opponent's body. He or she makes the attack at a -2 attack check penalty. The opponent earns a +2 bonus to the defence check if holding onto the weapon with two or more hands. A successful attack might dislodge the weapon, but the defender is allowed a Body Stat check to maintain his or her grip. If the defender fails, he or she drops the item; if successful, the defender is at a -4 penalty to use the weapon until the end of his or her next action (after which time, the defender can use the weapon without penalty, unless the attacker attempts another disarm manoeuvre).

Striking to Incapacitate

A character attacking in hand-to-hand combat or with a blunt melee weapon may attempt to knock a surprised opponent unconscious. The target of the attack must be unaware of the attack to be vulnerable. The attacker makes his or her Attack Combat check with a -6 penalty. If the target suffers any damage (after all defensive Attributes are applied), he or she must make a Body Stat check. If the target succeeds on this Body check, he or she maintains consciousness. If the target fails this check, however, he or she falls unconscious. Damage inflicted by an Incapacitating Strike is then divided by ten, rounding down.

For example, a special ops cyborg wants to capture the terrorists alive so he strikes to Incapacitate. His punch normally inflicts a maximum of 40 damage. He rolls to hit with a -6 penalty and successfully hits his opponent, forcing the target to make a Body Stat check. Regardless of whether or not the target remains conscious, he takes 4 (40÷10 = 4) damage from the blow.

Striking to Wound

A character in combat can elect to reduce his or her delivered damage below the normal damage value to a minimum of 1 point (known as striking to wound). He or she may not attempt this with attacks possessing the Area Effect, Auto-Fire, or Spreading Ability, however.

Throwing Heavy Things

A character with the Superstrength Attribute (or a high Body Stat) can lift heavy things — up to 10% of his or her maximum capacity — and throw them to deliver damage. It takes one action to grab and lift a large, awkward object, and another to throw it. Consequently, throwing objects is slower than firing most weapons. The advantage of throwing an object is that big things are harder to dodge than smaller ones. The GM should assign objects a number of BP of Awkward Size based on their size and mass; see Awkward Size on page 77. Defence checks suffer a penalty of -1 for each BP of Awkward Size of the object thrown (or equivalent). Damage delivered to both the target and the thrown object is equal to the attacker's Combat Value, plus bonuses for Superstrength and Massive Damage, plus 10 for each BP of Awkward Size Defect of the thrown object.

Total Attack

A character can take this option in conjunction with an attack. It means he or she focuses completely on an offensive action with no thought given to defence. The character may opt to forfeit one defence action to perform a Total Attack, gaining a +2 bonus to his or her attack check. Only one defence may be forfeited per attack, though a character with both the Extra Attacks and Extra Defences Attributes can initiate more than one Total Attack each round.

Touching a Target

Some Attributes require a character simply touch his or her target. It is much easier to just touch a person than it is to physically strike him or her with enough force to cause damage. Thus, any character who is simply attempting to touch an opponent gains a +6 bonus to his or her attack check. Touching a specific part of a target's body may require a Called Shot (page 93). This assumes the character is simply attempting to make physical contact with the target. If prolonged contact is required, the target must either be willing or the character must grapple the target (page 93).

Trick Shots

Some characters are known to make trick shots (such as ricocheting weapons or energy blasts off several walls before striking the target). Trick shots make the attack much harder to defend against, but likewise it is harder for the attacker to successfully hit. If the attacker takes a voluntary penalty to his or her Attack Combat Check Value, reflecting the difficult nature of the trick shot, the defender will suffer the same penalty to his or her Defence Combat Check Value.

Table 9-1: Trick Shot Modifiers

Trick Shot Degree of Difficulty	Attack's Penalty To Hit	Defender's Penalty To Evade
Fancy Trick Shot	-2	-2
Challenging Trick Shot	-4	-4
Complex Trick Shot	-6	-6
Difficult Trick Shot	-8	-8
Fantastic Trick Shot	-10	-10

Movement in Combat

The GM decides whether he or she wishes to keep detailed track of movement, ranges, and distances. In most close-in combat situations, GMs should not worry about exact speeds and distances — a general idea of the overall situation is sufficient. Alternatively, GMs can measure ranges in a more abstract fashion: "you're behind him and in melee range" or "you can reach her in three rounds, if you hurry." The GM should judge how quickly range shifts from relative speeds to dramatic necessity. For example, in a race between two opponents with equal speeds, the GM can allow the character who keeps winning Initiative to increase the gap gradually between him or her and the other runner. A good way to resolve long distance chases is for the GM to establish a certain number of combat rounds between the starting point and the goal. It then becomes a simple matter of reaching the target first.

If the GM wishes to keep precise track of movement and distances, assume an average human adult can sprint approximately 6 metres per round times his or her Body Stat over short distances (one metre times Body Stat if swimming or crawling). The speed is reduced when a character is running a long distance. This guideline assumes five-seconds per round, but the GM can modify exact speeds when necessary. Certain Attributes (Flight, Land Speed, Water Speed, Special Movement) allow faster or specialised movement under certain circumstances.

Jumping

GMs can allow characters to jump as far as seems dramatically appropriate for the game. If distance is important, a person can jump about two metres forward, or one up or back, with range doubled on a short running start. A successful Body Stat check allows a fast moving character (or vehicle) with a running start to jump, in metres, one-quarter of his or her current speed in kilometres per hour — an average character can reach 5 kph times his or her Body. A failed Stat check means the character falls short. A wheeled or tracked vehicle or a boat can only jump if it has a ramp.

Movement Attack Penalties

When a character is moving in combat, he or she may incur penalties to attack and Block Defence checks (see Table 9-2). The penalty incurred depends on how quickly the character is moving relative to his or her maximum movement ability. The following chart indicates the movement rates and penalties incurred. For a normal character who does not have or is not using an Attribute to move (Speed, Flight, Water Speed, etc.), the character's movement rate is dictated by his or her Body Stat, as outlined in the Normal Character column. Characters who are using a movement Attribute refer to the Movement Attribute column to determine their rate of movement.

Table 9-2: Movement Attack Penalties

	Normal Character	Movement Attribute	Penalty
Jogging	up to Body x 4 metres per round	Up to Maximum Attribute Level -2	no penalty
Running	Body x 5 metres per round	Maximum Attribute Level -1	-2
Sprinting	Body x 6 metres per round	Maximum Attribute Level	-4

Table 9-3: Attack Check Modifiers

Attack Situation	Modifier
Attacker is:	
Taking an action to aim	+2, or +3 with scope
Attacking Multiple Targets with one action	0, -2, or -4 per additional target
Attacking with two weapons (same target)	-8
Attacking with two weapons (different targets)	-12
Attempting to Touch the Target	+6
Making a Total Attack	+2
Firing personal weapons from a moving vehicle	-2 or -4
Firing personal weapons while piloting a vehicle	-8
Firing personal weapons while performing acrobatics	-4
Firing personal weapons while swimming	-4
In an awkward position (on the ground, etc.)	-4
Attacker is Attempting a Trick Shot:	
Fancy Trick Shot	-2
Challenging Trick Shot	-4
Complex Trick Shot	-6
Difficult Trick Shot	-8
Fantastic Trick Shot	-10
Attacker is:	
Jogging	no modifier
Running	-2
Sprinting	-4
Attacker is Attempting a Called Shot:	
Disarming (with melee attack)	-4
Disarming (with a ranged attack)	-8
Targeting a partially armoured point	-4
Targeting a vital spot	-8
Targeting a Weak Point	-2, -4, or -6
Target is Moving at:	
up to 99 kph (Flight 1 or 2; Land Speed 1-4)	no modifier
100 to 499 kph (Flight 3; Land Speed 5-6; Speed 1)	-2
500 to 999 kph (Flight 4; Land Speed 7; Speed 2)	-4
1,000 to 4,999 kph (Flight 5; Land Speed 8-10; Speed 3)	-6
5,000 to 9,999 kph (Flight 6; Land Speed 11; Speed 4)	-8
10,000 to 49,999 kph (Flight 7; Land Speed 12-13; Speed 5)	-10
50,000 kph or more (Flight 8+; Land Speed 14+; Speed 6+)	-12
Target within melee range, and:	
Concealed by trees or brush	-2 to -6
Concealed by darkness, fog, or smoke	-2 to -4
Taking cover	-2 to -8
Target beyond melee range, and:	
Concealed by trees or brush	-4 to -8
Concealed by darkness, fog, or smoke	-4 to -6
Taking cover	-4 to -10
Range Modifiers:	
Attacking at up to twice range	-4
Attacking at up to five times range	-8

If a character is sprinting, he or she incurs a -4 penalty to attack and Block Defence checks. If the character is running, he or she incurs a -2 penalty on attack and Block Defence checks. Characters who are jogging do not incur penalties. Additionally, characters do not incur penalties when attempting Parry/Dodge Defence checks regardless of their speed. GMs do not need to keep exact track of movement rates unless they wish; they may simply keep movement abstract.

Firing Weapons from Moving Vehicles

Characters who are inside a fast-moving vehicle fire their weapons at a penalty. Firing weapons when moving at moderate speeds incurs a -2 penalty, while moving very quickly earns a -4 attack check penalty. Game Masters should impose an additional -4 penalty for characters also piloting the vehicle while firing.

Attacking Moving Targets

Attempting to hit a target that is moving at exceptional speeds is very challenging. When attempting to hit a target that is moving quickly, the character suffers an Attack Combat check penalty. See Table 9-3: Attack Check Modifiers for the appropriate penalty based on the target's speed.

Attack Check Modifiers

The GM may impose appropriate modifiers when the players make an attack check. An attack action normally assumes characters are engaged in active combat — dodging enemy attacks, making quick strikes when the opportunity arises, moving about, etc. The GM should not apply any penalties for this sort of normal combat-related activity. If circumstances are such that a character's aim or concentration seems likely impeded (such as shooting someone whom the character cannot clearly see or attacking a foe while hanging upside down), the GM may assign penalties to the attack check. Likewise, in stress-free situations (such as whacking an immobile victim, or target range shooting with nothing riding on the outcome), the GM can apply favourable bonuses or assume automatic success.

A number of possible penalties or bonuses are described on Table 9-3: Attack Check Modifiers. The GM may adjust or ignore these modifiers if he or she prefers.

Non-Combat Actions

Rather than taking an offensive action during any combat round, a character may use a non-combat action on his or her Initiative. Such actions include untying a rescued captive, running, changing weapons, climbing into or out of a vehicle, writing a note, changing clothes, etc. Players may also use non-combat actions to safely withdraw from armed or melee combat, provided the opposition does not attack at a later Initiative number in the same round. Note that speaking a few words during combat, running about while attacking, or making a short dramatic speech does not constitute an action.

A non-combat action may succeed automatically, or the GM can require a Stat check, or Skill check to determine whether it succeeds. Some non-combat actions may require several rounds to perform at the GM's option.

Other Actions

Some activities do not count as attack or non-combat actions. A character can perform all of the following activities in addition to an attack or non-combat action:

- Move a short distance or manoeuvre his or her vehicle.
- Say anything that fits within the span of 1-10 seconds.
- Perform defensive actions in response to any attacks against him or her. Note that if the character performs more than one defensive action in a round, subsequent defensive actions after the first (or later, if he or she has the Extra Defences Attribute, page 48) in the same round suffer penalties.

Defence

If a character is the target of a successful attack, he or she may attempt to defend against it with a Dodge/Parry Defence (avoiding the attack by moving out of the way, or using a weapon to push the attack to the side or "off-line"), an Attribute Defence, or a Block Defence (interposing an object between the attack and the target). Defensive actions are not dependent on Initiative order but resolved immediately after the attack before the attack damage is calculated or revealed.

To successfully defend, the player must roll less than or equal to the character's Defence Combat Value. Each character can attempt a defence only once against a particular attack (including grapples). A character may defend against more than one attack in a round, but with an appropriate penalty to each defence after the first (unless the character has the Extra Defences Attribute; the penalty then applies to each defence after the final bonus defence). Should the opponent not defend (perhaps in anticipation of a more powerful attack still to come), he or she cannot change that decision later in the round.

If a vehicle is the target of an attack, its driver or pilot makes the defence checks. If a vehicle is unable to manoeuvre (trapped in a confined space, for example) the GM may rule that it cannot defend at all. Likewise, a vehicle cannot normally defend against attacks made by a character who is riding in or on it.

Defending Against Multiple Attacks

When defending against multiple attacks in a single round, each defence after the first incurs a cumulative Check Value penalty of -4: -4 for the second defence, -8 for the third, -12 for the fourth, etc. This means that even the greatest fighter may be overwhelmed if badly outnumbered. Remember to include all relevant Attribute, Skill, Defect, and difficulty modifiers. If successful, the defender blocks, dodges, or otherwise negates the attack, and suffers no damage.

Relevant Defence Skills

When a character defends against a ranged attack, the relevant Skill is Ranged Defence. For a hand-to-hand or other melee-ranged attack, the relevant Skill is either Unarmed Defence (if the character is dodging, or blocking the attack with his or her body), or Melee Defence (if the character is using a weapon to parry or block).

Block Defence

Rather than attempting to avoid an attack with a Dodge/Parry Defence, the character may instead choose to block the attack with a shield or other suitably large and resistant object (a Block Defence). Characters may only attempt to block melee or unarmed attacks unless they have the Block Ranged Attack Combat Technique (page 45). When a character attempts to block, he or she gains a +2 bonus to his or her Defence Combat check. If successful, the character has interposed the object in front of the attack. The object's Armour Rating provides protection to the character. Thus, a plank of wood can be used to block a shotgun blast but, if the attack does more damage than the wood's Armour Rating, it will still strike the character, inflicting reduced damage. See Breaking Objects (page 135) for suggested Armour Ratings of common items or Table 10-6: Armour and Protective Devices (page 133) for shields. If the attack delivers five times the object's Armour Rating, the object is destroyed.

Why is Block Defence Easier?

Of the two defence options — Block Defence or Dodge/Parry Defence — we have decided to make the Block Defence easier for two reasons. First, we believe that interposing an object, like a sword or shield, between your own body and an attack is indeed easier than completely avoiding any contact (a dodge). We also think it's easier than using your own weapon to parry, which requires some skill.

Secondly, we assigned the +2 bonus for Block Defences for game balance reasons. With a successful Parry/Dodge Defence, the defender avoids all damage completely. Powerful attacks can potentially break the object the defender uses in a Block Defence, however, still inflicting partial damage. In exchange for a higher-risk defence manoeuvre, we are awarding your character a +2 bonus.

Indefensible Attacks

A character may not attempt a defence check if he or she is unaware of the attack, unable to move, or is struck with a Critical Hit (page 99).

Total Defence

A character can make fewer offensive or non-combat actions in a round to improve his or her chances of avoiding an attack. Instead of attacking or engaging in another activity, he or she concentrates completely on defence. A character performing a Total Defence may still move normally, but may not attack or take non-combat actions; the character is dodging and weaving, parrying frantically, ducking, and hiding. The character receives a +2 bonus to all defence checks for each attack sacrificed. This lasts until the character acts again next round. Total Defence is a good tactic for anyone retreating, or someone buying time until his or her allies arrive.

Defending Others

A character can defend the target of an attack in three ways: by pushing/pulling him or her out of the way, by interposing an object (such as a shield, or the character's body) between the target and the attacker. The methods are described below.

The first option, pushing or pulling (or grabbing a target as the character swing by), is similar to a Dodge/Parry Defence. The character uses a defence action, and rolls a defence check. It is difficult to defend someone else, however, and the attempt usually suffers a significant penalty (see Table 9-5). Obviously the action has to make sense — if the character has no way to reach a target, he or she cannot defend the individual.

To shield another person is akin to a Block Defence. Like any other Block Defence, the character gains a +2 to his or her Defence, and must have the Block Ranged Attacks Feat in order to defend against missile weapons. A character can Block for another person with a shield, weapon, or simply by standing in the way and absorbing the brunt of the attack.

If the character is out of defence actions, however, he or she normally cannot attempt to defend another (although in dire situations a GM might allow the character to make a roll with the normal cumulative penalty for additional defences, plus any other modifiers).

Table 9-4: Defence Situation Modifiers

Defence Situation	Modifier
Dodge/Parry Defence	No Modifier
Block Defence	+2
Total Defence	+2 per attack sacrificed
Defending Against Additional Attacks	-4 per additional attack (cumulative)
Defending Against Undetectable Assailant	-8
Defending When Surprised	Defence Check Not Possible
Defending Against Critical Hit	Defence Check Not Possible

Table 9-5: Defending Others

Defence Situation	Modifier
Target is within reach	-2
Target is at medium range	-4
Target is at long range	-6
Target is in an awkward position	-2
Defender is in an awkward position	-2
Target concealed by trees or bush	-2
Target concealed by darkness, smoke	-4
Defending against additional attacks	-4 (cumulative)
Defender is surprised	Defence Not Possible
Defending against undetectable assailant	Defence Not Possible

Damage

Characters suffer damage through combat, accidents, or other hazards. Damage ratings indicate the maximum amount of damage that an attack can inflict. The target character subtracts any damage inflicted from his or her Health Point total if the attack successfully penetrates Armour.

Amount of Damage Inflicted

Each attack has a Maximum Damage Rating, which is equal to the base damage of the attack (which includes a weapon's damage value) plus any bonuses from Massive Damage, and Superstrength, as is appropriate for the attack. When the character successfully strikes an opponent, he or she rolls on Table 9-6: Damage Percentage to determine the amount of damage the attack inflicts (always round fractions up). The character's Attack Combat Value, a reflection of the balance between Body Stat (force of the blow and manual dexterity), Mind Stat (knowledge of a body's vulnerable areas), and Soul Stat (determination and luck), is added to that value to determine how much damage is inflicted upon the target. The Maximum Damage Rating for normal, unarmed attacks by characters lacking Superstrength and Massive Damage is zero — the only damage delivered is equal to the character's Attack Combat value (do not roll on Table 9-6). In some circumstances it may be still important to determine the damage percentage for a Special Attack with the No Damage Disability (page 64), since the result determines the effectiveness of the attack's other Attack Abilities.

Characters may choose to inflict less damage than the dice roll indicates, if they desire. Thus, a heroic character who scores a crushing blow against an opponent on his last legs can reduce the damage inflicted to ensure that he does not kill the villain by mistake, rendering him unconscious instead.

Some effects reduce the percentage of damage delivered by one or more ranks. Each rank of reduction reduces the damage delivered by 25% to a minimum of 0% damage, though the attacker's Attack Combat Value is still added to this result.

If an attack delivers a percentage of damage, such as a Special Attack with the Burning Ability (page 61), the percentage of damage is based on the Base Damage

Table 9-6: Damage Percentage

2d8 Dice Roll	Damage percentage
2-4	100% Maximum Damage
5-8	75% Maximum Damage
9-13	50% Maximum Damage
14-16	25% Maximum Damage

Alternate Damage System

Some players will prefer a grittier combat system, where a successful Defense Combat check is not absolute, and where the Margin of Success is important. In this variant, the degree by which someone avoids an attack depends on how well a character defends against it. To completely defend against an attack, the player must score a Margin of Success equal to or greater than the attacker's Margin of Success on the attack check. If successful, the defender blocks, dodges, or otherwise negates the attack, and suffers no damage.

If the defender makes a successful defense combat check but scores a Margin of Success less than the attacker's Margin of Success, then the defender partially avoids the attack and only suffers half damage (rounding down). This reflects the character successfully blocking a punch but still taking some damage (perhaps after the attacker's fist hits his or her arm), etc. If the defender fails his or her defense combat check completely, then he or she does not avoid the attack and suffers full damage.

of the attack, not on the amount of damage that the successful attack inflicts upon the target. If an attack inflicts multiple hits, such as Special Attacks with the Auto-Fire Ability (page 61), each additional hit inflicts the same percentage of damage as the first hit.

Players should record, on their character sheets, the Maximum Damage as well as the 25%, 50%, and 75% damage values of each of their attacks to avoid slowing down game play.

Unarmed Combat

The attack's Maximum Damage is equal to the character's bonuses for Superstrength, and Massive Damage. The character's Attack Combat Value is added to the damage inflicted. Thus, a normal person attacking unarmed only inflicts damage equal to the Attack Combat Value.

Melee Weapons

The attack's Maximum Damage is equal to the weapon's damage value, plus bonuses for Superstrength and Massive Damage. If the weapon has Abilities or Disabilities, refer to the relevant section (page 60) for their effects. See Table 10-2: Weapons (page 118) for damages delivered by various melee weapons. The character's Attack Combat Value is added to the damage inflicted.

Ranged Weapons

The attack's Maximum Damage is equal to the weapon's damage value, plus bonuses for Massive Damage. A Superstrength bonus may also be added when appropriate (such as for thrown weapons). If the weapon has Abilities or Disabilities, refer to the relevant section (page 60) for their effects. See Table 10-2: Weapons (page 118) for damages delivered by various ranged weapons. The character's Attack Combat Value is added to the damage inflicted.

Special Attacks

The attack's Maximum Damage is equal to the Special Attack's damage value, plus bonuses for Superstrength (if the attack has the Muscle-Powered ability), and Massive Damage (if appropriate). The character's Attack Combat Value is added to the damage inflicted.

Impact Damage

Damage may also result from a non-combat action such as crashing a speedboat into land or falling from a tree. Characters always suffer the maximum damage indicated from falls and crashes — do not roll on Table 9-6: Damage Percentage. Naturally, some non-combat actions may result in an NPC's death, but these events should only kill a player character in exceptional circumstances.

Crashing

During the course of an adventure, a character's vehicle may accidentally (or deliberately) crash into objects along the road, in the sky, in or on water, or in space. GMs should assess whatever damage they deem appropriate upon both the vehicle and occupants in a crash. The Armour Attribute may protect against this damage. Similar damage can be applied to a character who jumps or is pushed from a speeding vehicle, or is struck by one.

Table 9-7: Crashing and Falling Damage assists the GM in determining the damage for hitting the ground, water, a building, or some other immovable object based on how fast the vehicle was moving during that round. If a speed falls between two damage values, use the greater of the two.

Falling

A character who falls a great distance will suffer damage depending on the height he or she plummeted. He or she may also make an Acrobatics Skill check with success halving the sustained damage to indicate a proper break fall. The Armour Attribute may protect against this damage (GM's discretion).

Table 9-7: Crashing and Falling Damage

Speed	Falling Distance	Damage Delivered
20 kph	3 to 4 meters	10
30 kph	5 metres to 9 metres	20
50 kph	10 metres to 29 metres	30
100 kph	30 metres to 59 metres	50
150 kph	60 metres to 149 metres	70
200 kph	150 metres to 499 metres	90
500 kph	500 metres (or greater)	120
1,000 kph		150
2,500 kph		180
each additional 2,500 kph		an additional 30

Armour and Damage

If a character has Armour (page 44) Attribute, body armour (page 133), or successfully blocks, this reduces the delivered damage from each successful attack by an amount equal to its rating. The character suffers any damage not negated by the Armour subtracting it from his or her current Health Point total. See Effects of Damage (below) for the result.

Optional Rule

Wound Difficulty Penalties

The Game Master may wish to assign difficulty penalties to characters who have been injured in combat. When the character's Health Points are reduced to 75% of their original value or less, all tasks suffer a -2 penalty. This penalty applies to all Stat, Skill, and combat checks. At 50% Health Points, tasks suffer a -4 penalty; at 25%, tasks suffer a -6 penalty.

Second Wind

If an event occurs during the course of combat that induces a powerful emotional response within a damaged character, the character is given an opportunity to refocus on the combat and eliminate all damage difficulty penalties – getting a "second wind." The GM decides which events are significant enough to evoke such a reaction. In these situations, the penalties are removed if the character makes a successful Stat check, without any modifiers, against his or her highest Stat Value.

If a character drops below one of the remaining damage tiers (50% or 25% of original Health Points) after getting a second wind, he or she will immediately suffer from the corresponding damage difficulty penalties once again: -4 at 50% or -6 at 25%. A character can only get a second wind once during any combat scene.

Table 9-8: Damage Difficulty Penalties

Percentage of Original Health Points	Modifier
100-76%	0
75%-51%	-2
50%-26%	-4
25%-0%	-6

Critical Hits

In the event of a natural attack dice roll of 2, the attacker automatically hits, preventing the target from making a defence check at all. The target also receives double Maximum Damage from the attack, plus the character's Attack Combat value — do not roll on Table 9-6 when an attacker rolls a critical hit.

Effects of Damage to a Character

Total loss of Health Points can cause a character to pass out or die. Should a character or NPC's Health Points ever drop below zero, he or she suffered a severe wound and is rendered unconscious. If a character is reduced to the negative value of his or her Health Points (for example, -40 if 40 Health Points), he or she has suffered a mortal wound and will die (or fall into a coma, depending on the tone of the game) unless medical attention arrives immediately. The GM may allow the character to linger long enough to say a few last words or perform some other final, heroic action.

Character Death

Death in a game can occur rarely, often, or never, depending on the tone and theme of the story in question. The default rule is that death is a real consequence of extreme actions; it may happen rarely, but is the end result of deadly force or careless negligence.

Although death is a commonplace in most cyberpunk worlds, not all campaigns need have the possibility for death, or the chance of accidental death, if the GM is uncomfortable with it. In these games, characters may hit an enemy full force and be comfortable that the GM won't announce they've unwittingly decapitated their opponent. Wounds may require medical attention, and knockouts, concussions, and comas are all possible, but death only occurs when a player announces that his or her character has had enough, and finally steps over that line. Playing with this rule gives players the freedom to let loose a little, but still maintains the option for intense role-playing, if a character is ever driven so far as to make that choice.

Shock, Critical Injury and Catastrophic Damage

A character who takes a great deal of damage all at once may be temporarily incapacitated, or even suffer a mortal injury that will be fatal if untreated.

These rules can be made optional if GMs want a less bloody game . . . although omitting the Shock rules can actually increase the level of violence, since it means characters will fight to a finish instead of being temporarily disabled. These rules also give medical-oriented characters additional things to do in action situations beyond simply installing or removing cybernetic parts.

Shock

If a character suffers more damage from a single attack than his or her Shock Value (page 84), he or she must make a Soul Stat check. If the check fails, the character is stunned and will collapse. The character will also let go of anything he or she is holding. The character's incapacitation will last for a number of rounds equal to the amount by which the Soul Stat check was failed. An incapacitated character is effectively out of action, either knocked out or awake but immobilised by pain or shock. He or she may not take any offensive, defensive, or non-combat actions. The duration of incapacitation from multiple failed Soul Stat checks from several injuries occurring in a short period of time is cumulative.

Critical Injury

A character that suffers more damage than his or her Shock Value from an attack that breaks the skin (such as from a bullet, knife, arrow, grenade fragment, etc.) has taken a critical injury. A character who suffers a critical injury loses one additional Health Point every round (every minute, if out of combat) until given successful first aid. Just stopping the bleeding through first aid is not enough, however — it only slows the loss of Health Points. A critically injured character that has undergone successful first aid will lose one Health Point every 10 minutes until he or she undergoes successful surgery (best performed in a hospital). Thus, a character who is badly hurt might die because of shock and internal injuries before he or she can be stabilised. A character can suffer multiple critical injuries. If so, each must be treated separately, and Health Point losses are cumulative.

Catastrophic Damage

If a character loses as many or more Health Points as his or her base Health Points from a single injury, make a Soul Stat check. If this roll fails, the character is dead (or dying, at the GM's option), even if his or her Health Points have not yet reached the negative value death threshold.

Medical Treatment for Critical Injuries

If a character suffered a critical injury, he or she will lose one Health Point every round (or every minute if out of combat) until treated via first aid. This

requires a successful Mind/Body-average based Medical (Emergency Response) Skill check. Each attempt takes 10 rounds (or one minute); several tries can be made until successful. If the character is trying to perform first aid on him or herself, apply a -2 penalty. If the character does not have an actual first aid kit handy but is forced to improvise dressings, etc., apply an additional -2 penalty.

As mentioned before, a critical injury that is treated will still result in the loss of one additional Health Point every 10 minutes until the character undergoes surgery. This requires a Mind/Body-average based Medical (Surgery) Skill check. There is no penalty if performed with a full staff in a well-equipped hospital, but a -4 penalty applies if it is performed with less adequate medical facilities (for example, in a doctor's office or a poor Third-World hospital) or -8 if performed with completely improvised equipment. Each attempt will take at least 10 minutes. Success stabilises the patient while failure causes him or her to lose additional Health Points equal to twice the margin of failure. Another try is possible, however.

Optionally, a character who has been badly injured (negative Health Points) because of cumulative Health Point loss may also require treatment, even if he or she did not suffer a critical injury. This may be dependent on the nature of the injuries — someone who was badly burned may be in worse condition than someone who was beaten up. The GM can rule that keeping the character alive until adequate medical attention is available requires a successful Medical (Emergency Response) Skill check and that full recovery (at doubled healing rate) will require a Medical (Surgery) Skill check. In both cases, use the average of the caregiver's Body and Mind Stats.

Mind Combat

Mind combat is a special type of conflict, that uses the Telepathy Attribute (page 67) to forcibly invade another's mind. In cyberpunk settings, this most often represents some form of advanced "mind hacking" through neural jacks or other techniques (see Brainwashing Techniques). This mental conflict, however, is a clashing of two psyches, each struggling to subdue the other — it is akin to two people getting into a mental fist fight. Mental combat can become lethal if either person begins tearing down neural pathways, erasing memories, or destroying brain cells. Physical strength does not play a role in this battle, only the power of the Mind. Each round of mind combat covers from 1 to 10 seconds of time from the characters' perspectives. The exact time scale is not relevant, since one round of physical combat should cover the same amount of time as one round of mind combat.

Mind combat can only be carried out once mental contact has been established, usually using the Telepathy Attribute, although it may also be initiated through some computer technologies (see Chapter 11). Once two minds have touched, the initiator of the contact may withdraw at any time. Alternatively, physical damage to the initiator or perhaps use of an appropriate Item of Power can break the contact. For the target to break unwanted mind contact, the player cannot initiate any other actions for one round and must make a successful Mind Stat check with a -4 penalty. If the check is successful, the aggressor is forced from the character's mind and the mind combat ends immediately.

If any character in mental contact forfeits all physical actions for the round (including attack, defence, and non-combat action), he or she can attack through mind combat. A successful attack requires the player to make a successful Stat check using the average of his or her Mind and Soul Stats. The GM has the option of modifying the Check Value should the attack be particularly easy or difficult. The target can attempt to defend with a Stat check using the average of his or her Mind and Soul Stats with a -2 penalty.

The psychic damage of a successful attack is equal to the average of the attacker's Mind and Soul Stats. It is removed from the character's Health Points. If a character is ever reduced to or below zero Health Points while in mind combat, his or her mind has been broken and is now at the mercy of the opponent. The victor can end the character's life, search through memories, plant powerful suggestions, erase thoughts, or simply render the character unconscious. Any changes to a character's mind (other than death) will remain until reversed by another character skilled in the Telepathy Attribute. The GM should decide exactly how this must be accomplished. Role-playing a character whose mind has been altered is challenging but can also be very rewarding when played with consistency.

Using he Telepathy Attribute to alter a target's mind after winning a mind combat battle can require a great deal of time. Minor changes such as removing unimportant memories or implanting unessential false memories can take a couple of hours. Massive changes, such as instilling (or removing) a prejudice or phobia, rebuilding a large portion of the target's memories, or similar large scale remodelling should take days to complete. Characters may rush the procedure, if pressed, but there is a risk of the alteration failing over time. The target may notice a gap in his or her memory and question what happened, or a personality adjustment (new phobia, for example) may weaken over time. If the character wishes to perform a change quickly, the character may perform minor changes in a matter of rounds while the character can accomplish massive changes in about an hour.

When a character attempts to alter a target's mind, he or she must make a Mind-based Social Sciences (Psychology) Skill check, or, a Mind-Based Computers (Programming) check as appropriate to situation. The GM may impose a penalty if the alteration is particularly severe or drastic. The character's Margin of Success determines how long the modification lasts, measured in years if the character took his or her time with the procedure or measured in days if the character rushed things. GMs should make this Skill check secretly and not inform the player of the result unless it is a failure — he or she will not know how long the change will hold, only that it has occurred or not.

The Mind Shield Attribute (page 56) provides a bonus to the character's attempt to resist mind combat and mental alterations, as well as Armour against mind combat damage.

• BRAINWASHING TECH •

The development of neural interface technology goes hand in hand with advanced brain-imaging devices. Through developments of magnetic resonance imaging and nano-scale probes, neurologists can see how the brain functions in real time ... and, in concert with a neural jack or interface, access their subject's memories. They can also make permanent or temporary alterations in their victim's memories via precise application of neurotransmitter drugs, tiny neuro-implants, or intense magnetic fields. For an example of a Mind-Alteration Machine, see page 112.

Recovery

A character who suffers lost Health Points due to damage may heal naturally (or be repaired, for mechanical characters).

Recovering Health Points

Health Points regenerate at a rate equal to the character's Body Stat for each day (or hour for less "realistic" campaigns) of rest. For example, a character with a Body Stat of 5 rejuvenates 5 Health Points every day while resting. The healing rate doubles if the character is in the care of someone with Medical Skill but halved if he or she does not spend time resting.

Repairing Equipment

Equipment, such as weapons, vehicles, or other gadgets can become damaged in the course of cut-throat opportunity. Characters can repair damage to equipment by making a Mind-based Mechanics Skill check. If the object has Health Points, each Skill check repairs 10 Health Points. Each Skill check should take approximately one day of work (approximately six to ten hours), depending on the extent of the repairs required. Most mechanical, or non-organic, characters do not recover Health Points, and must also be repaired.

Using Attributes in Combat

In some situations, players will want to use various Attributes in inventive ways in the middle of a fight. The following rules outline the use of Attributes in combat. In many instances, the appropriate Power Usage Skill (page 88) can influence the chances of success.

Using Attributes Against Opponents

Creative characters can use a number of seemingly inoffensive Attributes in very effective ways in the middle of combat. When a character wishes to use a normally inoffensive Attribute against an unwilling opponent, the character must give up a non-combat action and make a Stat check using the relevant Stat for the Attribute. If the check is successful, the target is allowed a Soul Stat check to resist the effect (Body or Mind can be substituted if the GM deems it appropriate). If the target fails the Soul Stat check, he or she is affected by the Attribute. Otherwise, the target resists the effect entirely.

Characters must have PMVs at a Level sufficient to be able to accomplish their desired effect.

Sphere of Control

If a character attempts to use an Attribute on an object within the sphere of control of a character, the character is allowed to make a Soul Stat check to resist the effect as though he or she was the target of the attack. Other common objects usually in a target's sphere of control include: the ground beneath the target, air around the target, objects the target holds or carries, etc. The GM determines what objects are under the defender's sphere of control.

All-or-Nothing or Partial Effects

When an Attribute is used against a group of targets, GMs may use one of two options for resolving the resistance check. When a large group of people attempt to resist the effect of an Attribute, the GM makes one check, using the average Soul Stat value of the targets. Important characters (player characters or key NPCs) should be allowed to make individual rolls for themselves. In this way, either all of the targets are affected by the Attribute (on a failed Soul Stat check) or none are affected (on a successful check).

Alternatively, the GM may wish to use one dice roll which is used as the same roll for each character's check — characters with high Soul Stats within the group may successfully resist the effects of the Attribute while characters with low Soul Stats are affected.

Attribute vs. Attribute

When two characters pit their Attribute against each other, who wins? In most situations, the character with the highest Level wins. If the two Attribute are close in Level (usually the same or differing by one Level), the GM may request an opposed Stat check to see who wins the contested action. What if a character has two or more Attribute that can be used in the opposed check? In a situation like this, the GM should simply add the two Attribute Levels together to determine who wins the opposed action. Note: Superstrength provides a +4 bonus to Body Stat Checks. Do not apply this bonus in Attribute vs. Attribute contests — it is only applied when the character is attempting something like breaking open a door or bending steel bars.

Example of Combat

The following dialogue illustrates many of the rule mechanics associated with combat. Since this example is intended to instruct the reader, the combat is more complex and "forced" than normal play. Robin is the Game Master (GM), and there are four players - Justin (playing Eddy Skinner, a independent journalist using the Investigator template), Valerie (playing Angelika, a star of the ultimate fighting circuit using both Idol and Street Samurai templates), Troy (playing Eury Minos, a VP of the Minos Corporation using the Suit template), and Paul (playing Mercury Version 2.0, using both Android and Hacker templates).

The characters are all indebted to the Shark Reef Casino of Vanuatu. One of the casino owners has offered them a once-in-a-lifetime deal: hack a privately owned supercomputer, and their debts will be wiped clean. The characters have infiltrated the Singh-Fujisawa research station, and made their way to a back-up control room. They surprised two on-duty techs and subdued them, and now the team waits edgily as Mercury v 2.0 hacks the machine. Time ticks away ... just as Mercury's operation nears completion, a pair of guards stumble upon the intruders!

First Combat Round

Robin: The door opens to reveal a pair of guards, presumably on coffee break as one is holding a tray with several steaming mugs on it. They are shocked at what they see - I need everyone to roll Initiative ... except for Paul. Mercury is distracted by being jacked in. You'll get to act, but at the end.

Justin: (rolls dice) I got 5 for Eddy, plus his ACV of 9, for 14.

Valerie: (rolls dice) I rolled a 10, plus 10 for Lightning Reflexes x2, plus my ACV of 12 ... so 32!

Troy: (rolls dice) Ow. I rolled a 2, plus an ACV of 8, for 10.

Robin: (He secretly rolls once for the two guards, with a final result of 13). Angelika is first with 32. I prefer to divide multiple actions over the entire round, unless they are very similar in nature. You have 2 actions in total, so you'll go on about 32 and 16. What are you doing?

Valerie: Angelika has been itching for action ... too much sneaking around and tech-talk. She lashes out in frustration, aiming to kick the tray at the guard, and maybe spray hot coffee over the two of them.

Justin: Wait, I think...

Robin: OK. It's not a particularly difficult shot, but it is a little tricky to ensure the hot liquid goes in the right direction. You would normally have a penalty of -2, but because you have the Combat Technique Accuracy the penalties are negated. Roll to hit.

Valerie: Angelika's ACV is 12, and she has Unarmed Attack (Strikes) Skill at +3. I'll only miss on a critical failure. (rolls a 15). Whew! That was close.

Robin: (Decides that the guard is too surprised to defend himself, and thus does not get a defence roll). You launch yourself at the guards before they really grasp what's going on. Your steel-toed combat boot connects with the edge of the tray, and drives it hard into the guard's chest. Both shriek as the steaming coffee burns them....

Justin: Oi. Quietly. Quietly, people.

Robin: Please roll your damage percentage, Valerie.

Valerie: I got a 5 - 75% maximum damage. So that's 75% of 20, for my Massive Damage Attribute and Superstrength bioware legs, or 15, plus 12 for my ACV, for a total of 27.

Robin: (The guard has soft body armour, which stops 8 damage, and nanofibire skin, which stops a further 3 damage, so Angelika's attack inflicts 16 damage total. The guard's Health Points are reduced from 65 to 49; he has a Shock Value of 13, so Robin rolls two dice for the guard's Soul Stat check, and makes the roll with a 5). Your big kick knocked the breath out of him, but he's not down for the count yet. (Looks at Initiative list). Everyone else is still slower than you, Angelika. What is your second action.

Valerie: Can I hold it?

Robin: Sure. Justin, what is Eddy doing?

Justin: Shaking his head, sadly. I whip out my flechette pistol, and shoot whichever guard I can hit with a tranq.

Robin: You target the second guard, as the first has been shoved back by that kick. Roll.

Justin: "We gotta take these guys out quietly!" (he whispers fiercely, in character; then rolls dice). My ACV is 9, plus Gun Combat (Pistols) of +2. The pistols Specialisation applies, right?

Robin: Yes, it gives you a +3 total.

Justin: Great. I rolled a 7, under my target of 12.

Robin: (Rolls for the guard's defence roll, but fails). He tries to dodge back out of the room, but you shoot him in the knee. Roll damage.

Justin: The flechette dart does (rolls dice) 50% of 8, or 4, plus my ACV of 9, for 13. If that gets through his armour, it inflicts up to 20 stun damage, through a Linked attack.

Robin: (Only 2 damage gets through the guard's armour and nanofibre skin, but it is enough for the drug to take effect). Your dart barely pricks the guard through his armoured leggings, but it does scratch the skin. Roll for your poison.

Justin: Woo-hoo! 100% damage.

Robin: (The guard has lost 22 Health Points, bringing him from 65 to 43. He also must make a Shock Value roll ... and fails the Soul Stat check). The guard reaches down for the dart stuck in his leg, but his fingers suddenly twitch and spasm as he goes into shock and slumps against the wall. The still-standing guard, although bruised, draws his gun and fires while retreating.

Valerie: Can I use my held action now?

Robin: Sure, but it may be simultaneous, depending on what you do.

Valerie: That's fine. I want to snap draw my combat knife and lodge it into his throat. Can I make this a Total Attack?

Robin: Yes, but to do so you must forfeit a defence. The penalty for a Called Shot to a Vital Spot is -8. Your Accuracy lessens than by 2, and the Total Attack gives you a further bonus of 2, so you have -4 in total.

Valerie: Damn! 16, a critical failure!

Robin: The guard's eyes go wide as you cock back your arm to whip the knife at him ... then his face breaks into a grin, as your foot slips in the coffee, and the knife tumbles harmlessly down the corridor. He opens fire on you! (The guard's ACV is 9, plus a Gun Combat Skill of +2; Robin rolls a 9). The guard is using a Singh-Fujisawa PDW on automatic (Robin made the roll with a margin of success of 2, signifying 2 hits because the weapon has the Auto-Fire Ability). Two bullets strike you ... that you cannot dodge, because you forfeited your defence. (Rolls damage percentage, and gets 50%). The first bullet does 3 plus 9, for 12 damage, and the second only does 3. However, the bullets are armour penetrating, and thus your armour stops 10 less damage for each hit.

Valerie: Well, my armour does nothing in that case. So I take 12 and then 3 damage, reducing my Health Points from 95 to 80. But my Shock Value is 19, so I don't need to make a Soul roll.

Robin: Correct. Now, Troy, what is your character doing.

Troy: Wow. Eury is stunned. He's never been this close to a real gun fight before. Still, he knows that guard has to be put down. I pop open my titanium briefcase and pull out my hand cannon ... it's a Minos Mark VI heavy pistol, with an Accurised chip and a Computer Targeting System. I simply want to aim this round, and let the gun "lock on."

Robin: The guard's delighted grin fades visibly at the sight of your artillery. Your gun is locking-on. Paul, you are reasonably aware of what has just occurred, though with your mind jacked in, you're fuzzy on a few of the details. You can act.

Paul: How long is it going to take to finish copying the data?

Robin: It's going to take another 3 minutes.

Paul: That's a long time in game rounds.

Robin: Yes, it is.

Paul: Well, then. While the data is copying, can I do something else with the computer?

Robin: Certainly. You can also forgo doing anything else in a round to "speed up" the process.

Paul: Fine. For the moment, however, I want to jack into the security cameras in all the surrounding corridors, and attempt to suppress any alarms that have been raised. I have Extra Attacks, but only for computer operations.

Robin: Sure, make two Mind-based Computers (Intrusion/Security) checks - we'll do both your actions at once, since it's the end of the round.

Paul: (rolls dice, gets a 2) I got a critical success on the first roll, and on the second ... damn, missed it by 1.

Robin: You easily worm a connection into the security cameras. You see a few people milling in the corridors, looking up a the sound of the shot, not quite realising what it was. However, you do not manage to suppress the alarm system ... klaxons scream throughout the facility. Roll for Initiative.

Second Combat Round

Robin: (Records numbers; Angelika gets 30, Troy gets 24, Justin gets 20, the guard gets 19, and Paul gets 15). Valerie, you are up first.

Valerie: I learned my lesson ... I'm going to hold my action again, but this time I'm being defensive. I want to wait until Eury gets his shot off, then act.

Robin: Troy?

Troy: As soon as the target has been locked, I pull the trigger. My ACV is 9, with a Gun Combat of +1, as my Specialisation of Auto-Fire doesn't apply, but I get a further +1 from the Accurised option, and the bullets have the Homing Ability, giving a bonus of +4. So I have a 15 – (rolls a 2) – critical hit!

Robin: Nice. A critical hit can't be dodged. Critical hits do double maximum damage, plus your character's Attack Combat value.

Troy: OK, that's 24 plus 9, or 33.

Robin: (The guard was already reduced to 43 Health Points; he takes another 10, and is forced to make Shock Value check; the roll is successful). The bullet tears into the guard's chest, but he staggers back, stubbornly clinging to consciousness. Valerie?

Valerie: I race down the corridor and launch a flying kick.

Robin: You reach him easily - roll to hit.

Valerie: I got a 5, easy.

Robin: The guard, gushing blood, tries to pull away. (Rolls dice; the guard's DCV is 7, plus an Unarmed Defence: Strikes of +2, for 10 with the Specialisation; unfortunately for him, Robin fails the roll). You connect.

Valerie: I got 100% damage again, so 32 total.

Robin: (The guard is reduced to -22 Health Points, and thus falls unconscious; no Shock Value check is needed). Your kick snaps his neck back, and he collapses in pain.

Justin: (To Angelika) Quick, get back in here. We're going to have to hold out here, and defend Mercury until he's done. (To Mercury) How much longer?

Robin: Mercury, as you scan the security network, you see a large group of soldiers gathering at the armoury, gearing up presumably to come find you. You recognise the leaders as Christof "Snake-Eyes" Xenophides and Marcus "the Dragon."

Paul: Oh. Crap.

Chapter 10: Technology and Equipment

Technology is at the heart of what makes a cyberpunk setting. The 20th century was shaped by key technologies like internal combustion engines, electric power, and electronics. The cyberpunk world of the 21st century (or beyond) is shaped by computer networks, cybernetics, biotechnology and nanotechnology.

This chapter provides guidelines to help Game Masters come up with a technological background for the setting. It also provides a plethora of gadgets, weapons and vehicles with which to outfit characters. The equipment created with the following rules is intended for use with the Gadgets Attribute (page 49) and, where noted, Item of Power (page 52). If a character requires a more powerful item that is not listed here, such as power armour, it should be created using the Item of Power Attribute.

Establishing a Background Technology

Creating a coherent cyberpunk world means thinking about what kinds of futuristic technology are commonplace and which are still experimental. Do hackers surf the web using keyboards or by direct neural interface? Is cybernetic enhancement something every punk on the street possesses, or reserved to highly-paid mercenaries and elite special ops soldiers? Decisions like these will have far-reaching effects on the game.

Near vs. Far Future

The first decision is how far in the future the cyberpunk world will be set. The majority of cyberpunk stories are set one to five generations in the future, usually between 2020 and 2120.

Near Future Cyberpunk

Today's think-tanks usually look 10-20 years into the future. A decade or two from now is a good definition of the "near future." Cyberpunk technologies can exist, but many may be lab prototypes or restricted to elite military or espionage agencies. Some, like self-aware androids, may not exist at all. Barring global catastrophe, society will not be radically changed. Present-day social trends may continue (or intensify), such as American hegemony, an ongoing war against terrorism, the expansion of computer networks and the ubiquity of "smart" devices. Corporate power may grow, but is still constrained by government regulation, grass-roots opposition to biotechnology, anti-globalism protests and environmental activism.

The advantage of this time period is the ability to use our world with relatively small changes, reducing the burden on the GM. Plots can be easily ripped from today's headlines. The GM can pick and choose among technologies by postulating only a single breakthrough. A game set in 2015, for example, could assume that a (newly-created) virtual cyberspace exists, but that cybernetics are not yet common. Characters who are augmented will often be very special people — elite secret agents, for example.

Classic Cyberpunk

The game is set 25 to 75 years in the future. A lot can change in two or three generations. Look back just 30 years: the Soviet Union was a superpower that rivalled the West, men were first walking on the moon, computers used punch cards or cassette tapes, and no one outside a computer lab had heard of the "net." Space colonies and a Mars landing seemed a good bet if we avoided a nuclear war. Viruses were things that people caught, and spam came in a can. A lot has changed in a generation. A cyberpunk world that is set 25-50 years in the future could have equally significant developments in all areas of technology and society. It is quite likely that most or all of the classic cyberpunk technologies will exist in some form, unless they are deliberately banned (such as a global ban on human genetic engineering or self-aware computers).

The advantage of a classic cyberpunk game is that it gives the GM freedom to rearrange the world, while still being close enough to the present that many aspects of that world will remain comfortably familiar. This is also the default for most cyberpunk games and literature, giving plenty of source material.

Far Future Cyberpunk

The time may be 50 or even 150 years in the future. The setting could be Earth, but mankind may have spread through the solar system, or even beyond. Far future cyberpunk settings often integrate nanotechnology and interplanetary colonisation into the setting. Large percentages — maybe even the majority — of the population may have cybernetics or be genetically enhanced. Society may have begun to change beyond recognition.

Post-Traumatic Cyberpunk: A Special Case

This theme could fall into any of the above eras: Some regional or global catastrophe has overturned society — perhaps a massive earthquake, plague, global warming, a regional electromagnetic pulse, World War III, civil war, alien contact, out-of-control nanomachines, or even a paradigm shift that brings back magic.

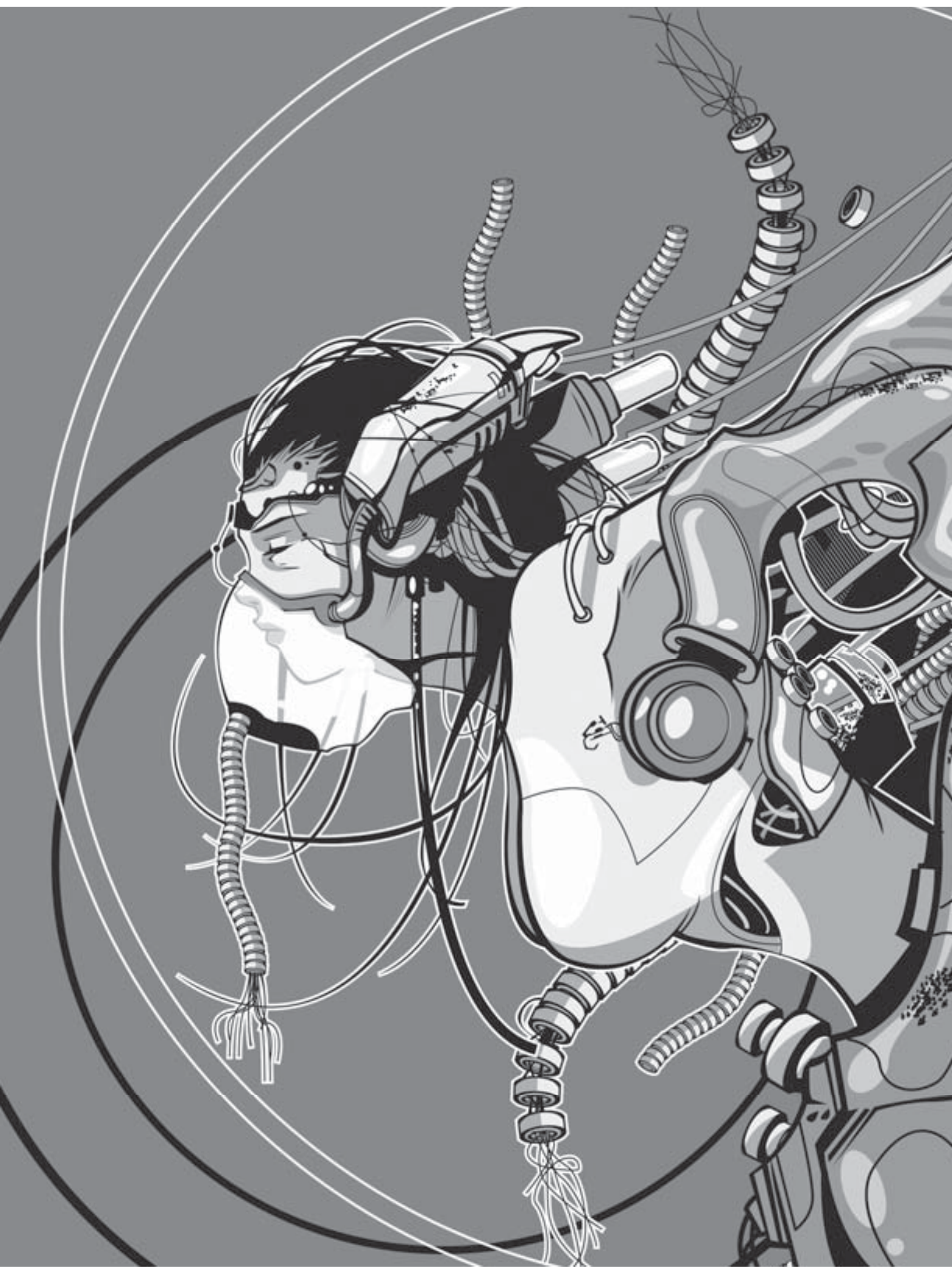
Whatever the cause, the result was a national or global shake-up that saw the old order collapse and a new power arise to rebuild civilisation. The setting may be a short or long time after the catastrophe. Often democratic government has been weakened or collapsed, replaced by an authoritarian regime or a cabal of ruthless megacorporations that now control the nation or the world.

Hard SF vs. Dramatic SF

The GM decides if a cyberpunk setting will have "realistic" science fiction ("hard SF") technology or if it will bend known science for dramatic effect ("dramatic SF"). These are equally valid choices, since bad science can make a good, dramatic story, especially if applied sparingly.

A good example of the difference in approaches is cloning technology. In a hard SF setting, a newly-created clone will be a baby with its own personality distinct from its DNA source. In a dramatic SF setting, the way cloning works may be changed to further the plot: a clone may be grown to full adulthood in days and share some of its parent's memories, allowing the story to easily play with issues of human identity.

The majority of literary cyberpunk was hard science (at least at the time it was printed), while most cinematic cyberpunk is dramatic SF. The hard SF choices will be the default in *Ex Machina*, but dramatic SF alternatives are quite possible for many technologies.





This is another popular choice in cyberpunk fiction. It emphasises the "dark future" and allows society to be reshaped to order. Parts of the world may not have recovered or may still be in chaos, creating dangerous "wild zones" where outlaws and mercenaries can operate. It can also justify shifts in attitudes toward technology. If a biotech corporation defeated a major natural plague using genetic engineering, then biotechnology might be common. If lots of people died, androids or robots might make up a labour shortage. It is also possible that a specific technology either caused the catastrophe (in which case it may be outlawed in the new world) or was invented specifically to fix it (like nanomachines repairing the environment).

Future Technologies

Which technologies exist in a setting will have a significant impact on the nature of the campaign world. For simplicity, a particular major technology can be classed as Obsolete, Mature, New, or Experimental.

Obsolete Technology

Obsolete technology is outdated. It is no longer widely available in leading-edge economies, but may be common in poorer regions or prized by collectors. Electronics and information media tend to advance rapidly, so yesterday's breakthrough product may be today's landfill. Think of vinyl records or cassette tapes today. Some technologies (such as a knife) may never become obsolete. Cyberpunk fiction has sometimes predicted that paper books (and reading) will become obsolete, but their convenience may prevent this.

Mature Technology

Mature technology is reliable and in production. Its existence is known to the public. It is usually available from multiple sources rather than a single manufacturer. Mature technology need not be cheap or legal; to give an extreme example, nuclear bombs are a mature technology in the 21st century, but are tightly controlled (only a few nations possess them) and extremely expensive.

New Technology

This is an emergent technology. It will usually be somewhat expensive, heavy, or unreliable (though not necessarily all of these) compared to mature technology. It may only be available from a single or small group of manufacturers, with others seeking to copy or steal it. Some new technologies may have limited and expensive commercial sales, while others are working prototypes, "secret weapons," or in "field use" by elite operatives or special military units.

Experimental Technology

This technology is still being invented, and not everyone believes it will succeed. R&D labs will be actively be working on it and may have even had limited success, but any prototypes are likely to be bug-ridden and unique. For example, there might only one lab in the world that has a working self-aware artificial intelligence, and it may often go insane or crash after a few minutes of being activated. Experimental technology can be a goal of adventures as rival corporations or governments try to steal each other's research in the hopes of achieving a breakthrough.

Future Technologies Chart

The Future Technologies chart lists several technologies that are detailed in this book and offers suggestions as to their availability in various cyberpunk settings. These are only suggestions — it is up to the GM to decide whether each of these technologies is available in his or her world, and how common they actually are.

Table 10-1: Future Technologies Chart

Technology	Page	Near-Future	Classic	Far-Future
A.I. (self-aware)	128	experimental	new	mature
Cyberware	26	new	mature	mature*
Hand-held Energy Weapons	—	experimental	new	mature
Human Genetic Enhancement	107	experimental	new	mature
Iconic Cyberspace	142	experimental	mature	mature
Memory Uploading	29	experimental	experimental	new
Nanomachines	107	experimental	experimental	new
Neural Buffers	29	experimental	new	mature
Neural Jack	27	new	mature	mature
Robots	113	new	mature	mature
Sensory Interface (SIN)	29	new	mature	mature
Space Colonies	—	experimental	new	mature
Vehicular Energy Weapons	—	new	mature	mature
Virtuality Networks	136	mature	mature	mature*
Wetware Plugs	27	experimental	mature	mature

* May be "obsolete" in some settings.

Note: Post-Traumatic cyberpunk may fall into any one of these settings.

• Technology Controls •

Just because a technology is available does not mean it will be legal. One example is the cloning of human beings. This might become possible in only a few years, but widespread social opposition to the idea of cloning humans may result in the technology being banned in most nations. The same legal constraints could easily be applied to other cyberpunk technologies, such as human genetic engineering or even self-aware A.I. Of course, banning a technology does not preclude its use. Illegal "black labs," shadow governments, and cloak-and-dagger corporate programs that delve into forbidden subjects are a genre staple.

Background Technologies

These technologies may exist in any cyberpunk world:

Nanotechnology

"Nanotechnology" is a broad term that can involve the use of nanomachines (see below) or simply refer to the creation of engineered "smart materials," such as MEMS (microscopic electro-mechanical systems — tiny sensors, processors and gears) through more conventional methods, as well as the design of new materials using nanomaterial technologies like carbon nanotubes (tiny cylinders of carbon atoms that are efficient conductors and can also be used to create super-strong

materials). The use of nanomaterials and MEMS is well underway even in 2004 and will be a feature of all cyberpunk settings — it is what makes cybereyes, tiny computers, and so on, possible.

Smart Matter and Reactive Technology

Many objects built using MEMS and nanomaterials can be "reactive" — they contain tiny molecular switches, gears, computers, motors, and sensors that can interact with their environment. For example, reactive clothes or armour could adjust their fit, while an aircraft might alter its shape for optimum aerodynamic performance at various speeds and altitudes.

Nanomachines ("Nanites")

These are molecular-sized robots that are tailored to perform such tasks as industrial fabrication, information processing, medical treatment, and terraforming.

In most cyberpunk settings, nanomachine technology is still in relatively early stages. Nanites are usually limited to specialised environments (such as chemical tanks or the bloodstream) and often rely on external sonic or microwave control or power sources. Humans usually do not know how to build self-reproducing nanomachines capable of operating "in the wild" (which may be a good thing, since in the wrong hands these could threaten the planet), although these could be a feature of a far-future setting.

Power and Energy Storage

The following assumptions are common in cyberpunk settings:

Fuel Cells

Fuel cells produce electrical energy through chemical processes other than combustion. Miniature methane or hydrogen fuel cells are often standard power units for everything from cars to computers; instead of changing batteries in a laptop deck, a hacker may install a new liquid fuel pellet. These are not as efficient as internal combustion, but are quiet, non-polluting, and produce water as a by-product.

Superconductors

Superconductors are the next step. High-power capacitors and chemical batteries may have been replaced by room-temperature superconductors, which power many items. A superconductor bank the size of a car battery can run a car for 12 hours. These can make possible cheap electric cars and magnetic levitation railways, long-lasting batteries for cyberlimbs, and vehicular or even man-portable railguns.

Fusion Power

Fusion power is the ultimate energy source. In classic or far-future settings, urban power plants may be building-sized nuclear fusion reactors fuelled by heavy water and tritium, or in more advanced reactor designs, the rare isotope helium-3. Fusion reactors in cyberpunk worlds will be huge installations, at least as large as contemporary nuclear plants. They are safer than fission reactors, producing little or no radioactive waste depending on their design, and with no risk of "meltdown" in the event of malfunction or critical damage. The cleanest fusion fuel, helium-3, is exceedingly rare on Earth, but is more common on the Moon and can be extracted from processing lunar soil. This could provide a "dollars-and-sense" justification for a corporate-run Moon base.

Biomedical Technology

The lifespans of the poor and middle class may be not much better than those of the early 21st century, but those of the wealthy are becoming indefinite. Their quest for longer, healthier lives is a driving force between many of the advances in cybernetics and biotechnology for which the street finds its own uses.

Genetic engineering can wipe out hereditary medical ailments from the children of the rich. Almost any injury can be cured through transplants or cybernetics, save serious brain trauma — the body can be repaired or replaced, but if the brain is severely damaged, memory and personality are likely to be gone forever. Using expensive treatments, it may be possible to eradicate almost any disease by injecting tailored micro- or nanomachines on search-and-destroy missions.

Cyberpunk biomedical technology can have other societal effects. For example, artificial incubators and wombs that are sufficiently advanced to allow creation of artificially-engineered life forms could also mean that women who can afford the service can transfer developing embryos to artificial wombs, if they prefer not to carry a baby to term.

Human Genetic Engineering

DNA is a universal code, so genes from one entity can be modified and inserted into another. Once in their new home, they "express themselves" by making proteins. When dealing with animals, this is only workable if the recipient is a germ cell — that is, a fertilised egg that has yet to grow into an embryo.

Human genetic engineering may involve selecting the "best" genes from other human donors (eugenic engineering) or actually inserting genes from other species (transgenic engineering). The former could, in theory, create a "perfect" human specimen, while the latter could create someone with nonhuman attributes. Unfortunately, perfection is in the eye of the beholder: a parent might seek a beautiful, healthy, intelligent child, but a totalitarian government or ruthless corporation may want perfect obedience or faultless soldiers.

Unlike cybernetic augmentation, genetic engineering is a process that must begin before birth, and in fact, even before the fertilised egg forms into an embryo that will become a foetus. (The exception is gene therapy, a process that treats diseases caused by missing or defective genes by adding the missing material).

Human genetic engineering is likely to be an inexact science. Not all traits are governed by genes ("nature vs. nurture"). Only the simplest genetic traits (for instance, eye or hair colour) are the result of one or two genes; the rest involve subtle combinations of dozens or even hundreds of different genes. Lengthy human experimentation (and advanced computer simulations) will be needed before the desired result is achieved, and many failures (some monstrous or tragic) may occur.

Adding to the difficulty is that it takes time to see the results of research: months before a human embryo can develop into a foetus. Mental traits as well as subtle physical ones may not be apparent in a developing foetus. A genetically altered baby may have to grow into a teenager or adult before his or her full potential (or problems) are revealed. In some cases, positive traits may be linked to negative ones. For example, an attempt to create a "genetic genius" might also result in insanity.

Progress in human genetic engineering is likely to be hindered primarily by ethical concerns that ban or restrict experimentation. Whether it is an unavailable, new, or mature technology depends on society's approach to bioethics. If genetic engineering does become a mature technology, it is possible that a form of genetic caste system could develop. If the rich engineer their own children, they won't just think they're better: they will be better. It is also possible that transgenic humans — especially if they look different — may be treated as property or slaves, or be deliberately engineered to be inferior to humans in some fashion. For an example of a typical transgenic human, see the Homo Superior template (page 36).

Cloning

A clone is a genetic duplicate of an individual. Cloning works by taking a sample of the subject's DNA, inserting it into an egg whose DNA has been

removed, and then impregnating a host mother (or artificial womb) with that egg. The resulting baby (if it safely comes to term) will be a genetic duplicate of the original donor, essentially an identical twin. This twin, however, will be a baby and have none of the original's memories, nor will they have identical fingerprints or birthmarks; these traits are environmental (developing in the womb). Realistic cloning technology provides no way to accelerate the growth of a foetus, so every clone will be born as a baby.

Human cloning is theoretically possible today, although the process is still difficult (for every successful clone, there are dozens of failures or aborted embryos or foetuses). There is some evidence that if DNA is taken from an adult donor, the clone will have a shorter lifespan, but there may be ways to avoid this.

In cyberpunk settings, cloning is usually depicted as a colourful eccentricity on behalf of a wealthy individual, who creates a clone of his or her own self, an ex-spouse, or a dead child. Cloning may also be used in conjunction with human genetic engineering (page 107). Once a successful genetic prototype is developed, more can be produced through cloning.

Individual body parts can be cloned in a growth culture medium or attached to specially-bred host animals. Organ transplants are tricky because the body often rejects foreign tissue. Cloning organs from the recipient's own tissue gets around this, allowing a source of matched "spare parts." It will only be necessary to grow non-sentient organs like hearts or lungs rather than an entire body (and thus seen as more ethical). It may take months or years to grow parts, however, so those who cannot afford to wait or have not set up expensive precautionary arrangements (storing replacement organs) may use cybernetics instead.

Money and Prices

Ex Machina is an effect-based game system. It does not include precise rules for money (with the exception of a Wealth Attribute, page 68, and a few dollar costs for very expensive items, such as vehicles, which are provided for reference). One reason for this: while acquiring money is often a major goal, its successful acquisition does not usually result in a major change in the lives of most adventurers – they are usually working for organisations, in the military, supported by parents, etc. A successful mission may result in them living high for a few weeks, but then they tend to lose it again. Another reason is that cyberpunk characters are often provided with gear or modifications from various organisations, be it the Yakuza, the military, or a corporate special ops team.

The GM is nevertheless free to make money a significant element of the setting and its possession a prerequisite for augmenting or modifying a character (see Character Advancement, page 147). If so, a good rule of thumb is that 1 Character Point worth of cyber or bioware or a typical major Gadget may cost approximately $10,000+ (and most minor Gadgets are $500-$2,500). If money is a vital and carefully tracked element in the campaign, the Wealth Attribute should not be allowed, and the Gadgets Attribute is best interpreted as "the amount of gear a character feels comfortable taking with him or her on adventure" rather than "the sum total of possessions." The IOSHI world (page 247) offers some further suggestions for tracking money in a more detailed fashion.

Computers and Information Technology

Computer technology in cyberpunk worlds is more advanced than those of present day systems. It may use holographic memories, biocomputers (using protein-based DNA systems) or nanocomputers (using trillions of tiny nanomachines packed into a compact space that function as a single superfast parallel computer).

Computer Hardware

Tiny dedicated computers can be built into just about everything from home appliances to handguns, performing various invisible tasks. There are also multi-purpose programmable computer systems, which come in four basic classes:

Com

A combination cellular phone, radio/video communicator (2 km range but can relay over cell phone networks), pocket computer, and digital camera. A com is perfectly usable for casual computer activities (like text messaging, video conferencing or routine work), but due its small size and limited processing power, any important tasks (such as those that would require a Skill check) are made at a -1 penalty. The system's memory is sufficient to store a day's worth of motion picture imagery (including audio), or many thousands of graphics.

Various types of com interface exist. All coms except implants have a plug that can jack into a normal phone jack to access higher speed cable lines. An implant will require the user use a neural jack for that purpose.

Pocket Com

Pocket coms have a tiny keyboard and screen, but also possess voice-interface capability. The basic com is the size of a slim pocket calculator and slips into a pocket. A mundane Gadget.

Wearable Com

Wearable coms are integrated into an item of clothing. The most common design has a small belt module that communicates with a display monocle or sunglasses and an ear piece. They work just like pocket coms, except they allow hands-free operation. The monocle or glasses are a video display and the frame incorporates a digital camera, computer, cell phone and 2 km range radio. The wearer can use voice commands to control it, or for more precision, cause a "virtual" keyboard to appear in front of his or her eyes and type on it; the camera tracks the user's finger movements. These and other graphics and text appear as holograms overlaid on his or her field of vision. Multiple visual windows can also be opened up, although too many can be distracting. A minor Gadget.

Implant Com

Implant coms are surgically implanted in the skull (or built into a robot brain). The user must already have a neural jack. An implant com counts as Features (Implant Com). These are a standard Feature of many robots and A.I. computers.

Deck

A deck is notebook- or laptop-sized portable computer with more computing power than a com. The deck incorporates a processor, video camera, hard drive, media plug, wireless modem (1 km range), and cable input/output jack. It will usually have keyboard and monitor, although some hardcore decks fitted with neural interface adapter (page 109) are built without them.

Decks are the standard computers used to do any serious work — there is no penalty or bonus when using them to make Computers Skill checks. Access to a deck may be required for many tasks in a cyberpunk world, from business management to scientific research. A deck is a minor Gadget — it is more useful than a com, but not concealable.

Frame

Frames are big mainframe computers, at a minimum taking up an entire desk. They are not portable. They are most commonly used as major network servers or as the central computer of a lab or important office complex.

For any Skill check where a deck is required but a more powerful, faster system would be of benefit, such as computer hacking, use of a full-sized frame will give a +1 bonus to Skill checks. The GM may rule that a frame is absolutely mandatory for a high-powered scientific or engineering task, such as genetic engineering; if so, no bonus is granted. A frame counts as two minor Gadgets.

Supercomputer

Supercomputers are parallel networks of frames or big room-sized computers. They are used for scientific research or controlling complex systems. Some are powerful enough to run A.I. software.

Net Connections

A computer may connect to networks in various ways.

Wireless Connection

A wireless connection uses radio to connect to local repeater stations, much as cell phones do. Coms routinely use wireless connections. Upload and downloading speed is relatively slow, so certain types of information-intensive activities (such as transmission of high-resolution real-time SIN or downloading Skill programs) may be difficult or impossible.

Cable Connection

Cable connections are the default, integrated into decks, frames, and supercomputers. They are assumed to use an integrated high-speed fibre optic cable, the "cable television" and "phone lines" merged into a single high-speed system. This can carry vast amounts of information at high speeds. If someone wants to quickly download information, it will be necessary to physically attach a cable jack to a phone line.

Satellite Connections

Satellite connections are uplinks to major communication satellites. Decks and other computers built into mobile vehicles may use these systems. They usually rely on laser beams (rather than radio or microwave) as they can handle large amounts of information. Those using lasers are as fast as cable connections; otherwise, they will have the same speed as wireless systems, with the advantage that a repeater station need not be nearby. Satellite connections require a satellite uplink or laser communicator (a minor Gadget).

A supercomputer is twice as effective as a frame: that is, it provides a +2 bonus on any task that a deck would suffice for, or a +1 bonus if a frame would be needed. The GM may rule that certain tasks (such as breaking encryption or nanotechnology research) are so complicated that only a supercomputer will suffice; if so, no bonus is granted. A supercomputer counts as a major Gadget.

Terminals

An alternative to an actual computer is a dumb terminal. Terminals are simply video display monitors and keyboards — or sometimes just neural jack sockets — that are connected by a cable or wireless network to other computer servers. They can access the Net and perform basic searches for information, or function as video phones.

Terminals may be found in offices and public places like malls or libraries; there may be public terminals instead of phone booths (although personal coms may replace them). Terminals are mundane equipment.

Computer Customisation

Computers can be customised with one or more of these options. Each counts as an additional minor Gadget.

Neural Interface Adapter

The computer is fitted with an input device that allows a neural jack or headset to be connected to it. This is the key upgrade that turns ordinary systems into "cyberspace decks." Interfaces built into decks or larger systems sometimes let the user bring one or more "riders" as passive observers, especially when travelling into iconic cyberspace (page 140) or the virtuality net (page 136). These individuals are jacked into the computer, but cannot actually do anything (or have anything done to them). A Piggyback Interface counts as an extra minor Gadget.

High Speed

This is a state-of-the art system with a high-speed processor. It gives a +1 bonus to Computer Skill checks, but only to cancel any penalties for rapid execution of tasks.

Optimised

The system's hardware is optimised for a particular use, such as data security and intrusion, network service, graphic design, or video production. (This usually equates with a particular Skill Specialisation) It gives a +1 bonus when performing that specific task, but the user will suffer a -1 penalty when used to perform any other task.

EM Shielding

The computer and its interface devices (monitor, keyboard, neural interface), are carefully designed to minimise any leakage of electromagnetic signals. This makes it difficult to use emission-detection devices to eavesdrop on the computer; any attempt to do so has a -6 penalty. This is not hardened against electromagnetic pulse weapons, however.

Neural Surge Protector

This is only available if the system has a neural interface. It provides additional protection to the user when he or she is jacked in. If using the virtuality net hacking rules, it halves the damage inflicted by neural feedback or mind worm programs. If using iconic cyberspace, any damage suffered by the user's Alternate Form while he or she is in iconic cyberspace is halved before applying it to the character's own body. Minor Gadget.

Software

For the most part, software is assumed to be mundane equipment. That is, the bonuses a computer provides assume that the user is able to download, buy,

pirate, or otherwise acquire software necessary to do the job. Cutting-edge software packages can exist that provide further bonuses for specific tasks, but require a minimum size of computer to run. For an example, a customised "icebreaker" computer intrusion program might run on a deck and provide a +1 bonus to Skill checks when performing an icebreaking task against a target system. These systems are very good when initially released, but rapidly become obsolete: a prototype program might provide a +2 bonus on its initial run, a +1 bonus for a few weeks after that, and then no bonus at all after security systems are updated to deal with it. Such software is usually a minor Gadget, and can be modified/replaced using Computers Skill and Gadgeteer.

General Gear and Tactical Gadgets

These devices are used by operatives of all sorts, from cops to special ops teams.

Active Optical Camouflage

In some settings, clothing, armour, or even the surface of a vehicle can be fitted with active optical camouflage. This technology creates the illusion of invisibility by covering armour or clothing with a "smart skin" surface that functions as a video display, projecting the surrounding background onto the object. The smart skin incorporates multiple integrated stereoscopic nanocameras that are used to capture and generate the surroundings. The user must have an optimised com or deck dedicated to providing processing for the camouflage.

Active Optical Camouflage provides Invisibility with the Reduction: Partial Invisibility (Mind Stat check at -4 to spot the character if he or she is moving faster than a slow walk, and half penalties in combat). Major Gadget. If the camouflage extends to infrared vision, it counts as two major Gadgets.

Police Scanner

A sophisticated hand-held device that can tune in to a variety of radio frequencies. It can pick up police-band or emergency radio calls or, at close range (within 50 m or so), be tuned to listen in on cordless or cellular phone conversations. The latter may require a successful Electronics (Security) check to do properly. Minor Gadget.

Tactical Headset

A tiny radio ear piece and throat mike combination, assumed to be encrypted to prevent eavesdropping and capable of data and video transmission. Easily concealed behind hair or built into a helmet. 1 km range. Mundane equipment.

Surveillance Gear

Used to spy on people, or detect such surveillance.

Shotgun Microphone

This is a long-range directional microphone capable of picking up a whisper at a range of 100 m. Cops and agents use it most often for surveillance, but it can be countered by "white noise," such as a television or running water, and by obstacles such as walls or closed windows. Minor Gadget.

Laser Microphone

A sophisticated surveillance tool that uses a modulated laser beam. When shone through a window, the laser beam picks up minute vibrations in the window glass caused by speech, and the Gadget translates those detected vibrations into sound. The device has a range of a 100-500 m. A laser mike is a briefcase-sized device. Minor Gadget.

Cable Hack

A specially designed micro-bug installed in a phone cable jack. It works like an audio bug, except it draws power from the phone line and transmits conversations to a single pre-set phone number. This works whether the phone is on or off the hook. Similar devices can be hidden in computers equipped with modems, to transmit anything that is typed on the computer keyboard to a remote recipient. Minor Gadget.

Phone Tap

A bug can also be attached to a phone line without actually entering a building. Placing one properly will require an Electronics (Security) Skill check. Minor Gadget.

EM Detector

A handheld electromagnetic emissions detector designed to detect nearby cable hacks, phone taps, micro-bugs, surveillance motes and similar devices. Range is about 5 m; add a +2 bonus if scanning within 1 m of the bug. Detection requires a successful Mind-based Electronics (Security) Skill check. Surveillance motes are detected at a -2 penalty. Minor Gadget.

Sniffer Wand

A handheld wand that contains a programmable electromagnetic metal detection and chemical sniffer; it can detect hidden metal objects, powdered drugs, chemical explosives, and ammunition. This requires a successful Mind-based Electronics (Security) Skill check; for most substances, apply a +4 bonus, but for substances buried deep within the body, such as cyberware, apply only a +2 bonus. The system can only detect chemicals in its database: if someone invents a new drug (for example), it would not detect it. Minor Gadget.

Tools

These devices are most often used by techs.

Virtuality Gloves

These gloves can also be used as an input device for manipulating virtual realities in concert with a com or a deck. They can also exchange data directly by shaking hands with someone else wearing a data glove, or by touching an input port in another computer. Minor Gadget.

Micro-Tool Pouch

A collection of small insulated tools in a handy belt pouch. These allow performing basic repair, jury-rigging, and maintenance tasks with the Electronics or Mechanics Skill. Minor Gadget.

SQUID

This sensor can detect and analyse minute electromagnetic signals. A Superconducting Quantum Interference Detector can be used to probe robot brains, computers, and to scan the contents of a neural buffer, reading the data stored within. Successful use normally requires a Computers (Electronic Warfare) check. The standard field model resembles a set of sensor probes attached by cable to a suitcase-sized unit. Major Gadget.

Microtech Toolbench

This desk-sized device is actually a sealed module used for analysing and modifying micro or nanomachines and nano-circuitry. An object is inserted into the box, and then various tools (nano-probes, nano-manipulators, lasers, etc.) can dissect, analyse and manipulate it. The user must jack into it or use an attached

computer interface with the system; this allows him or her to "handle" micro or nano-scale objects using various tools built into the toolbox system. It can work on objects up the size of a human head, but larger models exist. Major Gadget.

Lasercom Uplink

This is a tripod or vehicle-mounted device that transmits a signal on a modulated laser beam. It is a directional communicator, limited to line-of-sight transmission. Its signal can only be intercepted by someone who is directly in its path, but clouds, fog, dust or smoke block it. Range is up to 100 km in clear weather, allowing it to reach a satellite, although ground-to-ground transmission at sea level limits its range to about 3-5 km. Minor Gadget.

Micro-Bug

A tiny audio-visual bugging device with a burst transmitter. It may be voice activated or sensitive to other triggers, and has a 1 km range. It can also be placed on someone as a tracking device. The size of a penny, it is easily disguised (-8 to notice it). It can also serve as the control system for a network of smart dust surveillance motes. Minor Gadget.

Surveillance Mote ("Smart Dust")

This is a hidden surveillance device, only 1 cubic mm, with an electromagnetic sensor, tiny lidar (laser-based radar), or microphone (5 m range) and a transmitter that can broadcast to a receiver within a distance of roughly 10 m. Microscopic vision or specialised emission sensors are required to detect them; even then, this will usually require a Computers (Systems Operation) or Electronics (Security) Skill check at a -2 penalty. Swarms of motes can be sprayed or otherwise dispensed through an area to create a nearly invisible surveillance or communication network in which individual motes can relay information from one to another, often with a micro-bug as a command centre. A palm-sized canister with enough smart dust to saturate a city block-sized area or an office building with surveillance systems counts as a major Gadget.

Lockpicks

A set of professional lockpicking tools used to open complex locks. A character who wishes to pick a mechanical lock (as opposed to an electronic system) should have these tools, or he or she will suffer a -2 penalty. Minor Gadget.

Burglary Kit

A selection of various tools that easily fit inside a brief case, useful for burglars. A sample tool kit could include the following items, none of which are illegal: A screwdriver, small can of liquid nitrogen (useful to super-chill a metal lock, making it brittle), small hammer (used to shatter frozen locks), wire cutters, duct and/or transparent tape, wrench, diamond saw. Minor Gadget.

Shopfacs

These are work-bench-sized miniature robot factories. They can assemble most mundane consumer goods and items of personal gear using technologies similar to an ink jet printer. A set of cartridges contains basic raw materials such as liquid plastic, epoxy, ceramic and metal powders. Layers of composites, plastics, ceramics, metal oxides, epoxy, and even superconducting paint (some cold, others heated into a liquid or vapour) are sprayed down until gradually, layer by layer, a finished object takes form. Large objects (like cars) can be slowly built by assembling each component one at a time, and then putting them together. Precision parts (like laser optics or superconductors) and state-of-the-art gear (anything requiring an Item of Power) cannot usually be built in them without the use of pre-fabricated components. Major Gadget.

Medical and Bioengineering Equipment

These Gadgets are usually used by medics or biological engineers.

Field Medical Kit

A complete portable medical kit, including a hand-held diagnostic scanner, blood plasma, surgical instruments, air hypo, and spray-on sterile liquid bandage (see below). Provides +1 bonus for Medical (Emergency Response) Skill checks, and reduces the time required for first aid for critical wounds if using the liquid bandage, and provides the minimum equipment necessary for Medical (Diagnosis or Surgery) Skill checks. Major Gadget.

Liquid Bandage

This is a handheld canister of spray-on antiseptic bandage that rapidly hardens, but which also allows the injury to breath. It can be used as either a bandage or (if enough is sprayed) as a splint. It dramatically reduces the time required to apply first aid treatment for critical injury (see Medical Treatment for Critical Injuries, page 99) from 10 to 3 rounds. Each can is good for a half-dozen applications. Normally included in the field medical kit. Minor Gadget.

Medical Imaging System

A semi-portable combination CAT and NMR scanner that, due to advances in superconductor technology, weighs only 200-300 kg rather than filling an entire room. It fulfils all equipment requirements for performing ordinary medical diagnosis and, in addition, can perform high-resolution scans of the subject's brain. It is capable of detecting all cybernetics, nanomachines, and other foreign objects in a subject's body, as well as detecting tumours and similar problems. It requires a successful Medical (Diagnosis) Skill check to use; if a problem could have been diagnosed without it, the system grants a +2 bonus to the check. Major Gadget.

Portable Micro-Surgery

This module fits in a heavy backpack. It contains the necessary sensors, probes, and micro-surgical implements for delicate operations on a single patient, including brain and eye surgery as well as repair, implantation or removal of cyberware. The micro-surgery is clamped onto the patient, and the user remotely controls the robot arms and instruments using virtual reality. The user must either have appropriate virtuality gear (a wearable com and data gloves, for example) or fit the unit with a neural interface adapter and use a neural jack or neural headset (which gives a +1 Skill bonus). Major Gadget.

Cybernetic Workshop

The various tools and sensors necessary to build, maintain and repair full cyborgs and robots. Fits in a heavy suitcase. Major Gadget.

Nanofabricators

These are large tanks in which a fluid consisting of trillions of nanomachine assemblers is mixed with a feedstock, containing raw materials such as carbon. The assemblers then build objects "from the bottom up" by linking together molecules. Objects seem to grow within the tank as various specialised assemblers and materials are added. Nanofabricators allow cheap, fast manufacture of very sophisticated products. For example, they often build objects out of synthetic diamond-based ("diamondoid") materials, which can be cheaply nanofactured out of ordinary carbon.

In some cyberpunk settings with advanced nanotechnology, full-body cyborgs or androids are sometimes "grown" inside nanofabricators. The body (or just a brain pod) of the unmodified subject is placed within the tank, and then nanomachines simultaneously disassemble the organic body and replace them with machine parts. Counts as two (or more) major Gadgets in a far future setting, or as an Item of Power with Creation Attribute in near future settings.

Accelerated Growth Tanks

This technology uses exotic growth hormone treatments, nanotechnology, or other superscience to accelerate a clone's growth to adulthood in a period of days, weeks, or months rather than years. The adult clone will usually still have the mind of a newborn, so this process is most useful if some form of memory transfer technology also exists. If this is a mature technology, then corporations or governments can produce "clone armies" of workers or soldiers, or criminals may produce cloned celebrities to sell as living toys. If it is a new technology, it may be used for espionage black operations in which a kidnapped victim is replaced by a clone. Accelerated Growth Tanks are a major Gadget.

Organ Case or Support Vat

These are suitcase to trunk-sized life support systems that store surgically-removed or vat-grown organs. Larger systems, known as "support vats" may be able to keep a critically injured human alive indefinitely, even if nothing is left but a brain and spinal cord. Minor Gadget (a support vat would be a major Gadget).

Nanodoc

Cell-sized or smaller robots can be used to hunt down disease organisms, repair damaged cells, speed recovery after surgery, heal injury, take over diseased cellular metabolisms, or even perform genetic modifications. This is the ultimate medical technology. When someone is sick, they are placed into a vat-sized nanodoc. Countless microscopic nanosurgeons are pumped into their bodies to locate and fix the problem, communicating back to the nanodoc and each other through sonic pulses. This process can regenerate injuries in a matter of hours. A Medical (Surgery) Skill check is required — failure means the nano were improperly programmed, but another try can be attempted by spending more time. A severe failure may have bad effects (such as dissolving the subject into a puddle of flesh).

• Nanodoc •

Attributes

Item of Power 1

Item of Power "Nanodoc" Attributes

Healing 4 [Targets 1, Activation Time (1 hour; -1 can be interrupted; -7 BP), Backlash (Physical damage; -1 BP), Restriction (Requires Medical Skill check; -1 BP), Restriction (Must be recharged between patients; -2 BP)]

Defects

Awkward Size -1 BP

Final Cost: 3 Points

Metamorphosis Tank

A metamorphosis tank is the ultimate product of bio-nanotechnology. Inside a huge life support vat, fleets of billions of nanosurgeons — similar to those used in a nanodoc — disassemble the subject on a cellular level, essentially reducing him or her to a mass of pre-embryonic tissue (while carefully recording and preserving the complex structure of memory and personality), then reprogram his or her DNA, and finally reverse the process to recreate the person. This may be used to reverse the effects of old age, or even to genetically alter the original, provided appropriate genetic codes are understood. The process is a slow, exacting one and requires a Biological Sciences (Genetics) Skill check. Ordinary failures may be grotesque but can be reversed, but a backlash result will erase the subject's mind even if it recreates his or her body.

• Metamorphosis Tank •

Attributes

Item of Power 4

Item of Power "Metamorphosis Tank" Attributes

Metamorphosis 4 [Duration 15*, Targets 1, Activation Time (1 month; -1 can be interrupted; -11 BP), Backlash (Erase mind; -1 BP), Restriction (Requires Biological Sciences Skill check; -1 BP), Restriction (If interrupted, another Biological Sciences Skill check is required; -1 BP)]

Defects

Awkward Size -2

Final Cost: 12 Points

* Duration beyond usual PMV limit assigned to represent permanent effect.

Mind-Alteration Machine

This device consists of a bed, a portable superconducting magnetic resonance imaging scanner/effector that is attached to a patient's head, and various IV drips for inserting drugs or nanomachines into the patient.

It must be attached to a deck-sized or larger computer to function.

It allows the operating psychologist to "brain dive" into the subject's mind, restructure his or her memories, or even enter the patient's dreams. The physician must either have a neural jack or headset, or use a special virtual reality helmet (the latter is a minor Gadget).

• Mind-Alteration Machine •

Attributes

Item of Power 7

Item of Power (Mind-Alteration Machine) Attributes

Telepathy 8 [Area 2, Targets 1, Activation Time (1 hour; -6 BP), Restriction (Neural jack or headset, or virtual reality gear required; -1 BP), Restriction (Requires Social Sciences: Psychology Skill check; -1 BP)]

Defects

Awkward Size -1

Final Cost: 21 Points

Drugs

Designer performance-enhancing drugs are common in many cyberpunk worlds — sometimes as illegal black market products, other times legalised and widely accepted.

Drugs are usually delivered by an injector (which produces an effect one round later). Some drugs may also be inhaled or taken orally (usually a delay of five rounds); if these are introduced into food or drink, the victim may receive a Body or Mind Stat check to notice any odd taste or smell (with bonuses for appropriate Heightened Senses). Injecting an unwilling subject with a drug requires a successful Melee Attack (Needle) attack at a -2 penalty unless the victim is held and restrained.

Drugs count as minor Gadgets; each usually provides four doses; these can be replenished if the character has appropriate resources (Organisational Ties, Wealth, etc.).

Many drugs in cyberpunk settings will have colourful local names and unique capabilities. Typical cyberpunk drugs include:

Stimulant

The user receives a +2 to all Body and Mind Stat checks relating to endurance, alertness, and wakefulness for 4 hours, then suffers a -1 to Mind and Soul (due to nervousness, insomnia) for another 4 hours. Additional stimulant use will extend the duration of positive effects by a further hour.

Stimulants are easily abused; use of more than three doses in a given day may require a Soul Stat check to avoid dependency (the user will do anything for the next hit; treat as gaining the Special Requirement Defect).

Berserker

Favoured by some street gangs and psychos. This drug hypes up the user's adrenaline and makes him or her aggressive. The user receives Attack Combat Mastery +1 and Special Defence (Pain x2) +2, but suffer the twin Defects Blind Fury (2 BP) and Inept Defence (4 BP). Effects last for an hour.

Endorphins

A pain killer and euphoric. The user ignores Wound Difficulty Penalties (see page 99) for an hour, and recovers immediately if incapacitated due to shock. He or she suffers a -1 penalty to any Mind-based Stat or Skill checks, however.

Endorphins can be highly addictive; use of more than two doses in a day may require a Soul Stat check to avoid dependency (the user will do anything for the next hit; treat as gaining the Special Requirement Defect).

Nootropics

Nootropics ("smart drugs") are designer drugs that improve neural connections in the brain. The user gains Heightened Awareness +1 and Enhanced Mind +1 for 4 hours. Once the drug wears off, the user must make a Soul Stat check to avoid feeling stupid and depressed (-1 to Mind and Soul) for a number of hours equal to the margin of failure. These drugs are very easy to get psychologically addicted to. They are often taken (and abused) by students during exams, burned-out programmers, scientists, engineers, and artists.

Hypnotic

A relaxant and depressant. The user gains the Less Capable (Willpower and Wits) Defects (2 BP) for 15 minutes. At the end of this time, the user must make a Body Stat check to avoid falling unconscious for a number of hours equal to the margin of failure. This check is at -1 for each subsequent dose taken.

Medical Drugs

Various genetically-engineered hormones and neurotransmitters exist that can speed up the healing process. This doubles the healing rate.

Robots

A robot is a computer-controlled machine capable of programmed intelligent manipulation or movement. This is a broad definition that can mean anything from a pre-programmed robot arm in a factory to a self-aware humanoid android. For simplicity, the term "robot" will be used here to refer to autonomous mobile machines that can move about under their own power and perform tasks without direct human supervision.

Mobile robot development is driven by both domestic concerns (replace an ageing work force) and military needs (send robots instead of humans into harm's way). Cyberpunk settings often assume social changes that result in a "life is cheap" mentality, however, so if humans are considered disposable by governments or corporations and can be augmented or brainwashed, there may be no need to build autonomous robots. Authoritarian organisations, conversely, may like robots as security guards or assassins, as they never question orders.

It is fairly easy to build autonomous aircraft or missiles (the sky is a wide-open environment with few obstacles). It is more difficult to build machines capable of navigating populated environments or manipulating things with human dexterity. Robots in classic cyberpunk settings are usually not self-aware — this capability is limited to much larger, stationary, supercomputers. Robots usually have no motivation save following orders of their designated supervisor, and little or no self-initiative. They may have programmed personalities or emotions, but these will be superficial.

Semi-autonomous personal robot vehicles, pets, and assistants are common in many cyberpunk worlds. Most cyberpunk settings have tight controls on A.I.s, however, preventing these robots from becoming fully intelligent. Robots are usually fairly expensive. With billions of humans around, a lot of the grunt work — like warfare — is done more cheaply by people than machines.

Some cyberpunk settings do feature self-aware robots, but GMs should carefully consider the implications. If a computer that can house a self-aware mind is small enough to fit inside a robot body, A.I.-robots may be common. If so, there may be little room left for human adventurers. Why risk sending people into danger when a self-aware machine can do the job just as well? In most classic and near future cyberpunk settings, self-aware robots are new and expensive or experimental technology that has yet to have all the bugs worked out (and they might be prone to dangerous malfunctions). For an example, see the Android template (page 37).

Creating Semi-Autonomous Robots

Semi-Autonomous robots are created as Servants, Henchmen, or Agents, as appropriate to their role in the game. The robot can operate without constant supervision, but has no self-initiative and lacks emotions and desires. It can be given orders or programmed with directives but obeys in a slavish, unimaginative fashion.

The robot should be assigned a Body and Mind Stat, but will have a Soul Stat of 1-2 and the Less Capable (Intelligence) Defect. It may have several Skills, but will rarely have any individual Skill Level in excess of Level 2.

Teleoperation

Typical cyberpunk robots, with low Mind and minimal Soul Stats, lack much in the way of self initiative. One way to get around this is for the robot to be remotely controlled — teleoperated — by a human operator or an A.I. computer. This requires the robot to possess Features (Teleoperation Interface), which allows an operator to control the robot remotely. The operator must use at least a deck and be in radio, laser, or cable contact with teleoperated robot. This requires the operator's full attention, and he or she cannot carry out any other activities simultaneously (except possibly with other similar machines).

When a robot is teleoperated, it is treated as a vehicle. Ignore the robot's own Body, Mind, and Soul Stats, its Attack or Defence Combat Mastery (if any), and its Skills. These no longer apply. Instead, use the operator's Stats and Combat Values as if the operator was piloting it.

Teleoperation is not as easy as "being there." The user will suffer a -1 penalty to all Skill and Combat checks made by the controlled robot (or vehicle, if using a teleoperation link), due to a lack of situational awareness. This penalty is waived if the teleoperator is plugged into his or her control system using a neural jack.

• SURVEILLANCE ROBOT •

This is football-sized machine powered by a ducted fan engine. It is studded with sensors, but the basic model does not have any manipulation or weapons capability. Machines of this sort are used by security forces, operatives and journalists.

The surveillance robot's Point total makes is suitable as a Henchman or Agent.

Surveillance Robot (20 Character Points)

Body 4	Attack Combat Value 2
Mind 3	Defence Combat Value 0
Soul 1	Health Points 15
	Shock Value 3

Attributes

Armour 1 (-2; Unarmoured area), Features 2 (Minor Gadget: Com, Teleoperation Interface), Flight 2 [Restriction (Needs air for ducted fan engine; -1)], Heightened Senses 1 (Infrared Vision), Special Defence 11 (Air x2, Disease x2, Hunger x2, Pain, Poison x2, Sleep x2)

Skills

Area Knowledge 1 (Patrol area), Power Usage 1 (Infrared Vision), Urban Tracking 1 (Any)

Defects

Achilles Heel (Electrical damage) -1, Confined Movement -1, Diminutive -2, Marked (Robotic) -3, Not So Tough -1, Physically Impaired (No arms; Cannot speak) -4, Physically Impaired (No natural healing) -1, Sensory Impairment (No sense of smell or taste) -2, Special Requirement (Batteries) -1, Unskilled -2

Customisation Notes

• Flybots are much smaller bug-sized robots, with tiny manipulator arms and chemical sensors. Take two extra Levels of Diminutive instead of Physically Impaired (No Arms) and Sensory Impairment (No sense of smell or taste).

• PATROL BUG •

This is a typical police or corporate security semi-autonomous robot, which might be deployed by a SWAT team or to patrol a secure complex. It has a menacing bug-like six-legged body about the size of a dog, with built-in weapons and sensors. Biomimetic technology derived from analysis of gecko hairs allow its foot pads to stick to surfaces, allowing it to move on walls or ceilings as if it were a giant spider.

The Patrol Bug is presented as a ready-to-use character (for use as an Agent or Servant) rather than as a Template. Like most cyberpunk robots, it has a teleoperation link that allows it to be remotely controlled. This will usually improve its efficiency tremendously. Typically, a robot of this sort will perform routine patrols under its own direction, but is programmed to alert a human or A.I. teleoperator if it encounters an unusual or hazardous situation. This means that after a few rounds of combat, the robot's capabilities may suddenly seem to increase, as a real mind suddenly jumps into the loop to take control.

Patrol Bug (50 Character Points)

Body 5	Attack Combat Value 4
Mind 3	Defence Combat Value 2
Soul 1	Health Points 30
	Shock Value 6

Attributes

Adaptation 1 (Noxious Gases), Attack Combat Mastery 1, Armour 1 (-1; Thin area), Defence Combat Mastery 1, Features 2 (Minor Gadget: Com, Teleoperation Interface) Heightened Senses 3 (Hearing, Vision, Infravision), Land Speed 4 (60 kph), Special Attack "Gun Pod" 3 (20 Damage, Auto-Fire, Limited Shots), Special Attack "Grenade Launcher with stun grenades" 2 (40 Damage, Area Effect, Flare, Stun, Limited Shots x2, Short Range), Special Defence 10 (Air x2, Flare, Disease x2, Hunger x2, Pain, Poison x2, Sleep x2), Special Movement 2 (Wall Crawling)

Skills

Area Knowledge 1 (Patrol area), Gun Combat 1 (Auto-Fire), Ranged Defence 1 (Personal)

Defects

Achilles Heel (Electrical damage) -1, Confined Movement -1, Marked (Robotic) -3, Physically Impaired (No natural healing) -1, Sensory Impairment (No sense of smell or taste) -2, Special Requirement (Batteries) -1, Unappealing -1, Unskilled -1

The operator can program the machine to return to autonomous control if his or her signal is interrupted or he or she stops giving commands. If the operator tries to control multiple drones at once, he or she suffers a cumulative -2 Stat and Combat check penalty on all actions for each drone controlled simultaneously.

Two examples of semi-autonomous robots are given on page 114. The GM can use them as inspiration for creation of other robot designs. For a more advanced and possibly fully-autonomous robot, see the Android Template (page 37).

Vehicles can also be teleoperated — see the vehicle teleoperation link customisation (page 131).

Weapons

Where would a cyberpunk game be without myriad weapons? Table 10-1: Weapons lists the damage values and other characteristics of common weapons. If a weapon is not listed, the GM should assign a damage value based on one that is similar in form and function.

Some weapons possess Abilities and Disabilities to reflect their unique capabilities. These function identically to the Abilities and Disabilities described under the Special Attack Attribute (page 98). The Armour Ratings and Health Points of operational weapons, such as firearms, are indicated in the table as well (page 118).

Melee Weapons

Knives, swords, and so on may continue to be used for street fighting, assassinations, and possibly in virtual reality simulations. Many cyberpunk worlds are influenced by Japanese or Chinese martial arts traditions, and so Eastern weapons may be popular. Melee weapons may be enhanced via monowire (see below). Melee weapon statistics are found on Table 10-1.

All melee weapons are minor Gadgets except bo, staff, pipe, knife or dagger, which are mundane.

Monowire

Monowire is a superfine and superstrong wire, perhaps the product of early nanofacturing.

Monowire Blade

It is possible to design a blade (axe, sword, knife, dagger) that uses a taught length of monowire along its cutting edge. This gives the weapon the Penetrating (Armour) Ability and doubles its basic weapon Damage (for instance, from 12 to 24 for a longsword). A monowire blade counts as two minor Gadgets.

Monowire Whip

A monowire whip replaces the lash with a weighted strand of monowire; this eliminates the Low Penetration Disability of the whip, increases Damage to 8, and gives it the Unreliable Disability, except that instead of "burning out," the user accidentally strikes him or herself, taking normal damage. A monowire whip counts as two minor Gadgets.

Monowire Coil

A long coil of monowire, fitted with occasional safety sheathing along its length to ease handling, can be used as a trap (perhaps strung across a road for someone to run into). Monowire is hard to spot (a difficult Mind Stat check to spot). If someone simply walks into it, they will usually take only a paper cut (no damage), as it cuts relatively slowly, but a running person, vehicle, etc. will take damage as per the Crashing and Falling Damage Table (see page 98). The GM may permit a Defence roll at -2 to react quickly once the monowire begins to bite; success means only a paper cut. An average difficulty Mechanics (Traps) check may required to quickly (approximately 1 minute) deploy a monowire trap (failure indicates the trap is improperly strung and will inflict only half damage when hit; on a critical failure, the GM may rule the user injures his or herself, taking normal damage as if from a monowire whip). This counts as a minor Gadget.

Monowire Switchblade

A monowire switchblade is a weapon that uses an extendible strand of weighted memory-metal monowire attached to a powered hilt. When activated, an electric current allows the wire to go rigid, forming a blade with the same effect as a monowire longsword. If the current is turned off, the blade functions like a monowire whip. The user can change modes at the start of his or her action. A major Gadget.

Firearms

The weapons of choice in near-future and classic cyberpunk games are guns similar to those of 2004. Many contemporary firearms presently in use may still be in service as late as 2050 or 2075, in the same way that the Colt Government .45 heavy pistol (dating to 1911) still remains a popular firearm nearly a century after it was first introduced.

Where cyberpunk-era firearms are likely to see most improvement is in electronics and ammunitions. Laser sights, night vision scopes, and other "smart" systems are common; microscopic sensors, computer chips, and actuators — the same technology that goes into cybernetic limbs — also make "smart bullets" and "homing bullets" a reality. The simplest of these have tiny explosive warheads with programmable fuses that can be set to detonate in various ways, while the most advanced are miniature self-guided missiles. Firearm statistics are given on Table 10-1.

Light Assault Weapons

These automatic weapons fill a role between pistol and assault rifle; fairly lightweight, they have considerable firepower in close quarters. A major Gadget.

Submachine Gun

The submachine gun is a full automatic weapon firing pistol calibre ammunition (9mm or 10mm) such as the H&K MP5 or the UZI. A major Gadget.

PDW

The PDW (Personal Defence Weapon) is a submachine gun that fires a small calibre, high velocity bullet in between a pistol and a rifle round. PDWs are known for their large ammo capacity (hence the lack of a Limited Shots disability). A contemporary example of a PDW is the FN P90. Both are major Gadgets.

Non Lethal Ranged Weapons

Sometimes you need to take down an opponent without killing him or her.

Pepper Spray

Pepper spray is short ranged but effective irritant aerosol; a minor Gadget.

Laser Stunner

Laser stunners fire an electrical pulse down a path ionised by an ultraviolet laser beam, which can stun without killing (although it may cause a painful burn). They have a backpack or belt power supply attached by cable to the weapon, and are a major Gadget.

Sonic Disruptor

This acoustic weapon generates an intense sound pulse below the threshold of hearing. A hit causes pain, nausea, and loss of sphincter control, but no permanent effects. Major Gadget.

'Poon Gun

A 'poon gun is a compressed-gas pistol that fires a 30 metre carbon-nanotube climbing line with an ultra-adhesive memory-glue pad that can support up to 250 kg when an electric current is activated, plus a power winch to real it back. Good for scaling walls and also for "pooning" vehicles for a free ride, if also equipped with roller skates or a skateboard; does no damage. Minor Gadget.

Taser

Tasers fire an electrified dart connected to the gun by a pair of wires. Minor Gadget.

Pistols

These are semi-automatic pistols.

Light Pistol

The light pistol is a .22, .25, or .380 calibre semi-automatic pistol such as the Ruger High Standard. Minor Gadget.

Medium Pistol

The medium pistol is a 9mm, .40 S&W, or .45 calibre semi-automatic pistol such as a Glock 20 or Beretta 92. Minor Gadget.

Heavy Pistol

The heavy pistol is a .357 magnum or .44 magnum pistol such as the Desert Eagle. Minor Gadget.

Machine Pistol

The machine pistol is a pistol-sized submachine gun firing the same ammunition as the medium pistol, such as the MP5K or Micro-Uzi. Major Gadget.

Flechette Pistol

Flechette pistols are cold-gas guns that fire a tiny finned dart; the pistol itself is non-metallic. The darts typically inject a fast-acting sedative, although other types might be available. Minor Gadget.

Revolvers

Dating back two centuries, these pistols are still reliable today. They have a revolving cylinder that holds five or six cartridges, which are fired in succession; the spent shell casings remain in the cylinder until the gun is reloaded.

Revolver (.38 Calibre)

The revolver is a .38 calibre revolver such as the Smith & Wesson M10. Minor Gadget.

Magnum Revolver

The magnum revolver is a heavy .357 or .44 magnum revolver such as the .44 Taurus. Minor Gadget.

Rifles

Rifles are a varied category of longarm, ranging from hunting tools, to dedicated police or military action weapons, to powerful anti-material weapons (intended to destroy heavily armoured targets).

Light Rifle

The light rifle is a lightweight .22 calibre bolt-action rifle. Minor Gadget.

Hunting Rifle

The hunting rifle is a high-powered bolt-action rifle such as the Remington Model 700 BDL. Minor Gadget.

Sniper Rifle

The sniper rifle is a dedicated military or police sniper weapon such as the .338 Accuracy International Super Magnum. Major Gadget.

Assault Rifle

The assault rifle is a selective-fire military rifle such as the M16, G36, or AK-47, usually firing 5.56x45mm, 6.8mm or 7.62x39mm ammunition. Major Gadget.

Heavy Assault Rifle

The heavy assault rifle is a selective fire battle rifle such as the FN-FAL or G3, usually firing 7.62mm ammunition. Major Gadget.

Combat Infantry Weapon

Combat infantry weapons are double-barrelled weapons, combining a magazine-fed grenade launcher and a fully-automatic assault carbine into a single handy package. The weapon is usually fitted with a computer targeting system (see page 119). A contemporary prototype is the H&K XM29; although that weapon proved a bit too heavy for field use, cyberpunk technology should allow a lighter-weight version to be introduced in a decade or two. It counts as a major Gadget plus a minor Gadget.

Anti-Material Railgun

Anti-material railguns are hefty shoulder-fired weapons that use an electromagnetic impulse to accelerate a small projectile to hyper-velocities, capable of punching through most armour. They are powered by a superconductor loop built into the magazine. They count as two major Gadgets.

Sniper Laser

Sniper lasers fire a silent, invisible infrared laser beam powerful enough to melt through steel plate. The beam can only be seen by infrared vision or sensors (and then only if the beam scatters off a reflective surface), making it a superior assassination and terrorist weapon (and usually tightly controlled). A sniper laser is quite bulky, with a large flashlight-sized focusing lens, and a backpack power supply. It counts as two major Gadgets.

Heavy Weapons

Heavy weapons are essentially portable ordnance, allowing infantry to take on armoured vehicles, or terrorists to destroy valuable targets.

SAM Launcher

A SAM launcher is a reloadable infrared or radar-homing surface to air missile launcher. It can only lock onto airborne targets and has a minimum range of 100 metres. Major Gadget.

Underbarrel Grenade Launcher

An underbarrel grenade launcher is a tube-shaped, single-shot devices clipped under the barrel of a rifle that launch 30-40mm explosive or gas shells (these are smaller than hand grenades). A contemporary example is the M203. Minor Gadget.

90mm LAW

A 90mm LAW is a disposable shoulder-fired light antitank weapon — a rocket with a shaped-charge warhead. Major Gadget.

Tactical Missile Launcher

Tactical missile launchers are (barely) man-portable launch tubes for a 120-150mm "brilliant" missile that homes in on a target via imaging infrared or millimetric radar homing. The missile has an explosive warhead. They can also be installed on a light weapon, heavy weapon, or turret mount in a cluster of four; if vehicle-mounted the Static Disability is removed.

Shotguns

Shotguns are classic hunting and sporting weapons, with a long history of police and military action in America.

Shotgun (12-gauge)

The shotgun is a 12-gauge pump or semi-auto shotgun such as the Remington 870. Minor Gadget.

Heavy Shotgun

The heavy shotgun is a powerful 10-gauge shotgun such as the Remington SP-10. Two minor Gadgets.

Automatic Shotgun

A gas-operated shotgun such as the Daewoo USAS-12. It is designed explicitly for military and police use. Major Gadget.

Support Weapons

Support weapons are heavy weapons with limited mobility capable of high rates of fire and/or tremendous damage.

Machine Gun

The machine gun is a belt-fed squad support weapon such as the M240 Squad Automatic Weapon, firing the same ammunition as the assault rifle. Major Gadget.

Light Minigun

The light minigun is a six-barrelled Gatling machine gun such as the XM214 (light minigun) firing the same ammunition as the assault rifle. Major Gadget.

Heavy Minigun

The heavy minigun is a larger-calibre weapon such as the 7.62mm M134, firing the same ammunition as the heavy assault rifle. Major Gadget.

Ordnance

Ordnance encompasses battlefield and riot control weapons, typically attached to combat vehicles or armoured police units.

30mm Autocannon

30mm Autocannons are heavy (200+ kg) chain guns or automatic cannons typically mounted in light armoured vehicle turrets or in combat aircraft or helicopters. They have a large ammunition capacity (300+ rounds) and fire armour-piercing shells. They can be installed in a Heavy Weapon Mount or Turret Mount or carried by anyone with Superstrength Level 1+, and count as three major Gadgets.

MAD

Microwave Area Denial (MAD) weapons use a transmitting antennae (a metre or two in diameter) to beam microwave energy out to a range of several hundred metres. The beam quickly heats up the outermost layer of the skin, causing an intense burning sensation similar to that of briefly touching a hot light bulb, but with no permanent damage (even to eyes). The system — resembling a radar antennae plus power and control unit — easily fits on a light truck or building. MAD weapons are popular with police and corporate security for riot dispersal. It is also possible that unscrupulous individuals could use it for torture by securing a victim in front of the beam. The beam does half damage to characters with Special Defence (Pain), and no damage to those with Special Defence (Pain x2). A contemporary prototype is the Active Denial Technology system developed by the USAF for mounting on a HMMWV truck. Major Gadget.

Water Cannon

Water Cannons are heavy weapons normally mounted in riot control vans or APCs. They project a high-velocity jet of water that can sweep away unruly crowds; an internal reservoir built into the vehicle is good for a few minutes of fire. Some users load it with dye instead of water, to mark protestors for later pickup and arrest. They can be installed in a heavy weapon mount or turret mount on a vehicle, or carried by anyone with Superstrength Level 1+. Major Gadget.

Customising Firearms

Sometimes, nothing does the trick like a reliable firearm. The following options can be added to different types of weapons to enhance performance or otherwise alter them. Each accessory or feature normally counts as a minor Gadget. Some options are considered "mundane" (their advantages and disadvantages cancel), and do not cost Points.

Options for weapons are classed as either accessories or features. A feature is a change to the basic weapon template that reflects a particular factory model, or extensive after-market customisation. This requires the Mechanics (Gunsmith) Skill to install, and may require several hours or more. An accessory is something that can be easily attached or removed from the weapon within a few seconds to several minutes.

Weapon options are available for light assault weapons, rifles, pistols, shotguns, and revolvers unless otherwise noted. They are not normally available for other classes of weapons unless noted.

Accurised

Modification Type: Feature

The weapon has been specially modified (custom grips, improved sights, polygonal rifling, heavier barrel, etc.) to improve its accuracy. This is typical of target pistols and competition or sniper rifles. This modification grants a +1 bonus to any attack check when firing single shots, but no bonus if used with Auto-Fire. An accurised weapon must be in excellent condition with its sights precisely aligned — it will lose its bonus if knocked about, dropped, or otherwise mistreated.

Bayonet

Modification Type: Accessory

The weapon is fitted with a lug to accept a bayonet (included with this option). When attached, the weapon is a bit more awkward, but it can be used in melee combat as a spear. When detached (requires one round), the bayonet is also usable as a knife. A bayonet is available for any rifle.

Bipod Attachment

Modification Type: Accessory

When the bipod is unfolded, the weapon is treated as if it is Accurate (cumulative with any other Accurate bonuses) and Static. The weapon must be fired at rest with the shooter lying prone behind it. Folding or unfolding the bipod requires one round. A bipod is available for any rifle.

Brass Catcher

Modification Type: Accessory

This attachment collects cartridges as they are fired out of the weapon, and thus either saves them for hand loading or prevents any incriminating ballistics evidence from being left behind. A brass catcher is available for any rifle or assault weapon.

Table 10-2: Weapons

Weapon	Damage	Abilities	Disabilities	Skill
Bladed Weapons				
Axe	10	Muscle-Powered	Inaccurate Melee	Melee (Axe)
Broadsword	12	Muscle-Powered	Melee	Melee (Sword)
Knife or Dagger	6	Concealable Muscle-Powered	Melee	Melee (Knife)
Long Sword or Katana	12*	Muscle-Powered	Melee	Melee (Sword)
Short Sword	8	Concealable Muscle-Powered	Melee	Melee (Sword)
Spear	10	Muscle-Powered	Melee	Melee (Polearm)
Blunt Weapons				
Bo, Staff, or Pipe	6*	Muscle-Powered Melee	Melee	Melee (Polearm)
Club, Baseball Bat	6	Muscle-Powered Melee	Melee	Melee (Club)
Nunchuku or Chain	6	Flexible Muscle-Powered	Melee	Melee (Whips/Chains)
Whip, Rope, or Belt	4	Concealable Flexible Muscle-Powered	Low Penetration Melee	Melee (Whips)
Bows (2 Armour, 20 Health Points)				
Crossbow	12	none	Limited Shots (1) Slow	Archery (Crossbow)
Long Bow	10	none	Limited Shots (1)	Archery (Bow)
Pistols (4 Armour, 30 Health Points)				
Flechette Pistol	8	Concealable	Short Range Short Range	Gun Combat (Pistol)
• with knockout drug	20	Linked	Stun Toxic	
Light Pistol	8	Concealable	Low Penetration Short Range	Gun Combat (Pistol)
Heavy Pistol	12	Concealable	Short Range	Gun Combat (Pistol)
Machine Pistol	10	Auto-Fire Concealable Spreading	Inaccurate Limited Shots (6) Short Range	Gun Combat (Auto-fire)
Magnum Revolver	14	Concealable	Limited Shots (6) Short Range	Gun Combat (Pistol)
Medium Pistol	10	Concealable	Short Range	Gun Combat (Pistol)
Revolver (.38)	8	Concealable	Limited Shots (6) Short Range	Gun Combat (Pistol)
Rifles (5 Armour, 35 Health Points)				
Assault Rifle	14	Auto-Fire Spreading	Limited Shots (6)	Gun Combat (Auto-fire)
Heavy Assault Rifle	18	Auto-Fire Spreading	Inaccurate Limited Shots (6)	Gun Combat (Auto-Fire)
Hunting Rifle	14	none	none	Gun Combat (Rifle)
Light Rifle	8	none	none	Gun Combat (Rifle)
Sniper Rifle	20	Accurate	Limited Shots (6)	Gun Combat (Rifle)
Combat Infantry Weapon				
• rifle barrel	12	Auto-Fire	Limited Shots (6)	Gun Combat (Auto-fire)
• grenade launcher	20	Area Effect	Limited Shots (6)	Heavy Weapons (Launcher)
Anti-Material Railgun	40	Accurate Long Range Penetrating (Armour)	Static	Gun Combat (Rifle)
Sniper Laser	20	Accurate Long Range Undetectable	Unreliable	Gun Combat (Rifle)
Shotguns (5 Armour, 35 Health Points)				
Shotgun (12-gauge)	18**	Spreading	Limited Shots (6) Low Penetration Short Range	Gun Combat (Rifle)
Heavy Shotgun	22**	Spreading	Limited Shots (6) Low Penetration Short Range	Gun Combat (Rifle)
Automatic Shotgun	18	Auto-Fire Spreading	Inaccurate Limited Shots (3) Low Penetration Penetration	Gun Combat (Rifle)
Light Assault Weapons (5 Armour, 35 Health Points)				
PDW	6	Auto-Fire Penetrating Spreading	Short Range	Gun Combat (Auto-fire)
Submachine Gun	10	Auto-Fire Spreading	Limited Shots (6) Short Range	Gun Combat (Auto-fire)
Support Weapons (5 Armour, 35 Health Points)				
Light Mini-Gun	16	Accurate Auto-Fire Spreading x2	Limited Shots (6) Static	Gun Combat (Auto-fire)
Heavy Mini-Gun	22	Auto-Fire Spreading x2	Limited Shots (6) Static	Gun Combat (Auto-fire)
Machine Gun	20	Auto-Fire Spreading	Static	Heavy Weapons (Machine Gun)
Heavy Weapons (4 Armour, 30 Health)				
90mm LAW	60	Area Effect Burning Penetrating	Inaccurate Limited Shots (1) Self-Destruct Slow Static	Heavy Weapons (Launcher)

Briefcase-Firing
Modification Type: Accessory

The weapon is designed to be concealed in and fired from a briefcase or attaché case without removing it, using a hidden trigger in the case handle. The weapon must be an auto-loading pistol, machine pistol, or light assault weapon (PDW or submachine gun). The weapon suffers a -4 penalty to the attack check when fired from within a brief case. The gun can usually be unclamped from the case and used normally (takes one round). GMs may use similar rules for umbrella guns or other disguised weaponry.

Carbine-Format
Modification Type: Mundane Feature

The weapon has a shorter barrel and stock. A carbine format subtracts 1 damage but allows the weapon to be concealed under a long coat (see Concealable Ability, page 62) as if it were a submachine gun. A carbine-format weapon is available for any rifle.

Computer Targeting System (CTS)
Modification Type: Accessory (counts as 3 minor Gadgets)

This is an integrated system that combines a laser sight and night vision scope into a single unit. In addition, it incorporates a video display camera that

Weapon	Damage	Abilities	Disabilities	Skill
Underbarrel Grenade Launcher	25	Area Effect	Inaccurate Limited Shots (1)	Heavy Weapons (Launcher)
SAM Launcher	60	Area Effect Homing Long Range Penetrating	Backblast Limited Shots (1) Only Air Targets Slow Static	Heavy Weapons (Launcher)
Tactical Missile	100	Accurate Homing Long Range x3 Penetrating x2	Limited Shots (1) Slow Static Stoppable	Heavy Weapons (Launcher)
Thrown Weapons				
Concussion Grenade	30	Area Effect x3 Concealable	Limited Shots (1) Self-Destruct Short Range	Thrown Weapons (Grenades)
Thrown Knife	4	Concealable	Limited Shots (1) Short Range	Thrown Weapons (Blades)
Non Lethal Ranged Weapons (3 Armour, 25 Health)				
Tear Gas Grenade	30	Area Effect x2 Enduring	Inaccurate Limited Shots (1) Self-Destruct Slow Stun Toxic	Heavy Weapons (Grenades)
Taser	12	Stun	Low Penetration Short Range Slow	Gun Combat (Pistol)
Pepper Spray	12	Concealable Irritant Stun	Melee Range Limited Shots (6) Toxic	none
Laser Stunner	15	Stun	Short Range	Gun Combat (Pistol)
Sonic Disruptor	10	Irritant Spreading Stun	Short Range Toxic	Gun Combat (Pistol)
'Poon Gun	20	Flexible	No Damage Slow Short Range	Gun Combat (Pistol)
Ordnance (15 Armour, 85 Health)				
30mm Autocannon	60	Auto-Fire Long Range Penetrating (Armour)	(Gunnery)	Heavy Weapons
MAD	20	Accurate x 2 Area Effect Enduring Irritant Stun Undetectable	No Damage Static Toxic Unique Disability***	Heavy Weapons (Gunnery)
Water Cannon	20	Spreading Stun	Short Range	Heavy Weapons (Gunnery)

Weapon Table Notes

"Damage" is how much punishment the weapon inflicts (the damage of the attack).

"Abilities" or "Disabilities" are any special capabilities or limitations the weapon possesses. See pages 61 and 64. Unless noted otherwise, a weapon has Medium range. All Improvised Weapons have the Muscle-Powered Ability.

"Skill" is the Skill and Specialisation that provides a bonus when firing the weapon.

* Requires two hands to wield properly; delivers +4 damage when wielded two-handed.

** Some shotguns are "double-barrelled" and can fire both barrels at once. If so, an additional 8 damage is delivered. Double Barrelled shotguns have the Limited Shots (2) Disability.

*** Unique disability: All stun damage from a MAD pain beam recovers immediately two rounds after the beam is no longer held on the target. Characters with Special Defence (Pain) take half damage; those with Special Defence (Pain x2) are immune.

Limited Shots: The number in parenthesis after Limited Shots on the table is the number of attacks that can be made before reloading is required. An attack represents a number of shots (or Auto-Fire bursts). If the weapon does not have Limited Shots (such as a typical handgun) it simply means that — in the context of a round representing several seconds — it is easy to reload on the fly. Otherwise, reloading takes a full non-combat action and an extra ammunition load should be purchased as a minor Gadget, or as two minor Gadgets if one of the alternate ammo types (see Types of Ammunition, page 120) are selected.

allows video from the user's sighting system to be transmitted to a computer display within 2 m of the weapon (usually to a com that the user is wearing). This video allows the user to (for example) stick the gun around a corner or over cover. If the user's com transmits this information, it also allows other people to monitor what the user's gun is seeing — for example, the user's superior officer back at base can get a muzzle-eye view of the action. These are also available for ordnance, heavy weapons, and support weapons.

Flash Suppressor
Modification Type: Accessory

The hot gasses produced when a bullet is fired are quite visible at night. A flash suppressor is a long device that can be attached to the end of a weapon, masking this signature. A weapon with a flash suppressor attached is easier to detect if hidden (+1 bonus).

Flashlight Attachment
Modification Type: Accessory

This attachment allows any weapon to be used with a flashlight, and permits illumination of targets at short range so that attackers can target them without any penalties for darkness. Of course, someone using a flashlight at night can also be detected at a greater distance.

Folding or Telescoping Stock
Modification Type: Feature

The stock on the weapon can be folded or telescoped down, making it handier and more concealable. Unfortunately, a weapon with this feature also suffers from the Inaccurate Disability (-2 penalty) when firing at targets at over half its effective range. It requires one round (one attack if the character has the Extra Attacks Attribute) to fold or unfold the stock. If the weapon is also carbine-format, sawed-off, or a submachine gun, there is an extra -1 penalty to any check to spot the weapon while concealed, which is cumulative with other modifiers. This feature can be assigned to any rifle, shotgun, or light assault weapon.

Laser Sight
Modification Type: Accessory

A laser sight projects a small, bright dot of laser light exactly where the weapon is pointing, which helps the attacker determine whether or not he or she is on target. In game terms, the attacker receives a +1 bonus to their appropriate attack check in situations where they can see the laser dot on the target (usually up to Short Range unless combined with a scope). Laser sights with an infrared beam (visible only to people with night vision scopes or goggles) are also available.

Night Vision Scope
Modification Type: Accessory (counts as 2 minor Gadgets)

This scope uses thermal imaging or light intensification technology to "turn night into day." This functions exactly like a regular scope, except that it also eliminates any penalties for darkness. Available for all types of firearms except pepper spray.

Neural Interface Adapter
Modification Type: Accessory

Neural interface adapters (page 109) for guns are often added to firearms, allowing shooters to "jack into" their weapons for an extra +1 bonus. Available for all types of firearms except pepper spray.

Sawed-Off Barrel
Modification Type: Feature

This modification is for shotguns only. Sawing off the barrel of a shotgun means that it is easier to conceal, but is also shorter ranged. A sawed-off shotgun can be concealed under a long coat (see Concealable weapon Ability, page 62) as if it were a submachine gun. At up to Melee Range (5 metres or less) it has a wider spread of pellets (+1 bonus on attack checks), but suffers a -4 penalty to damage at ranges beyond Melee Range.

Snub-Nose
Modification Type: Mundane Feature

A snub-nose is a shorter-barrel versions of any auto-loading pistol, revolver, or machine pistol. The weapon suffers a -2 attack check penalty at any range greater than 5 metres and delivers less damage (-1 to damage), but is substantially easier to conceal (-1 penalty to spot the hidden weapon, cumulative with other bonuses or penalties of the weapon).

Scope
Modification Type: Accessory

A telescopic sight mounted atop the weapon gives the shooter an extra +1 bonus to his or her attack check when taking an entire turn to aim at a target. This bonus only applies to targets further away than Melee Range (over 5 metres). Scopes are available for all types of firearms except pepper spray.

Silencer
Modification Type: Accessory

A silencer, or more technically, a sound-suppressor, is a tube that attaches to the weapons barrel and reduces the noise the weapon makes while firing. A silenced weapon cannot be heard at a range of greater than 5 metres unless a nearby character makes a successful Body Stat check. The GM should modify this distance/check for conditions such as ambient noise, range, and Heightened Senses. Pistols, machine pistols, light assault weapons, and rifles (except lasers and railguns) may be fitted with silencers. A silenced weapon cannot be concealed or holstered until the silencer is removed, which requires one round.

Speed Loader
Modification Type: Accessory

A speed loader is a device that holds a number of revolver cartridges and permits them to be rapidly inserted into a cylinder. If a character has this minor Gadget, he or she can ignore the Limited Shots Disability of any revolver.

Trigger Lock
Modification Type: Mundane Feature

An integral lock that prevents the gun from being used without the right key or combination. It takes an extra round to unlock the gun before it can be ready to fire. In some areas, the law may require trigger locks on some or all firearms.

Types of Ammunition

It is assumed that characters have access to ammunition of whatever type they need for their standard weapons. Standard ammunition for auto-loading pistols, revolvers, rifles, and machine guns is a lead bullet; this type of bullet is called "ball" in military parlance. Standard ammunition for shotguns is shot. If characters have more than one type of ammunition, each extra type that is carried counts as a minor Gadget.

Armour Piercing (AP)

This is a bullet specifically designed to punch through Armour, using a steel or tungsten core rather than jacketed lead. Some brands of Armour-piercing ammunition are Teflon-coated, but contrary to myth, the coating on AP bullets has nothing to do with the Armour-piercing qualities — it simply helps protect the rifling inside the gun from the tougher material from which the bullet is made. Weapons using AP bullets are assigned the Penetrating (Armour) Ability (page 63). AP bullets are somewhat less lethal against flesh, and thus the actual damage is

always halved (round up) after the effects of Armour are considered. These bullets are available for auto-loading pistols, machine guns, shotguns, revolvers, and rifles. AP pistol or revolver ammunition ("cop killer bullets") is sometimes illegal.

Bird Shot

The statistics given for shotguns assume they are using buckshot, which is the usual combat load. If using birdshot (with a greater number of smaller pellets) damage is reduced by 5 (minimum 1 damage) but the attacker gains a +1 bonus to his or her attack check. Bird shot is only available for shotguns.

Blanks

A blank is a cartridge without the bullet that also has a reduced powder load. A blank normally does not deliver any damage when fired, but if the gun's muzzle is directly in contact with someone, the hot gasses expelled can still be dangerous or fatal. When a character is using a blank-firing gun in combat, the gun is treated as if it is firing a rubber bullet, but range is limited to Melee Range. Blanks are available for auto-loading pistols, machine guns, revolvers, rifles, and shotguns.

Hollow Point (HP)

This is a bullet designed to expand after entering a target, therefore doing greater damage. Hollow Point bullets are known by various trade names, and include bullets described as "expanding," "dumdum," or pre-fragmented rounds such as "safety slugs." HP ammo is standard issue in many police departments, since the rounds are better man-stoppers and are less likely to pierce walls and injure bystanders on the other side. The Hague Convention prohibits HP bullets for military use in international conflicts; whether this continues to be enforced in a cyberpunk setting is up to the GM. Hollow Point bullets have less Armour-penetrating power: Armour protection is doubled against the bullets. These disadvantages are cumulative with any Low Penetration modifiers. If even 1 damage succeeds in penetrating Armour, however, or if the target was unarmoured, 5 bonus damage is added to the damage that a living target suffers (the bullets "mushroom" inside living tissue), but only if the base damage penetrates the target's Armour. No extra damage is inflicted on machines or structures by HP bullets. HP bullets are available for auto-loading pistols, machine guns, revolvers, and rifles.

Programmable Shells

Underbarrel grenade launcher and payload rifle weapons that are also equipped with a computerised targeting system (CTS) may be loaded with shells or grenades with smart programmable-fuse warheads. Programmable shells with the Area Effect Ability can be set to detonate after travelling a certain distance. For example, if the enemy is hiding in a trench or behind a wall, the shell could be set to burst in the air as it passes over the barrier; thus, ordinary cover provides no protection against the Area Effect of a smart-fused shell. Similarly, it can be set to explode a metre or so after penetrating a window.

Homing Bullets and Shells

In some cyberpunk settings bullets, shells, or launched grenade may be equipped with a tiny optical or infrared seeker. The shell or bullet steers itself using tiny aerodynamic bumps (a product of MEMS micro- or nano-technology). This adds the Homing Ability but at the cost of the Slow Disability (the user must take a round to lock the gun onto a specific target before firing). The ammo can be fired normally without taking a round to aim, but the user does not get to take advantage of the Homing Ability.

Sensor Bullets

A "sensor bullet" is an elongated projectile, approximately 1.5 cm in diameter, than is fired from a compressed gas gun (treat as a flechette pistol; does no damage). The bullet is coated with an adhesive polymer, which allows it to stick to a target on a successful hit. The projectile is a shell that contains a sensor, a tiny wireless transmitter, and a battery. The sensors allow a target to be tracked, and can detect trace metal objects, powdered drugs, chemical explosives, and ammunition with a successful Mind-based Electronics (Security) Skill check. The bullet transmits its finding to a com or deck, up to 100 metres away. The projectiles are reusable if recovered.

Rubber

These are bullets encased in rubber or plastic, which are designed to be "less lethal." A weapon using rubber bullets automatically suffers from the Low Penetration Disability and delivers 5 less damage (minimum 1 damage). Rubber bullets are available for auto-loading pistols, machine guns, revolvers and rifles, and for shotguns firing slug ammunition.

Wooden Bullets

These are large calibre light wood slugs intended to splinter and cause minor fragmentation injuries when fired into hard surfaces like pavement. They can be fired from specialised anti-riot guns (treat as shotgun). Similar to shotgun slugs except that the Low Penetration Disability is not removed and if fired into the ground rather than at the body, they do -10 damage but gain the Area Effect ability.

Shotgun Slugs

A shotgun can fire big bullets instead of shot. Police will often use slugs to stop cars or blow open barricades. When using slugs, a shotgun loses both the Spreading Ability (page 63) and the Low Penetrating Disability (page 64). Slugs are available for shotguns only.

Incendiary Shells

Special shells are also available for shotguns; these shells contain phosphorous chemicals that convert the shotgun into an improvised flamethrower. Damage is reduced by 5 (minimum 1), but if any damage penetrates Armour, the target receives fire damage, and suffers one quarter (round up) the basic damage per round for the next five rounds. This damage is also very painful, imposing a -2 penalty on all checks. The ammunition tends to foul the gun after use, however. Any further shots fired before the gun can be carefully cleaned suffer a -2 attack check penalty, and the gun will jam on any roll of 1 or 2 (requiring cleaning before the gun can be reused). These shells are available for shotguns only.

Grenades and Explosives

The user throws these hand-held explosive weapons at a target. Their use uses the Thrown Weapons (Grenade) Skill. All of these explosives count as minor Gadgets except a satchel charge, which is treated as a major Gadget.

Concussion Grenade

This grenade is filled with high explosives. 30 damage is delivered to everyone in a six-metre radius who fails a defence check. Even if characters make the defence check, they still may suffer some blast damage (see Area Effect, page 61) unless there is sufficient cover (GM's option).

Tear Gas Grenade

This grenade bursts to fill a room-sized area (three-metre radius) with (usually) non-lethal irritant gas. Damage is the same as concussion grenade (30 damage), but is "stun only" — it wears off after a few minutes, and it does not affect non-living things or anyone wearing a gas mask. Anyone exposed to the gas also suffers a -2 penalty on all checks due to irritation if they fail a Body Stat check. This penalty lasts for a number of rounds equal to the amount by which the check was failed. Tear gas grenades also release a lot of smoke and may occasionally (GM's option) start fires if they explode next to paper or other flammable substances.

Flash-Bang Grenade

These special grenades produce a brilliant firecracker effect, stunning people with sound and light. This weapon is a favourite of hostage-rescue teams. No physical damage will be suffered, but the victims must make a Body Stat check or be blinded and deafened for a number of combat rounds equal to the difference between the Check Value and the roll. The character suffers a -1 Check Value penalty if he or she is right next to the grenade when it explodes. Characters wearing anti-flare goggles (such as a welding mask) and ear protectors or in sealed combat armour will receive a +6 bonus to their check to avoid the grenade's effects.

Smoke Grenade

This grenade fills a room-sized area (three-metre radius) with non-toxic chemical smoke for three to eight rounds (depending on wind). Anyone without night vision goggles or a night vision scope will suffer a -4 attack check penalty when attacking a target obscured by smoke.

Dynamite Stick

This explosive functions like a concussion grenade, except the blast covers only a three-metre radius, and it delivers 20 damage. It may represent actual dynamite or various handmade and handheld improvised explosive devices.

Satchel Charge

This is a knapsack full of plastic explosive or multiple dynamite sticks. The explosion is treated as a concussion grenade, but the blast covers an 8 m radius and the maximum damage is 40. Unlike a grenade, a satchel charge is too heavy to throw far, so its range is limited to Melee Range for average humans — the attacker will be caught in the charge's blast unless it has a timer.

Timed or Remote Detonator

This device is used to explode a satchel charge (or other bomb) from a distance, either at a specific time or in response to an electrical or radio signal. Attaching the detonator to the explosive and properly setting it requires a Demolitions Skill check, with failure indicating a late or premature blast.

Improvised Weapons

In combat, it is not uncommon for an exceptionally strong character to pick up a nearby object and wield it is a weapon. It is impossible to account for every conceivable weapon that the player characters may decide to throw at their opponents, but Table 10-2: Improvised Weapons provides commonly encountered examples of improvised weapons and their statistics. GMs are encouraged to use this table as a guideline should their players decide to grab something in the middle of combat that is not listed. Naturally, most weapons have the Melee Disability (page 64) as well, though they can be thrown in combat if necessary.

Table 10-3: Improvised Weapons

Object	Damage	Abilities	Disabilities	Strength Requirement
Car	24	Area Effect	Inaccurate Low Penetration	Superstrength Level 2
Dumpster	18	-	Inaccurate Low Penetration	Superstrength Level 2
Manhole Cover	24	-	Low Penetration	Body 16
Park Bench	8	-	Low Penetration	Superstrength Level 1
Stop Sign	6	-	-	Body 10
Telephone Pole	20	Spreading	Inaccurate	Superstrength Level 2

The statistics are as per Table 10-1, except "Strength Requirement" indicates the minimum Body Stat or Superstrength Level required to wield the object as a weapon effectively. If any improvised weapon is thrown, it is treated as a Short Range weapon.

Vehicles

Along with their specialised weaponry, many cyberpunk stories features rigged and modified vehicles. Law enforcement agencies, paramilitary groups, international organisations, and rogue adventurers use high-tech vehicles in their quests to keep their interests safe.

Cyberpunk vehicles are usually similar to those in 2004. The usual change is a widespread adoption of electric, hybrid, or fuel cell power plants in place of traditional internal combustion engines. In game terms, this simply means that automobiles are quieter; the reduced performance of most electric systems is countered by making auto bodies out of lighter composites.

Another change is that mass transport may benefit from advances in superconductor technology, resulting in very fast (300 kph) magnetic-levitation railway trains. In some settings, these may even be used for elevators or intracity transport with a three-dimensional maze of mag-lev car tracks running up buildings and across streets.

Cyberpunk futures often assume that personal aircraft will become more ubiquitous, including "air car" designs powered by ducted fans. Flying prototypes of these vehicles exist in 2004 — the major problems are concerns about safety and air traffic control, which the integrated computer networks of cyberpunk worlds may be able to solve. Another assumption is that a new generation of supersonic transports (SSTs) may finally be built — hybrid jet-rocket planes that allow executives to cross the world in only a few hours.

This section describes the standard vehicles likely to appear in a cyberpunk game. Some vehicles are suitable for use as personal vehicles by characters, while a desperate individual may commandeer others (such as a city bus) when no better transportation is available. This section concentrates on general types that are in common use, rather than providing individual statistics for specific models. All costs are approximate US dollar (USD) values, which can vary greatly.

Vehicle Cost

Each vehicle counts as a major Gadget (or multiple major Gadgets, see descriptions), with the exception of the motor scooter and ultra-light (minor Gadget). All basic vehicle templates can be modified using the Customising Vehicles guidelines. Using the customisation options, the vehicle can be further modified to match the character's personal vision (adding options such as supercharged engines or armoured glass windows) with each option normally considered to be a minor Gadget.

Speed is the top speed in kilometres per hour. Pickup trucks, sport/utility vehicles, and dirt bikes move at half speed off-road. Other non-military ground vehicles are road-bound and can move a maximum of one-quarter speed off road.

MB is the Manoeuvre Bonus. +1 means a +1 bonus to Initiative rolls (only), while a -1 or -2 means that penalty is applied to both Initiative rolls and to Driving Skill checks.

Size is the Awkward Size Defect possessed by the vehicle, and thus a relative measure of the vehicle's mass and volume. "0" means the vehicle is about the size of a motorcycle; you could drive it through a house's door, or stow it in the back of a van (a few hundred kg). "1" means it is about the size of a car or pickup truck, and

you can park it in a normal garage (masses a tonne or so). "2" means it is the size of a large truck (uses multiple parking spaces, often masses 5-10 tonnes when loaded). "3" means it is even larger, such as a big tractor-trailer combination that might haul 20+ tonnes.

People is how many people the vehicle is designed to seat, including the driver or pilot.

Cargo is how many tonnes or kilograms of cargo the vehicle can typically carry without suffering movement penalties. An ** indicates that the cargo area can be converted into passenger space at a ratio of 5 people per tonne.

Table 10-4: Vehicles

Vehicle	Speed	MB	Size	People	Cargo	Armour	Health Points	Skill
Automobiles								
Compact Car	160	-	1	4	100 kg	4	50	Driving (Car)
Mini-Car	120	-	1	2	50 kg	3	40	Driving (Car)
Passenger Car	160	-	1	5	200 kg	5	60	Driving (Car)
Pickup Truck	160	-	1	3	1 tonne	6	70	Driving (Car)
Race Car	300	+1	1	1	-	5	60	Driving (Car)
Sports Car	200	-	1	2	200 kg	4	50	Driving (Car)
Sport/Utility	160	-	1	6	200 kg	6	70	Driving (Car)
Stretched Limousine	160	-1	1	6	500 kg	5	60	Driving (Car)
Van	150	-1	2	2	1 tonne **	7	80	Driving (Van)
Motorcycles								
Dirt Bike	140	+1	0	2	-	3*	40	Driving (Motorcycle)
Motorbike	180	+1	0	2	50 kg	3*	40	Driving (Motorcycle)
Scooter	120	+1	0	1	25 kg	2*	30	Driving (Motorcycle)
Oversized Vehicles								
Big Rig	150	-2	3	2	10 tonnes	10	110	Driving (Big Rig)
Bus	120	-2	3	30-50	1 tonne	9	100	Driving (Big Rig)
Heavy Truck	150	-1	2	2	5 tonnes	8	90	Driving (Van)
Helicopters								
Combat Helicopter	300	+1	2	2	2 tonnes	10	80	Piloting (Helicopter)
Light Helicopter	200	+1	1	3	250 kg	4	50	Piloting (Helicopter)
Mini-Copter	120	+3	1	1	-	4	50	Piloting (Helicopter)
Utility Helicopter	200	-	2	2	2 tonnes **	7	80	Piloting (Helicopter)
Airplanes								
Combat Jet	2,500	+1	2	2	5 tonnes	16	100	Piloting (Jet Fighter)
Heavy Airplane	300	-3	3	4	40 tonnes **	11	120	Piloting (Heavy Airplane)
Light Airplane	350	+1	1	4	250 kg	4	50	Piloting (Light Airplane)
Ultra-Light	100	+1	0	1	-	2*	30	Piloting (Light Airplane)
Utility Tilt-Rotor	500	-	2	15	10 tonnes	10	100	Piloting (**)
Speed Boats								
Off-shore Racer	180	-	2	6	500 kg	7	80	Boating (Small Boat)
Recreational Boat	80	+1	1	3-4	100 kg	4	50	Boating (Small Boat)
WIG Boat	250	+1	2	6	1 tonne	4	80	Boating (Small Boats)
Military Ground Vehicles								
Armoured Personnel Carrier	70	-	2	13	2 tonnes	20	120	Driving (Truck)
Wheeled APC	120	-1	2	11	2 tonnes	15	115	Driving (Truck)
Tactical Hovercraft	100	-2	2	20	5 tonnes	20	140	Boating (Hovercraft)
VTOL Vehicles								
Air Car	320	+2	1	4	50 kg	4	50	Piloting (VTOL)
Air Van	300	+1	2	8	200 kg	5	70	Piloting (VTOL)

** Use Helicopter or Heavy Airplane depending on flight mode. Top speed is limited to 100 kph when in helicopter mode.

Armour is the number of damage points that the Armour stops. An * indicates that the Armour only protects the vehicle, not the driver or passengers.

Health Points indicate how much damage the vehicle can sustain before it ceases to function. The vehicle is not necessarily destroyed when its Health Points are reduced to zero — it has merely sustained enough damage to shut the engine down, hinder the control systems, or in some other way prevent the vehicle from working. For rules on destroying a vehicle, see Breaking Objects, page 135.

No range is listed, since all vehicles except the ultra-light and mini-copter can operate for 3-10 hours before requiring refuelling. The ultra-light's and mini-copter's endurances are under one hour. Modern vehicles use electric, hybrid, or fuel cell power plants with older models burning diesel, gasoline, or kerosene (jet fuel), as appriprate.

Automobiles

The basic motor vehicle of the 21st, and possible later centuries. Automobiles have four wheels and are normally powered by a gasoline internal combustion engine. Standard features on modern vehicles include headlights, seat belts, air bags, and air conditioning.

Compact/Passenger Car

An ordinary compact or mid-sized automobile. Cars are available in coupe (two doors, often with a hatch back and extra cargo space), sedan (four door), or station wagon (extra room in back, but reduced rear visibility for driver) body styles. Cost: $10,000+ (compact) to $14,000+ (passenger) USD. For an expensive luxury car, add custom options such as Big Engine and Luxury Interior.

Mini-Car

An sub-subcompact for use in congested streets of future urban sprawls. Usually a hybrid gas-electric vehicle. Cost: $4,000 USD.

Sub-Compact Car

A small, somewhat cramped passenger car. It seats four, but with a lot less comfort than a comparable mid-sized vehicle. It is easier to park, but not as robust. Cost: $8,000+ USD.

Pickup Truck or Sport/Utility Vehicle

A light truck with cab seating (2-3 people), off-road suspension, and four-wheel drive and either an open cargo bed (pickup truck) or extra passenger capacity (sport/utility vehicle). Standard military vehicles like the Hummer can be created by taking the SUV and adding various vehicle customisations. Cost: $20,000+ USD.

Race Car

A dedicated race car (such as a Formula 1 racer or funny car) with an aerodynamic body, a single seat, and very powerful engine. Such a vehicle is not "street legal." Race cars are "hangar queens" that require periodic maintenance every few hours just to keep their finely tuned engines and transmissions in working order. Cost: $100,000+ USD.

Sports Car

A car with good aerodynamics, a powerful engine, and superior transmission and suspension. Some sports cars carry two people, while others sacrifice already-meagre cargo space to carry an extra person or two in cramped back seats. Cost: $50,000+ USD.

Stretched Limousine

An oversized passenger car. It will usually have a number of posh features, such as a luxury interior. Cost: $50,000+ USD.

Van

A light panel truck or mini-van, with one or two big rear doors and sliding side doors. Use this template with appropriate customisation for ambulances. Cost: $15,000+ USD.

Motorcycle

A two-wheeled bike powered by a gasoline engine. Standard features include headlights and rear-view mirrors.

Dirt Bike

A motorbike designed for off-road operations. Dirt bikes include the Off-Road Suspension option (page 130) at no extra cost. Cost: $4,000+ USD.

Motorbike

A big bike with a reasonably powerful engine. A second person can usually be carried without much difficulty. Cost: $3,000+ USD.

Scooter

A small bike with an anaemic engine. Scooters are suitable for a single rider only. A minor Gadget. Cost: $2,000+ USD.

Oversized Vehicles

A big ground vehicle with six or more wheels, usually powered by a diesel engine rather than gasoline engine (diesel fuel is cheaper, and less flammable) although "green" models may use fuel cells. Standard features include headlights, seat belts, airbags, and air conditioning.

Big Rig

An 18-wheel tractor-trailer combination, with a powerful tractor cab designed to tow a big trailer. With trailer, a big rig may be 20 metres long. Pick one of these options for the cargo area: flat bed (open cargo), van (enclosed cargo), refrigerated ("reefer"), tanker. If the trailer is unhooked from the "fifth wheel" (this takes at least two rounds outside the vehicle to do this), the rig's speed can increase by 10-20 kph. Cost: $60,000+ USD.

Bus

A city, school, or excursion bus. In action series, these usually make their appearance when someone hijacks or plants a bomb on them. A typical bus seats 35-45 people (with plenty of standing and cargo room) and is about 10-15 metres long. Cost: $50,000+ USD.

Heavy Truck

A large truck, bigger than an ordinary van. Pick one of these options for the cargo area: flat bed (open cargo), van (enclosed cargo), refrigerated ("reefer"), tanker. A heavy truck may also be a cement mixer, dump truck, street cleaner, fire engine, etc. Cost: $30,000+ USD.

Helicopters

A rotary winged vehicle. Helicopters are usually powered by a gas turbine engine, and require a pilot's license to operate. They have a horizontal main rotor that provides lift and (by tilting the helicopter) propulsion, and a small vertical tail rotor to act as a stabiliser. A helicopter is capable of executing vertical takeoffs or landings, and hovering. Standard features include landing lights (treat as headlights), seat belts, and often air conditioning.

Combat Helicopter

A devastatingly offensive helicopter, typically used by military forces. This is for the airframe only: a combat helicopter in military service will normally extra vehicle customisations such as a turret mount, military radio, a TSA mast, ECM, and two-to-four heavy weapon mounts. Three major Gadgets. Cost: $10,000,000+ USD.

Light Helicopter

A small helicopter that can carry a couple of people. This is a typical news or police helicopter. Cost: $100,000+ USD.

Mini-Copter (Helicopter)

A small one-man single-seat helicopter with a folding rotor. The helicopter's armour does not protect the pilot, who has an open seat. It can take off or land on any rooftop, making it popular with urban assault units. The helicopter may be fitted with a light weapon mount for a small heavy weapon, such as a minigun or machine gun. Cost: $150,000 USD.

Utility Helicopter

A larger helicopter that is often a civilian version of a military troop-carrying model. These choppers are designed to carry a dozen people or a decent cargo load. Helicopters of this sort are often used as air ambulances. Cost: $1,000,000+ USD.

Airplanes

An airplane relies on wings for lift and a propeller or jet engine for propulsion. It requires a smooth, flat runway for takeoffs and landings. While airborne it must maintain a minimum speed (usually about 1/10 its maximum speed) to avoid stalling. Standard features include landing lights (treat as headlights), seatbelts, emergency parachutes, and often air conditioning.

Combat Jet

Military jets and bombers (such as the F-35 Joint Strike Fighter) are incredibly powerful machines used to assist ground assaults or carry out missions alone. This is for a jet without full equipment (such as a trainer or a military-surplus aircraft); jets in military service will add ECM, radar, military radio, and weapon mount customisations. Four major Gadgets. Cost: $50,000,000+ USD (sometimes exceeding $1 Billion USD).

Heavy Airplane

A large plane, often with two or four engines, which is used primarily to transport large numbers of people or cargo. Heavy airplanes often require longer runways in order to take off or land. Two major Gadgets. Cost: $10,000,000+ USD.

Light Airplane

A single-engine propeller-driven passenger airplane, capable of operating out of grass strips or landing on a smooth stretch of highway if necessary. Light aircraft are a favourite of drug runners. Use Pilot (Light Plane) Skill. Cost: $100,000+ USD.

Ultra-Light

A small one-man powered hang-glider that may be used for recreation or (with the engine turned off and gliding) for quiet assaults. A minor Gadget. Cost: $10,000+ USD.

Utility Tilt-Rotor

These resemble twin-engine turboprop airplanes with oversized propellers. Their engines are equipped with a swivel system that lets them rotate in flight from a horizontal to a vertical position, allowing the airplane to transition between high-speed conventional flight and helicopter flight for vertical takeoff, landing, and hovering. Their main disadvantage is that they are vulnerable to accidents (or enemy fire) during the delicate period (two rounds) when they are transitioning between forward and vertical flight: they cannot manoeuvre or make defence rolls, and any Skill checks are made at an extra -2 penalty. The Utility Tilt-Rotor is a tactical transport designed to carry two dozen passengers (or 12 stretchers), or up to 10 tonnes of cargo. These aircraft are often used as military assault transports. Three major Gadgets. Cost: $20-80 million USD.

Speed Boats

Boat designs come in a variety of shapes, depending on their desired function. Speed boats have sleek hull designs and powerful engines in order to travel at high speeds. Standard features include a VHF radio (treat as a CB radio), convertible tops, running lights, and lifejackets.

Offshore Racer

These large race boats, usually measuring between 10 and 18 metres in length, are used in offshore racing. Smugglers often utilise these sleek, fast boats to transport illegal goods. Cost: $80,000+ USD.

Recreational Speed Boat

A medium-sized powerboat, usually with an outboard engine. These boats are often used for water-skiing. Cost: $10,000+ USD.

Wing-in-Ground-Effect Boat

A WIG boat is a specially designed sea plane that flies only 3 to 6 m above the water's surface, using its wing-body aerodynamics to create a cushion of air that reduces drag and fuel consumption compared to a conventional aircraft. They are also called Ekranoplanes, Ground-Effect Planes, or Flarecraft. Cost: $150,000 USD.

Military Ground Vehicles

These are deployed for riot control or combat. They are large enough to carry both a light weapon mount and either a heavy weapon mount or turret mount. The Gadget costs are for the basic vehicle: those in military service will add, at minimum, a military radio and light weapon mount accessories; a tactical sensor array is very common on front-line combat vehicles.

Armoured Personnel Carrier (APC)

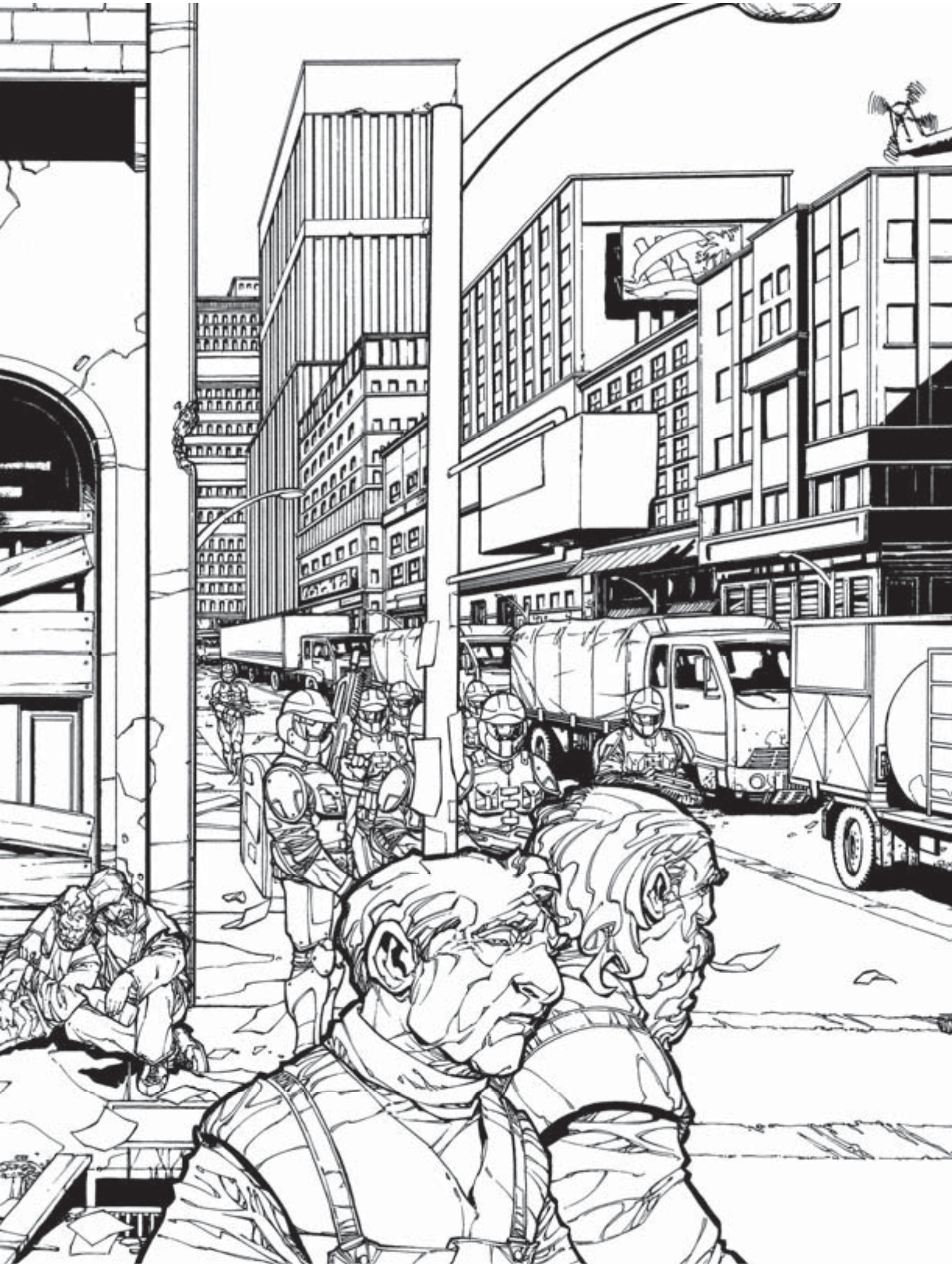
A lightly armoured, full-tracked, air-transportable personnel carrier designed to carry and protect personnel and certain types of cargo. Three major Gadgets. Cost: $500,000+ USD.

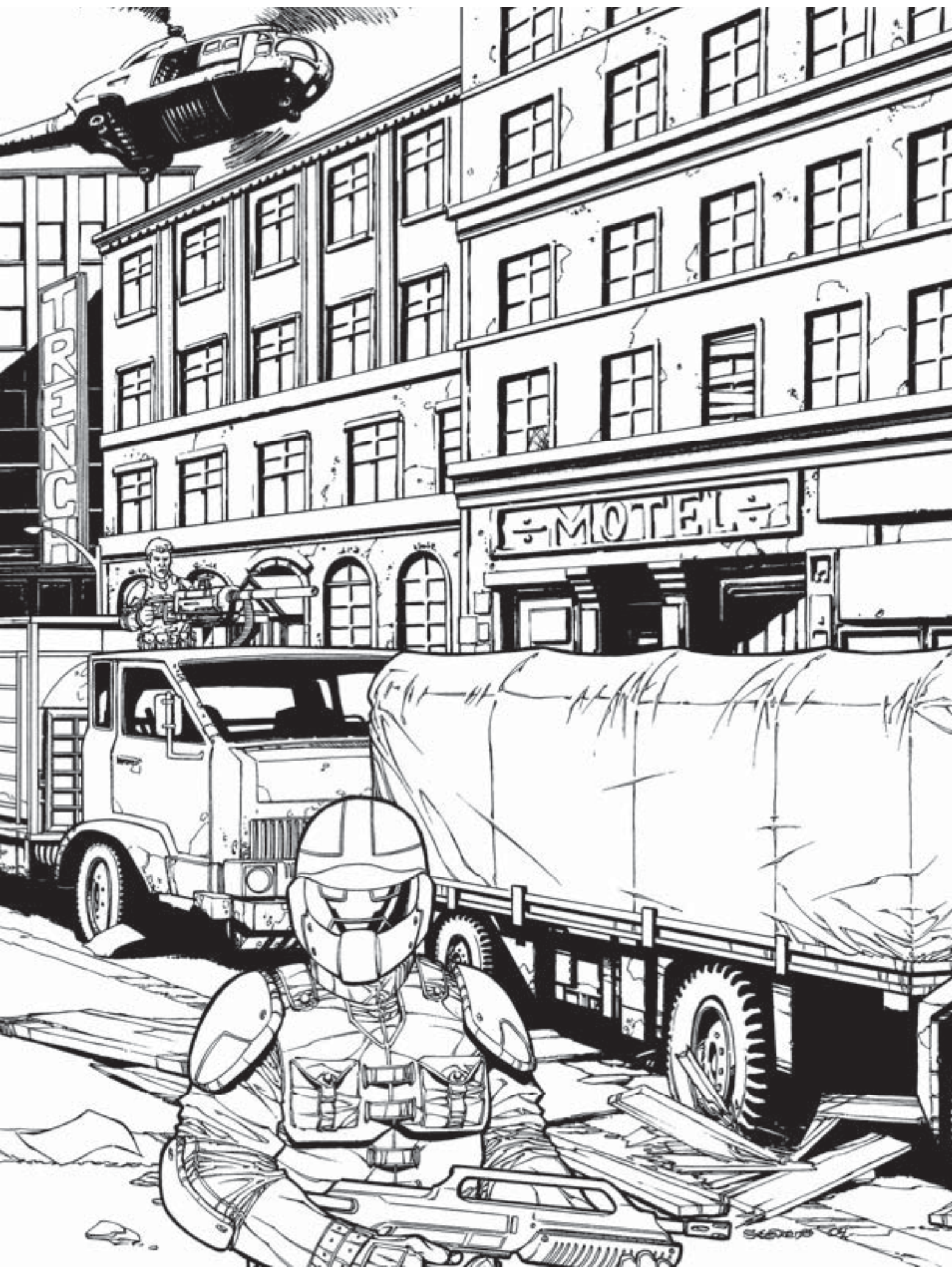
Tactical Hovercraft

Hovercraft float on a cushion of air, allowing them to cross land and water with equal ease. They are powered by gas turbine engines driving ducted fans or sometimes jet engines. Their main disadvantage is an inability to cross rough terrain such as woods or broken ground, or to operate in heavy seas; the lack of ground friction also makes them tricky to manoeuvre. This is a robust armoured hovercraft with a rear cargo ramp. It is used by coast guard patrols, marines, pirates, and smugglers. Two major Gadgets. Cost: $300,000 USD.

Wheeled APC

An armoured six- or eight-wheeled armoured personnel carrier. It has a crew of two and can carry a squad of eight cops or troops and their gear, or half as many stretchers. A top hatch and a powered rear ramp provide access to the interior. Wheeled APCs are favoured for urban riot-control, tactical response and peacekeeping, since they are cheaper to maintain (and less destructive to roads) and have a greater highway speed. Three major Gadgets. Cost: $300,000+ USD.




TRENCH
MOTEL

VTOL Vehicles

A VTOL is a wingless aircraft that uses thrust-deflection or lift fans to allow the aircraft to fly at 300-500 kph, hover in mid-air, or take off and land vertically.

Air Car

This is a sporty, streamlined automobile with a set of tail fins and four pod-mounted ducted fans or jet engines. The car can also move along the ground at 50 kph using conventional wheels. Cost if mass-produced: $100,000 USD.

Air Van

The Air Van is a larger version of the Air Car that resembles a streamlined van or mini-bus with four turbofan engines. Air Vans are used for everything from medical evacuation to SWAT team deployment. Two major Gadgets. Cost if mass produced: $500,000 USD.

Customising Vehicles

Options can be added to different types of vehicles to enhance performance or give them additional capabilities. Unless otherwise noted, each accessory counts as one minor Gadget and can only be taken once.

Note that Engine Rebuild, Turbocharger, and Big Engine have approximately the same effect in game terms. A fast vehicle may have all three options assigned, however.

Table 10-5: Vehicle Customisations

- Active Optical Camouflage
- Airfoils
- Armour
- Artificial Intelligence (A.I.)
- Big Engine
- Biohazard Unit
- Burglar Alarm
- Citizen's Band (CB) Radio
- Consumer Electronics
- Convertible Top
- Door Mount
- Electronic Countermeasures
- Engine Rebuild
- Extra Capacity
- Extra Endurance
- Furnishings
- Global Positioning System
- Hidden Cargo Space
- Improved Brakes
- Improved Shocks
- Lights and Siren
- Luxury Interior
- Manoeuvrable
- Manual Transmission
- Mobile Command Centre
- Nitrous Oxide Tank
- Off-Road Suspension
- Police-Band Radio
- Pontoons
- Radar Detector
- Rocket Engine
- Rotating License Plate
- Sidecar
- Slick Tires
- Smoke Screen/Oil Slick
- Special Tires or Puncture-Resistant
- Stealth
- Stretchers and Medical Equipment
- Stripped
- Sun Roof
- Supercharger
- Tactical Sensor Array
- Teleoperation Link
- Tow Winch
- TSA With Mast-Mounted Sight
- Trailer
- Turbocharger
- Turret Mount
- Weapon Mount — Light
- Weapon Mount — Heavy

Active Optical Camouflage Coating

A vehicular version of the personal system — see page 110. Major Gadget.

Airfoils

An aerodynamic feature (airdams, spoilers, etc.) that improves traction by increasing the downward force on a car. Gives a +1 bonus to any Drive (Car) Skill check at speeds over 100 kph. Airfoils are available for any automobile and some exceptionally fast boats.

Armour

This can be assigned more than once. The vehicle is retro-fitted with armoured panels, Kevlar inserts, and bullet proof glass on the windows (or for already armoured military vehicles, this represents extra panels of appliqué or reactive armour). Each time the armour is assigned, the extra weight reduces top speed by 10 kph but increases the vehicle's Armour Rating by 5. Armour is available for any vehicle except an ultra-light aircraft, and counts as two minor Gadgets.

Artificial Intelligence (A.I.)

This can be assigned more than once. For one major Gadget, a vehicle can be given one Stat Value in Mind or Soul to a recommended maximum of 10 for each Stat. The A.I. customisation enables a vehicular computer to achieve a limited form of self-operation and (in a few instances) self-awareness. For these purposes, the Mind Stat represents processing power and database/knowledge access while the Soul Stat represents consciousness, self-determination, and free will. If an A.I. assists a character in the completion of a task, one-half the A.I.'s relevant Stat is added as a bonus to his or her Skill check (or Stat check). In many cyberpunk settings, self-aware A.I. will be limited to fairly large and expensive computers. If so, vehicles given the A.I. Attributes should therefore have low Soul values, unless there is room in them for a supercomputer.

Big Engine

An upgraded engine, such as a big V8 in a passenger car, or a V12 in a sports car. The engine often differentiates an ordinary passenger car from a luxury model, or a basic sports car from a racer. A big engine adds 20 kph (or for aircraft, +10%) to the top speed of any vehicle.

Biohazard Unit

A portable biohazard facility for transporting infected or contaminated subjects. The passenger compartment of the vehicle is sealed off, a filtration and overpressure system is added, and all windows/doors are replaced by a single airlock. Biohazard sensors are installed to warn of any leaks. The safety systems will only fail if the vehicle is actually reduced to 0 Health or less as a result of damage — ordinary penetrations (such as a bullet fired through the vehicle wall) are handled by the overpressure system. A Biohazard Unit reduces passenger capacity by two; it is often combined with a couple of stretcher pallets.

Burglar Alarm

If a door, trunk, or window is opened without the proper key, an alarm will sound to alert (and annoy) everyone in the vicinity. Defeating the alarm requires a Mind-Based Electronics (Security) Skill check. Marginal failure means the thief realises he or she cannot disarm it while a worse failure means will trigger the alarm.

Citizen's Band (CB) Radio

With a range of a few miles, truckers favour CBs for exchanging information on road conditions, speed traps, and general gossip. Unlike a personal cell phone, a CB broadcasts to everyone in the area — it is not useful for private communication, but is great for distress calls. A similar option can be taken for taxi dispatcher radios. A CB radio can be installed in any vehicle.

Consumer Electronics

These electronic gadgets include small TV sets, a vehicular computer, fax machines, etc. The cyberpunk equivalent of a CD or MP3 player in a car can be considered a fairly mundane item. Electronics can be added to any vehicle, provided the size seems reasonable.

Convertible Top

The vehicle with this option has a removable or retractable plastic, fibreglass, or fabric top. Removing the top gives a better view and nice breeze, but also means that the driver and passengers are now "partially exposed," and are at the mercy of the weather. Exposed occupants are also completely unprotected from overhead attacks and can be attacked (bypassing vehicle Armour/Health Points) more easily from the side or rear (-4 attack check penalty to ignore the car's Armour). On the plus side, those occupants can also fire out of the vehicle without any difficulty, and jump in or out more easily. This feature is available for automobiles; recreational speed boats and most offshore racers automatically possess this option.

Door Mount

This option is a post and bracket for mounting a machine gun, minigun, railgun, sniper rifle, or sniper laser, out a helicopter's or van's open side door. The Static Disability (preventing fire while moving) is eliminated when the weapon is installed on a vehicular door mount, but it can only fire out to one side of the vehicle.

ECM (Electronic Countermeasures)

This advanced defence system enables the vehicle to avoid detection by radar and other sensors. Any attempt to electronically detect the vehicle (except through the basic senses such as sight or hearing) or attack it with a homing weapon incurs a -6 penalty. This system also includes a radar/laser detector that will sound a warning tone if the vehicle is scanned by military or police radar or laser detection systems. Major Gadget.

Engine Rebuild

A rebuild is major custom upgrade to the engine, rather than just simply increasing its size. In a car, this may involve removing and completely cleaning the existing system (including "hot tanking" the engine block in a chemical bath to remove grime), then adding various modifications (known as "blueprinting"). Other engine "buzz-words" include forged dome pistons, tuneable fuel injection, strengthened rods and bearings, adjustable or hot cam socket, tubular headers, custom intake manifolds, big valves, and a bored-out throttle body. This option adds 20 kph (or for aircraft, +10%) to the top speed of any vehicle.

Extra Capacity

Some vehicles are customised to contain more cargo or passenger capacity. Each time this option is assigned, the capacity of the vehicle is doubled. Capacity for one passenger is approximately equivalent to a quarter-tonne of cargo space.

Extra Endurance

Most vehicles can operate for 3-10 hours before requiring refuelling (one hour for an ultra-light). Each time this option is assigned, the maximum time between refuelling is doubled.

Furnishings

Furnishings include a mini-bar, mini-fridge, kitchenette, chemical toilet, bunk bed, etc. For larger furnishings (kitchenette, bunks, etc.) each one added also requires replacing one or two seats, depending on the size. Furnishings can be added to any vehicle with Size 2 or more.

Global Positioning System (GPS)

This option uses satellite systems to provide precise navigational co-ordinators, which prevents the driver from becoming lost. Naturally, it is still possible to miss a turn through human error. A GPS can be added to any vehicle.

Hidden Cargo Space

This space is often used in vehicles that are designed to smuggle goods across borders or past highway patrols. Up to 10% of the vehicle's cargo capacity can be considered "hidden" under fake panels and bogus fixtures. Hidden space can be added to any vehicle with cargo capacity.

Improved Brakes

This option includes high quality brakes, drag chutes, or spiked tires that allow the vehicle to stop faster than normal. Those breaks provide a +2 bonus to Drive Skill checks on any manoeuvre where sudden, sharp deceleration is important. Improved breaks can be added to any ground-based vehicle.

Improved Shocks

Some ground vehicles have high quality or adjustable shock absorbers or springs, which provide an extra +1 bonus to Drive Skill checks in any circumstance where the suspension would be important (such as crossing over obstacles).

Lights and Siren

Any vehicle can be fitted with a noisy siren and flashing lights. This option can also provide a powerful spot search light.

Luxury Interior

Leather upholstery, lots of chrome, extra head room, or other items on a vehicle are a sure way to impress someone special. A plethora of luxury options are available for most vehicles.

Manoeuvrable

A vehicle with Manoeuvrable has superior handling characteristics that give it a bonus of +1 to Initiative each time it is assigned. This bonus is cumulative with the vehicle's Manoeuvre Bonus (see Table 10-3: Vehicles).

Manual Transmission

There are two types of transmissions: manual and automatic. An automatic transmission is assumed to be standard issue for automobiles (but not other vehicles), and means that the gear mechanism changes by itself. In a manual transmission, the driver must shift the gears on his or her own, usually with a stick and the clutch pedal. In the case of automobiles, a manual transmission gives an additional -1 penalty to characters who are trying to do something else while they drive, such as shoot a gun. If, however, a vehicle with an automatic transmission and one with a manual transmission are competing in a race, the GM should give any driver who has both the Drive Skill and a manual transmission an extra +1 bonus to reflect the greater speed control the manual transmission provides. This is a mundane option for automobiles.

Mobile Command Centre

A portable command centre contains a large "operations board" video display, a communications console, and an ultra-secure satellite communication link. It requires at least one person assigned to operate the system and takes up two seats worth of space.

Nitrous Oxide Tank

This option adds a nitrous oxide tank and push-button injection system. Nitrous oxide ("laughing gas") can be injected into the engine, which releases more free oxygen and improves cylinder pressures and engine temperature. This action allows extra fuel to be burned in a more controlled fashion, resulting in a quick

power boost for a short sprint. A single injection adds 30 kph to speed and +2 to Initiative on any round it is used. A tank can be used for up to five rounds before depleting the nitrous oxide bottle. Available for automobiles, motorcycles, light airplane, speed boats, or oversized vehicles.

Off-Road Suspension

A raised suspension and special tires allow the vehicle to drive cross-country at two-thirds of the on-road top speed. The extra suspension weight also means -5 kph to road speed. For airplanes, this option corresponds to Rough-Field Landing Gear that lets the aircraft land without a proper runway. Off-road suspension is available for any wheeled ground vehicle or light aircraft. It is already standard for wheeled or tracked APCs.

Police-Band or Tactical Radio

This radio allows the driver to listen to, and communicate on, police and emergency frequencies, or on military frequencies (depending on the radio). This radio is available for any vehicle.

Pontoons

Pontoons allow an aircraft to land in, or take off from, water. The extra air drag reduces the aircraft's top speed by 5 kph. Pontoons are available for any helicopter or light airplane.

Radar

A long range radar that can track aerial objects out to 25 km or objects on the ground or water out to the horizon. Successful detection may require a Computers (Electronic Warfare) Skill check. It can be taken multiple times; each adds 25 km to aerial range.

Radar Detector

A detector can warn the driver if a police radar trap is within a few miles. Recent models also detect police laser scanners. A radar detector capable of detecting military radar or laser scanners is included in ECM.

Rocket Engine

The vehicle is outfitted with a rocket engine (either replacing propellers for an airplane or as a booster rocket for wheeled ground vehicles). The engine drastically increases the speed of the vehicle by an additional 100 kph but the expensive modification counts as a major Gadget. Additionally, for ground based vehicles, the driver incurs a -2 penalty on all Drive Skill checks while the rocket booster is activated. Available for any automobiles, motorcycles, light airplane, speed boats, or oversized vehicles (but not tracked vehicles such as the APC).

Rotating License Plate

With a flick of a switch, the license plate can flip to reveal an alternative identity for a vehicle. This illegal modification is available for any automobile or oversized ground vehicle.

Sidecar

Sidecars are attached to motorcycles, allowing an extra person to ride. This option reduces the top speed by 10 kph. A motorbike sidecar requires three rounds to attach or detach.

Slick Tires

A vehicle may be outfitted with flat racing tires (no grooves) for better traction. Slicks give a +1 bonus to any Drive checks on smooth, dry tracks, but unfortunately have a poor grip on wet roads: an additional -2 penalty is assigned to any penalties suffered by a vehicle for the weather conditions. Slicks are available for any wheeled ground vehicle except a wheeled APC.

Smoke Screen/Oil Slick

This option releases smoke behind the vehicle, obscuring view in a cloud about 10 metres in diameter. The screen will last for one to six rounds depending on the wind. Alternatively, it could act as an oil slick, which creates a slippery area that hampers the control of any vehicle driving through it. A driver may avoid the oil slick if he or she spots it in time. At GM's option, a character caught in a smoke screen/oil slick might be required to make a successful Driving Skill check to avoid an accident. A fully charged smoke screen/oil slick is good for three rounds of use, and is available for any automobile or oversized ground vehicle.

Special Tires or Puncture-Resistant

Tires may be designed with various special abilities. These include solid puncture-resistant tires that run while flat (halve penalties for losing a tire) or special snow tires (reduce or negate any penalties that the GM may assign for manoeuvring on snow or ice). Any ground based vehicle can be equipped with special tires.

Stealth

The vehicle's skin and structure incorporate Radar Absorbent Material (RAM) to make it harder to detect via radar. Its engine is equipped with an infrared suppression system to reduce its heat emissions. This halves the distance at which it can be detected by thermal/infrared and radar sensors; any checks made to detect the vehicle with such sensors are at -4. It has no effect on visual detection or telescopic optics. This is cumulative with ECM. Stealth can be taken twice, doubling the effect.

Stretchers and Medical Equipment

This option differentiates ambulances from regular vehicles. Each stretcher replaces two seats for passenger capacity purposes. Medical equipment can be added to any van or utility helicopter.

Stripped

These vehicles are carefully stripped down to improve their power to weight ratio. In a car, this might mean removing glass from side windows (replacing them with nets), taking out the headlights, stripping out the doors (the driver will now climb through the window), modifying the seats, and otherwise removing items that are required for regular driving but unnecessary or unsafe for a high-speed race. Stripping a vehicle will add 20 kph to top speed if the vehicle is still "street legal" or 30 kph if enough stuff is removed so that the vehicle no longer meets minimum safety standards. All vehicles, except an ultra-light, can be stripped.

Sun Roof

A sun roof is an open hatch in the top of the vehicle, which can be added to any car or van. Characters who lean out the opening can be attacked, but receive a benefit for partial cover (-4 penalty to the attacker's check). A sun roof is available for any automobile or oversized ground vehicle.

Supercharger

A supercharger is designed to increase an engine's power. The supercharger uses a belt-and-pulley mechanism linked to an engine's crankshaft. It functions by forcing extra air and fuel into the engine's combustion chambers. A supercharger adds 20 kph to top speed and the extra acceleration gives a +2 Initiative bonus. Superchargers count as two minor Gadgets, and are available for any automobiles, motorcycles, light airplane, speed boats, or oversized vehicles.

Tactical Sensor Array (TSA)

This is a small rotating sensor turret that mounts an infrared thermal imaging night vision system (range 5 km), a telescopic daylight TV camera (with 10x optical zoom), and a laser rangefinder. It allows the user to see clearly in the dark or through ordinary smoke or fog, and gives a +1 bonus on any attack check, increased

to +2 if an extra round is taken to aim at the subject, and eliminates any penalties for aiming or firing at night, but only if using weapons built into the vehicle (on weapon mounts or in a turret).

TSA with Mast-Mounted Sight

This takes a standard TSA and adds a powerful imaging radar, mounting the combined system in a telescoping mast (if on a ground vehicle) or atop the main rotor assembly (on a helicopter). The system has a 15 km range and provides the same bonuses as the TSA, or an extra +1 if using the radar. (The radar can be detected by a radar detector at up to twice its range).

Teleoperation Link

This allows a radio-equipped vehicle to be teleoperated. It incorporates appropriate video and navigation sensors to allow remote steering — use the rules for teleoperation of robots. If the vehicle also has artificial intelligence, decide whether the teleoperation overrides the A.I. or vice versa. In some cyberpunk worlds, many civilian road vehicles may be designed to be teleoperated by a central computer system.

Tow Winch

A winch allows the vehicle to tow other vehicles of equal or smaller size (similar to pulling a trailer — see Trailer below). A winch is available for any pickup truck or oversized ground vehicle.

Trailer

A trailer lets the vehicle tow extra cargo. A typical trailer is designed for a car or van and can hold a half-tonne (for a car-sized trailer) or 1-2 tonnes (for a larger trailer). The vehicle's top speed will be reduced by 25 kph and it will suffer a -1 Initiative penalty while towing the trailer. Trailers can be added to any automobile or oversized vehicle.

Turbocharger

This device uses the engine's exhaust stream to drive an air compressor, which increases the engine's power output. This extra power adds 20 kph to top speed, but there is no extra Initiative bonus, due to "turbo lag" — the delay it takes for the turbocharger to respond. Available for any automobiles, motorcycles, light airplane, speed boats, or oversized vehicles.

Turret Mount

A powered 360-degree rotation (180-degrees if on a helicopter or tilt rotor) remote-controlled turret. It can be attached to the top of an APC, wheeled APC, or tactical hovercraft or under the nose of a combat or utility helicopter or tilt rotor. It can mount up to four heavy weapons and/or support weapons, or a single heavier ordnance weapon (such as a water cannon or 30mm autocannon) plus a single support weapon.

Weapon Mount – Light

A weapon mount is a bracket or pintle for mounting a single support weapon or heavy weapon on the vehicle's roof, turret top, deck, or the underside of a wing. Any vehicle may have a single light weapon mount, except a scooter. Oversize vehicles, military ground vehicles, airplanes or helicopters (other than the ultralight) may have two; combat helicopters or combat jets may have up to four light weapon mounts.

Weapon Mount – Heavy

This mount is used for mounting ordnance-class weapons. It can carry the same weapons as a turret mount but only firing forward. Only oversized vehicles or the same vehicles that can have a turret mount can install a heavy weapon mount. Exception: combat helicopters or jets may have up to four heavy weapon mounts.

Vehicles as Items of Power (Option)

Vehicles — including powered suits — can be easily designed using the Item of Power Attribute.

Default Vehicles

Since *Tri-Stat* is an effects-based RPG system, a default vehicle is assumed to have many similar traits as a character – arms and legs, natural healing ability, human sized, etc – unless specific Attributes or Defects are assigned. Of course, many vehicles are not anthropomorphic, and can be anything from a sailing ship to a sleek racing bike to a starship. Use the Points granted by Item of Power to create the vehicle.

A vehicle is created just like a character, with two exceptions that differentiate it from someone created via the Servant Attribute: it has no Stats and its occupancy and land speed are determined as shown below.

A vehicle must be piloted by a character. The vehicle's operator uses his or her Stats when the vehicle must make a check. If a vehicle has multiple occupants, only one operator can control it at any one time. Other passengers are just that, unless the vehicle has specific Attributes that are assigned to other crew (see below).

A standard vehicle is assumed to be able to carry one person (see Occupancy). It is small enough that any damage that penetrates its armour also applies to the occupant, although his or her own armour will offer some protection. This might be a form-fitting suit, a racing car, or other tight-fitted design.

Customisation

Certain vehicle customisation options may be added to a vehicle. In particular, Extra Capacity is extremely useful. Since they are actually built into the vehicle, they count as Features rather than Gadgets: each customisation option that counts as a minor Gadget is a single Feature; each one that counts as a major Gadget counts as four Features. In particular, the Manoeuvrable, Extra Capacity, and Extra Endurance options are appropriate.

Attributes

A vehicle may be given just about any Attribute. In particular, the Flight, Land Speed, and Water Speed Attributes will allow it to operate in various environments. Vehicles will usually not be assigned the Speed Attribute, but it may be appropriate for certain types of designs, such as a suit that enhances reflexes.

A vehicle's Attributes are used by the operator and occupants when dealing with the world outside the vehicle. Attribute Attacks and other Attributes that affect specific targets can only be used by one of the vehicle's occupants (see Alternate Crew). Other Attributes, such as Adaptation, will protect the occupants along with the vehicle itself.

Attributes that a vehicle has do not usually stack with those of a character. If a vehicle has Flight Level 1 and so does its operator, this does not give the vehicle Flight Level 2. The GM may make exceptions where it seems appropriate (such as Armour).

Armour and Health

Armour and Tough are common Attributes to select. A vehicle should usually be given multiple Levels of the Tough Attribute to give it Health Points equivalent to similar vehicles on page 189.

Occupancy

A standard vehicle is normally assumed to have a capacity of one occupant. If it can carry more, give it Features (Extra Capacity), which works just like the Extra Capacity vehicle customisation (each Level doubling capacity; people can be traded for 250 kg cargo).

Endurance

A vehicle is normally assumed to be able to operate for 3-10 hours. If it requires more frequent refuelling or maintenance, give it a Special Requirement; if it requires less, give it Features (Extra Endurance), which works just like the vehicle customisation feature, each Level doubling this time.

Manipulation

If the vehicle can manipulate things, giving it equivalent levels of Superstrength is a good idea. The operator's own Body is used for Body checks, modified as usual by Superstrength.

Alternate Crew

Attributes are usually used by a single operator but may be assigned to other crew when the vehicle is designed. For example, a spy craft might be built with the Heightened Senses (Radio) and Sensory Block (Radar) Attributes, with one assigned to the "cipher" and the other to the "communications officer." Occupants other than the primary operator can only attack from within a vehicle if it has additional Special Attacks that are assigned to them. If another gunner uses a vehicle's weapon, the operator cannot use it in the same round.

Vehicular Computers

Vehicle computers can be simulated by giving the vehicle the Highly Skilled Attribute. For play balance, it is suggested that a vehicle not be able to grant more than 2 Levels to its operators. Optionally, a vehicle could be given the A.I. customisation (page 128).

Vehicle Defects

A vehicle can be given Defects to reduce its cost. The effects of these Defects only apply when the vehicle operator or other occupants are trying to manipulate, perceive, or affect the outside world. For example, if a vehicle has Sensory Impairment (to vision), the occupants cannot see out. They can still see normally inside the vehicle. Similarly, Physical Impairment (no limbs) means the vehicle has no ability to lift, punch, kick, and so on, but doesn't affect the driver if he or she wants to scratch an itch or pull out a cell phone.

Physical Impairment

Most vehicles will have Physical Impairment (No Limbs) (3 BP) and Physical Impairment (Cannot Heal Naturally) (1 BP).

Mental Defects

Any Defect that assumes the vehicle has a Mind, Soul, or personality is inappropriate unless it also extends to the occupants. Thus, Blind Fury, Significant Other, or Recurring Nightmares would not fit unless (for example) the vehicle has some form of neural interface system that influences its crew's mentality, a concept that does occur in some cyberpunk anime, for example.

Ownership

The Owned Defect is not normally appropriate to a vehicle. Instead, the character (not the vehicle!) should take the Conditional Ownership Defect linked to Item of Power.

Social Defects

Defects like Famous (the vehicle is well known) or Wanted can be assigned to a vehicle.

Awkward Size

For realism's sake, a vehicle should have sufficient Levels of Awkward Size Defect to create a large enough vehicle to reasonably fit everyone or everything it carries inside (GM's option). Likewise, a vehicle should only have Diminutive if the standard occupants are appropriately small.

Required Skill

After the vehicle is designed, assign the vehicle a required Skill (for example, Driving if it has Land Speed, or Piloting if Flight, or Boating if Water Speed). This is the Skill used to operate it. A character may operate a vehicle without having the appropriate Skill, if the GM believes it is relatively simple (such as driving a car). Some vehicle may require multiple Skills for different functions such as sensors.

• 4X4 OFF-ROAD VEHICLE •

For players who wish to create ordinary vehicles using Item of Power (perhaps to use them as a baseline to create more complex designs) here is an example of a tough military-style, four-wheel-drive, off-road vehicle (such as a HMMWV):

Attributes

Item of Power 2

Item of Power (4 x 4 vehicle) Attributes

Armour 1 (-1; Thin Area), Features 3 (Extra Capacity x3), Land Speed 5 [125 kph, Restriction (2/3 speed off road; 1 BP)], Tough 4

Defects

Awkward Size -2, Physical Impairment (No limbs) -3, Physical Impairment (Cannot heal naturally) -1, Weak Point (Gas tank) -1

Final Cost: 10 Points or Item of Power Level 2 or two major Gadgets (see Designer's Note: Downgrading Items of Power).

Downgrading Items of Power

The use of Item of Power to design vehicles allows them to be more precisely described, but they can sometimes come out a bit more expensive in terms of Character Points than vehicles purchased as Gadgets. Nevertheless, GMs may sometimes wish to build mundane vehicles – like the sample 4 x 4 – as Items of Power. Under this guideline, if a vehicle is easily commercially available, each Level of Item of Power that would be required is downgraded to a major Gadget. Thus, the 4 x 4 counts as two major Gadgets instead of a Level 2 Item of Power.

• Gyrostabilised Skateboard •

This is a skateboard built with cyber-age technology – gyrostabilised smart wheels, frictionless bearings, polymer-laminate construction, etc. that allows a very high top speed. The skateboard's top speed can only be achieved on paved roads and with a physically fit rider (who "powers" the board).

Attributes

Item of Power 1

Item of Power (Gyrostabilised Skateboard) Attributes

Armour 1 [Reduction (-2; Rider unprotected)], Features 3 [Appearance (Brilliant racing stripes), Frictionless Bearings (Allows speeds up to Body x 12 kph on flat, smooth surface), Gyrostabiliser], Tough 1

Final Cost: 2 Points or Item of Power Level 1 or one major Gadget

• Powered Suit •

This is a sealed suit of articulated powered armour that amplifies the wearer's own muscles, making him or her the equivalent of a combat cyborg or battle robot. The suit clamshells open, allowing the wearer to step into it; it also has a quick-release explosive bolt system if he or she needs to remove it in a hurry. It is armed with a short-barrel railgun that plugs into its own power supply and has a heads-up targeting display; its arm muscles possess extra hydraulic or myo-electric augmentation to deliver a powerful blow in hand-to-hand combat. In some cyberpunk settings (especially anime-influenced ones), urban SWAT teams, special ops troops, or mercenaries may be assigned such equipment.

Attributes

Item of Power 7

Item of Power (Powered suit vehicle) Attributes

Adaptation 2 (Noxious gases, Vacuum), Armour 3 (-1; Thin area), Features 1 (Minor Gadget: Pocket com), Heightened Senses 2 (Infravision, Radar), Jumping 1, Special Attack "Rail Gun" 3 (40 Damage, Accurate, Penetrating: Armour, Hand-Held), Special Attack "Armoured Fist" 1 (40 Damage, Melee, Muscle-Powered), Special Defence 3 (Air x2, Flare attacks), Superstrength 1, Tough 2

Defects

Awkward Size -1, Physical Impairment (Cannot heal naturally) -1, Weak Point -1

Final Cost: 35 Points or Item of Power Level 7 or seven major Gadgets.

Table 10-6: Armour and Protective Devices

Armour Type	Armour Value	Penalties
Leather Jacket	2	None
Soft Body Armour	8	-2 on Body-related checks*
Tactical Armour	16	-4 on Body-related checks*
Biohazard Suit	1	-4 on Body-related checks*
Skinsuit	6	None
Flex Armour	16	-1 on Body-related checks*
Sealed Combat Armour	20	-3 on Body-related checks*
Space Suit	4	-4 on Body-related checks*
Shields		
Tactical Shield	20	Requires one free hand to use, -2 on Body-related checks*

* The penalties for armour and shield only extend to Body-related checks requiring agility, endurance and running speed.

Body Armour and Protective Devices

Body armour is commonly worn in cyberpunk worlds by people expecting trouble, although it is usually considered rude to wear it in social situations. The most sophisticated armour makes use of nanomaterials and advanced alloys and incorporates woven-in electronics and smart materials that make it cool and comfortable to wear. Most armour only covers some of the body, leaving the face and often other extremities unprotected. An attacker can aim for an unprotected spot in exchange for suffering a penalty on his or her attack check (see Called Shot to Partial Armour, page 93). The Armour values listed in this section represent average-quality construction and materials. Shoddy workmanship, poor construction techniques, or weak materials can penalise the given Armour values by -1 to -4. Exceptional workmanship, advanced construction techniques, or resilient materials can increase the given Armour values by +1 to +4.

Leather Jacket or Riding Suit

This mundane item stops 2 damage from melee attacks or concussion damage.

Soft Body Armour

This armour is a light-weight ballistic-fibre "flak jacket" or "bullet proof vest." The armour works by catching the bullet in fibres and rapidly distributing the impact energy, often turning a potentially lethal penetration into a bruising blow. Armour is usually made of poly-aramid plastic fibres (Kevlar or Twaron) or extended-chain polyethylene (Spectra). A typical vest subtracts 8 from the damage inflicted on the character, but can be worn concealed under a jacket or coat. It is cumbersome, however, and penalises the wearer with a -2 penalty on Body-related checks relating to agility and running speed. Spotting the armour requires a Mind Stat check; it will be obvious if anyone does a pat-down search. Minor Gadget.

Tactical Armour

This armour is a heavy armoured outfit (with a helmet) of the sort worn by SWAT teams and soldiers. It consists of a rigid ballistic jacket, usually made of composite material such as Spectra Shield (Spectra fibres held in a special Kraton resin), sometimes with ceramic or metal plate inserts. The armour is resistant to nearly all pistol fire and some less powerful rifle rounds. Tactical armour cannot be concealed — everyone seeing the character will know he or she is wearing body armour. Tactical armour is uncomfortable to wear all the time, and characters will not be able to rest and relax while wearing it. Someone who wears the armour for several hours on a hot day may have to make an unmodified Body Stat checks to avoid passing out from heat stroke. Tactical armour subtracts 16 from the damage inflicted to the wearer. The armour requires at least three rounds to strap on or take off, and is sufficiently heavy that Body checks requiring agility, endurance and running speed suffer a -4 penalty. Major Gadget.

Biohazard Suit

A lightweight "space suit" for operations in a "hot" environment. It protects the wearer from chemical, biological, and radioactive fallout contamination (as per Adaptation). It also provides a minimal level of armour, subtracting 1 from the damage inflicted to the wearer. The suit is light weight but clumsy (-4 to all Body Stat checks requiring agility, endurance and running speed) and very hot: if worn for several hours, an unmodified Body Stat roll is required to avoid passing out from heat stroke. Minor Gadget.

Skinsuit

A skin-tight body stocking of advanced design, using nanomaterials or biomaterials such as genetically-engineered goat-spider silk coated in shear-thickening fluid. It fits like a glove and does not encumber the wearer or penalise physically-oriented skill checks. It subtracts 6 from the damage inflicted. Major Gadget.

Flex Armour

This is similar to tactical armour but is made of an advanced "liquid armour" nanofibre. The key component is a shear thickening fluid composed of hard silica nano-particles suspended in a liquid (such as polyethylene glycol). This combination of flowable and hard components results in a material that during normal handling is flexible and flows like a liquid, but once a bullet or other fast-moving object hits the vest, it transitions to a rigid material, which prevents the projectile from penetrating. This "smart material" is normally as soft as ordinary clothing, but becomes as hard as steel when exposed to powerful impacts. It provides the same protection as tactical armour (subtracting 16 damage) but the wearer only suffers the penalties of soft body armour (-2 to Body checks requiring agility, endurance and running speed, no risk of heat exhaustion). Its protection is halved against laser beams or other energy weapons. Major Gadget.

Sealed Combat Armour

A form-fitting full-body suit that uses flex armour to protect the limbs and joints but moulded composite or ceramic plates on vulnerable areas. It incorporates a solid-state climate control system (and an enclosed helmet with snap-down visor), and subtracts 20 damage from attacks.

With the helmet on, it fully protects against noxious gases, fallout, and biochemical toxins; also, a Called Shot to Partial Armour does not ignore the armour protection: instead it merely hits a weak spot (halves rather than negates armour). The armour's weight gives a -3 penalty to Body checks (but only -2 if the helmet is removed) requiring agility, endurance and running speed. Major Gadget.

Space Suit

A pressure suit, helmet, and life support pack that allows the wearer to survive in vacuum for up to six hours. The suit is bulky and requires four rounds to put on or remove. While worn, it imposes a -4 penalty on all Body Stat checks requiring agility, endurance and running speed. The suit stops 4 damage, and with the helmet on Called Shots to Partial Armour halve protection rather than negating it. The suit can be worn casually without the helmet, pack, or gloves; if so, the penalty on Body Stat checks drops to -2. It takes two rounds to put on the helmet, gloves, and pack. The suit's boots have magnetic soles for walking on the hull or deck in zero-G. Provides: Adaptation (High and Low Temperatures, Radtiation, Vacuum) 4; Features (Magnetic Boots, Radio). Major Gadget.

Shields

Shields stop a significant amount of damage if they are interposed between an attack and the target with a successful Block Defence (page 96). If the damage exceeds the Armour rating, the remaining damage is delivered to the intended target. This damage can reflect several events: penetration of the weapon through the shield; damage delivered to the target's arm through a forceful impact; the shield slamming against the head or body of the target; a piece of the shield splintering away into the target; a target's physical exhaustion after successive shield impacts; etc. The reason why the target receives the excess damage is best determined by the combat situation.

Tactical Shield

This modern riot shield is approximately one to two yards in height and acts as a virtual wall, protecting the character from damage. Not only does it require a free hand for use, but its large size also makes it difficult for the character to accomplish Body-related checks, imposing a -2 penalty on Body-related checks requiring agility, endurance and running speed. Stops 20 damage on a successful Block defence (page 96). Major Gadget.

Special Protective Devices

These Gadgets provide protection against specific threats.

Goggles and Ear Protectors

This gear provides a +6 Check Value bonus to resist the stunning effects of flash-bang grenades, but prevents the character from hearing any normal conversations. They require one round to put on or remove. Minor Gadget.

Gas Mask

A gas mask protects against tear gas and similar attacks, but imposes a -4 penalty on all Check Values for actions requiring peripheral vision. It requires one round to put on or remove. Minor Gadget.

Breaking Objects

Cyberpunk firefights foes often result in a great deal of collateral damage. How effective is a car as a shield? How much damage can a vault door take before it cracks?

Objects are divided into two main categories: static and operational. Static objects are those that exist without working parts, such as most melee weapons, furniture, buildings, etc. Operational objects are things that have moving parts that work together in some way to accomplish a task. Examples include firearms, vehicles, computers, and other similar objects.

Static Objects

Static objects possess an Armour Rating. This is an amount of damage that the object is capable of stopping. If the object is hit with more damage than this, it suffers damage up to its Armour Rating and any remaining damage passes through it (possibly injuring characters behind it). Though the object is damaged, it still maintains its structure but will require repairs later. If an object suffers repeated damage, roughly 5 to 10 times within a short period of time (GM discretion), it has suffered sufficient damage to break. If the object suffers five times its Armour Rating in damage in one attack, it is completely destroyed — it is beyond repair and must be completely rebuilt or replaced.

Operational Objects

Operational objects have both an Armour Rating and Health Points. If the object suffers more damage than its Armour Rating, the excess damage is deducted from its Health Points. If its Health Points are ever reduced to zero, it ceases to function in its given task; a car will no longer run, a gun will no longer fire, etc. The object is not destroyed — it is simply rendered non-functional. It can be repaired later and returned to normal. Additionally, as with Static objects, if the item suffers five times its Armour Rating in damage in one attack, regardless of how many Health Points it has remaining, it is completely destroyed — it is beyond repair and must be completely rebuilt or replaced.

Penetrating (Armour) vs. Objects

When a character uses a Special Attack with the Penetrating (Armour) Ability (page 63), the attack is more likely to destroy an object. Each assignment of Penetrating (Armour) reduces the multiplier required to destroy an object by 1. For example, if a character attacks a vault door, he or she must inflict over 250 damage (Armour Rating of 50 times 5) to destroy it. If the character had a special cutting torch with Penetrating (Armour) assigned three times, however, the character only needs to inflict over 30 damage (Armour Rating of 50 times [5 minus 3 due to three assignments of Penetrating: Armour = 2] = 100).

Armour Ratings of Objects

The Armour Rating of an object indicates how much damage the object can stop and it is dependent on the material from which the object is made, the size of the object, and how well it is constructed. A hollow, aluminium pole will be far weaker than a solid aluminium pole of the same size. Table 10-6: Static Object Armour Ratings provides rough Armour Ratings for common Static objects. GMs are encouraged to use this chart as a basis when determining the Armour Rating of other objects encountered in their games, adjusting for the material from which the object is made, the thickness of the material, the quality of construction, and other similar factors. The Armour Ratings and Health Points for common operational objects are listed in Tables 10-2: Weapons and 10-3: Vehicles. In most cases, the Health Points of an operational object is equal to 10 plus five times the object's Armour Rating.

Table 10-7: Static Object Armour Ratings

Object	Armour Rating	Object	Armour Rating
Bench/Table, Metal	8	Steel Cables	8
Bench/Table, Wood	4	Steel Girder	30
Cement Barrier	30	Stop Sign	6
Door, Wooden	8	Telephone Pole, Metal	20
Door, Vault	50	Telephone Pole, Wood	16
Dumpster, Metal	18	Tree, Giant	40
Furniture, Wood	6	Tree, Large	30
Ladder, Metal	8	Tree, Medium	20
Manhole Cover	24	Tree, Small	10
Melee Weapons	Equal to the weapon's maximum damage, see Table 10-1: Weapons		
Buildings	See Table 10-7: Building Armour Ratings		

Destroying Buildings

Characters usually gain automatic successes when they target a building in a melee or ranged attack. Most buildings, whether they are mainly comprised of stone, brick, wood, or steel, have 5 Armour for each size ranking. If a building suffers more damage than its Armour rating, it has suffered structural damage; there will be holes in walls and/or floors, powered systems begin to cease working, etc. If the building ever suffers five times its armour rating in damage in one attack, some or all of the building will collapse. For example, a mid-sized office building partially collapses if it suffers 125 damage in one attack. Characters within or adjacent to a collapsing building may suffer damage equal to the building's Armour Rating, unless they can reach safety (GM's discretion). As with normal Static objects, repeated damage may eventually destroy a building.

Weapons without the Area Effect or Spreading Abilities are much less effective against large structures such as buildings: any damage that penetrates the building's Armour is localised, representing the attack only damaging a small area of the structure.

Table 10-8: Building Armour Ratings

Type of Building	Size Ranking	Armour Rating
Phone Booth	1	5
Wood Shed	2	10
Three-Bedroom House	3	15
Small Office Building (6 Floors)	4	20
Mid-Sized Office Building (12 Floors)	5	25
Large Office Building (24 Floors)	6	30
Skyscraper (50 Floors)	7	35

Chapter 11: Cyberspace

The internet began as a distributed computer network used for the transmission of text messages. It spawned the world wide web, a multi-media audio-visual environment. The next evolution of the net could engage all of our senses, incorporate virtual reality, and become an environment of its own. The growth of such a "virtuality network" will not only require advances in interface technologies (current virtual reality rigs are clumsy and expensive) but also increased bandwidth, such as the replacement of obsolete wiring with high-speed fibre optics. This environment might be accessed through gloves, visors, or bodysuits that physically transmit sensations, but the ultimate expression is a direct neural link between the virtual world and the body's nervous system.

The net is ultimately a repository for information — some of it open to everyone, while other parts are intended to be secure. "Information is power," as the old adage states. Operatives may want to hack into a computer system, often to steal information or disable physical security systems. This involves breaking into someone else's networked computer system and performing various acts of mischief. How this is achieved depends on the way the net is organised.

Two options are detailed below: the virtuality net and iconic cyberspace. The virtuality net system (see below) is intended for settings where activity within the net is a relatively small part of the experience. The iconic cyberspace system (see page 142) is intended for settings where cyberspace is, in essence, a world of its own.

Virtuality Net

The virtuality net is much like today's internet and world wide web, with a few differences. First, instead of simply seeing content as text, video, or audio, a user who has the proper equipment — usually a neural interface of some sort — can experience it as a full-sensory hallucination. This has plenty of legitimate uses, from entertainment and education to online telemedicine. It also means a hacker who is neurally interfaced with a computer can experience flows of data in a much more intuitive fashion. Whereas it would often take a hacker days to crack defences, now it can be achieved in hours or minutes. The disadvantage is that this same neural connection leaves the hacker's mind vulnerable to countermeasures.

Navigating the Net

The net consists of millions — perhaps billions — of server computers that are temporarily or permanently connected. Each of these computers maintains one or more specific sites on the net. Individual computers that log onto the net can access any of these sites by inputting the proper address, which is generally done automatically by having the computer's web browser software interrogate any of the servers that maintain the net.

Open Systems

There are vast libraries of information on the net, although in some future settings, this may be less "free" than in 2004 (with more "pay for access" sites). Anyone with a computer that is connected to the net can search for data that is openly available. There will be numerous online sites, from simple web sites to complex multi-user spaces — similar to present-day chat rooms, but with added virtual reality content that engages all the senses. This sort of information requires no Skill to access — it is handled by smart search engines, and requires only a round or two to dig up. The GM may, however, require a Mind Stat check to know where to look if the characters are in a great hurry.

Other information may be online but is not found easily by search engines. It requires checking mailing list archives, gossiping in chat rooms, and paying to access private virtual spaces. A Mind-based Area Knowledge (Cyberspace) or Computers (Networks) Skill check is required to locate this sort of privileged information. Use Table 11-1: Hacking Time Modifiers Table.

Secure Systems

Secure sites are accessible only to individuals with correct passwords ... and to computer hackers who know how to bypass these safeguards. All kinds of secure information is stored online: corporate financial and personnel records, credit information, business plans, research and development data, school grades, the controls for electronic systems, even the entry codes for special "members only" virtuality clubs. A skilled hacker may be able to gain access to the secure systems where this data is held and read or manipulate it.

Secure systems are connected to open sites on the net so that legitimate users can remotely access them. Executives in their private limousines or jets, telecommuting workers, or any of the hundreds or thousands of subcontractors all need to have remote access to secure data in order to do their jobs. In order to get into a secure part of the network, a computer hacker must convince the target system that he or she is one of these legitimate users.

The hacker must first know the address of the target system. It is all very well to want to crack into Strela Biotechnology's top secret R&D computer system ... but where is it? Some sites are easily located: a hacker might go to Strela Biotech's public site, check the directory, find the R&D division, and discover that a password is needed for further access. Others will not be listed in normal search engines — finding their net address will require talking to people or following a trail of data, which in turn may require an Area Knowledge (Cyberspace) Skill check.

If the players wish to hack a secure system, the GM should decide on how accessible its address is, the Level of the system's Security Programs and whether it has any Active Countermeasures (page 141). The GM must also decide exactly what is inside the system — valuable data, programs that control "real world" security systems like building cameras or doors, a gateway to a private virtual reality, or possibly access to an inner set of even more secure systems. If the characters wish to try tricking passwords out of people, the GM will also have to work out details regarding who has access to the system in case the players wish to threaten, bribe, seduce, or otherwise coerce legitimate users into helping them.

Ultra-Secure Systems

Ultra-secure systems — including those controlling military weapons — are not connected to the net at all. Instead, they have their own private network of computers linked together by a separate dedicated set of cables or satellites. The only way to access off-line networks is to actually locate one of the terminals or computers that is connected to the system. This may require breaking into a building and performing hacking from inside, or possibly physically interfering with the cable line or satellite itself.

These methods may be supplemented or replaced by additional requirements, such as: biometric scans (voice print, finger print, retina, or other checks); hardware keys that generate new passcodes on the fly (which may only work for a very limited period); or other complications. The key to a successful infiltration is to determine in advance what protection systems exist before encountering them.

Personal Data Chips

A further complication that may exist in some settings is the use of individualised data key chips. These may be used in all types and sizes of computer, from coms to supercomputers. They store all personal data and applications on a removal chip (often held on a key chain, or possibly a cybernetic data plug (page 27) containing its own hard drive. Insert the key (or use a neural interface, if it's a cybernetic system), turn the computer on with it, and it boots up with all the information ready to go, becoming the user's "personal" computer. At the end of

the day, the user saves everything, shuts the computer off, and pulls out the chip (or jacks out), removing all his or her personal data. The next day he or she may use a completely different system, but as all his or her information is on the chip it doesn't matter. In this case, since the data and password is installed in the chip, physically stealing the chip (or otherwise compromising that particular user) becomes the key to a successful intrusion.

• Stealing Passwords •

All legitimate users will log on to their system via a password they have been given. It is possible to make an "end run" around security systems by attempting to gain access to a legitimate password, thus allowing people to break into a computer without a cyberspace run.

Security-conscious organisations like the military will generate passwords electronically so they are a string of meaningless numbers and letters. The disadvantages of this is that the password cannot easily be memorised: it must be stored electronically or written down somewhere.

More casual organisations or individuals will let users pick their own passwords. These can be memorised, but the disadvantage is that people may sometimes pick obvious passwords that can be guessed by someone who knows them, such as a favourite pet's name or their birthday.

If a legitimate user has his or her password written down or stored electronically somewhere, then a hacker may be able to find it. Methods can include:

- Surveillance of a particular user to try to detect his or her use of a password, or if the password is written down or stored electronically, to find out where it is kept so it can be covertly acquired and copied.
- Bribing, blackmailing, seducing, or threatening someone into revealing their password.
- Attaching a bug to his or her computer or phone, or using a long-ranged emissions surveillance device, so as to "read" his or her input of the password.
- Locating the original person who designed the security system, and who may have left a "back door" into the system that bypasses all the usual defences.

The trick is to acquire a stolen password without alerting opposing security that something is going on. Security-conscious organisations may also change passwords regularly (sometimes every day), so an acquired password may only be good for a very limited window of opportunity. Any organisation may make changes if they have reason to believe that their security has been compromised.

Intrusion Attempts

The "target system" is the target computer — or network of linked computers — that runs the programs and stores the data in which the hacker is interested. It will be protected by a security system that screens out illegitimate users, such as the hacker. If the hackers cannot finesse their way into finding a legitimate password, they will have to hack their way into the system.

Since computer security is a rapidly evolving field, it is usually best to portray this element via metaphor rather than hard detail: the hacker uses his or her computer programs to "monitor the incoming and outgoing data streams," "exploit operating system vulnerabilities," and "camouflage the hacker as a legitimate user." A hacking attempt is a Skill check that represents the hacker launching one or more customised intrusion programs at the target system for the purpose of gaining access. In game terms:

1. The hacker specifies the time he or she is going to spend on the intrusion attempt. Refer to the Hacking Time Modifiers Chart (Table 11-1) for the bonus or penalty.
2. The hacker specifies whether or not he or she is using a neural interface system (which requires a specially-customised computer and a neural headset or neural jack).
3. The hacker makes a Mind-based Computers (Intrusion/Security) check. Apply a penalty equal to twice the system's Security Level protecting the system.

Critical Success means the hacker successfully penetrates the system much faster than he or she expected. It takes one less Time step to complete the hack (for example, if the hacker planned to take one minute, it instead takes five rounds).

Success means the hacker gets inside the system in the specified time.

Time Modifiers for Hacking

Time can be crucial when hacking. The default time required to perform a computer task is an hour. Taking more time will give a check bonus; taking less time will give a penalty. A neural jack or Headset interfaced with the computer drastically reduces the penalty for rapid hacking, as shown on the table:

Table 11-1: Hacking Time Modifier

Time	Neural	Keyboard
One round	-4	-8
5 rounds	-3	-6
1 minute	-2	-4
10 minutes	-1	-2
1 hour	0	0
12 hours	+1	+1
1 day	+2	+2
1 week	+3	+3
1 month	+4	+4

Use the Neural column if the hacker is using a computer with a neural interface system. (To do so, the hacker must have a neural headset or neural jack.)

A computer with the High Speed customisation (page 109) reduces time penalties by 1 (to a minimum of 0).





Failure by 1 means the attempt failed, but no one is alerted. The hacker can try again by spending additional time.

Failure by 2 means the attempt failed, but defences are alerted. If the hacker tries again within 24 hours, there will be an extra -2 penalty. If the attacker was using a "hole" created through icebreaking (see below), that hole is closed and the system's Security Level returns to full strength against both the hacker and anyone else that had hoped to rely on the same hole.

Failure by 3+, or critical failure, has the same effect, and triggers any Active Countermeasures (page 141).

Probing Attempts

Instead of trying to break in immediately, a cautious hacker can take time to carefully probe a system's defences. A probe attempt is treated like an intrusion attempt, except the hacker suffers no Security Level penalty.

Critical success means he or she discovers the system's Security Level and finds a possible "back door" that will give a +2 bonus on any break-in attempt.

Success means the hacker discovers the Security Level.

Failure by 1-2 means no useful information is gained, but the hacker can try again by spending more time.

Failure by 3+, or any critical failure, means the target is alerted (see above): hackers suffer -1 on all hacking attempts in the next 24 hours.

Icebreaking

A hacker faced with very powerful defences may try to attack the system's security instead of trying to bypass it. This is referred to as "icebreaking."

Icebreaking requires a Soul-based Computers (Intrusion/Security) Skill check and the usual time. The Security Level penalty is halved. For example, Security Level 3 would give a -3 penalty instead of a -6.

Critical Success means that the hacker has found a fatal flaw and completely subverted the security system. Any intrusion attempt will automatically succeed.

Success means that the hacker has subverted part of the defences: the Security Level drops by one against his or her next icebreaking or intrusion attempt. If desired, the hacker can keep trying, with each success further reducing the defences (to a minimum of 0).

Failure by 1 means the attempt failed, but no one is alerted. If this was a repeated attempt to "enlarge" an existing hole, the original hole is not detected and the defences remain weakened.

Failure by 2 means the attempt failed, and the defences are alerted. Any "hole" the hacker had previously opened is closed, and the Security Level returns to full strength.

Failure by 3+ has the same effect, and triggers any Active Countermeasures.

If the hacker succeeded in creating an undiscovered security hole, he or she can also pass a program containing the details of this "hole" to other hackers, which will allow them to exploit it as well — at least, until one of them fails an icebreaking or intrusion attempt by 2+, which will close the hole to everyone.

Inside the System

Once a hacker has accessed a computer system either via stealing the password or a successful intrusion, he or she can perform all kinds of mischief and mayhem. These activities are less likely to be detected: usually only a critical failure will trigger Active Countermeasures (page 141).

Manipulating Data

The hacker can try to locate information stored on the system by checking through directories or running search programs. This requires a Mind-Based Computer (Databases) Skill check. Add bonuses for Heightened Awareness and for the desired time spent (see Table 11-1). Additional modifiers depend on how much data the computer system holds, from +4 (a few files) to -4 (a massive library of data).

Critical success means the hacker serendipitously finds exactly what is being sought, or possibly stumbles on other useful files.

Success means a hacker who knows what to look for finds that particular file, or discovers its absence with certainty. If the hacker is snooping about, a success means the GM can provide a sense of what is available (perhaps a list of directories, like "Research Division Personnel Files," "Members-Only VR Access," or "Project Nemesis Test Results"). The hacker can further refine the search based on this (and another Skill check).

Failure means he or she does not find anything helpful, but can try again by spending more time.

A critical failure means that the hacker's inquiries were deemed suspicious and Active Countermeasures were triggered (see page 141).

Once located, data files can be copied, read online, moved, or deleted. Each attempt usually takes only one round (but reading or copying a huge file may take longer). No Skill roll is usually necessary to perform the operation, but a successful Computers (Databases) Skill check must be made to do so without alerting security.

Viruses, Crashing Systems, and Other Sabotage

A hacker can try to crash the computer that controls the system he or she has infiltrated. This requires a Mind-based Computers (Networks) Skill check at a -2 penalty. Each attempt takes one round; there are no time modifiers. Failure and critical failure have the usual effects. Success means the system goes down. This will alert any humans (or A.I.s) who were using the system, but also shut down all computer-controlled systems run by it. The hacker is automatically kicked offline. Unsaved data being worked on will be lost, and a lot of people will be aggravated.

Rebooting the Network

The system operator will need to reboot the system, perform security checks, and restore files. The system's operator requires a Mind-based Computers (Networks) check to get it back online (roll every 10 minutes) at a penalty equal to the amount by which the hacker succeeded. For example, if the hacker succeeded by 5, the system operator would roll at -5 to bring the system back on line.

Viruses and Hidden Programs

A more subtle way to sabotage a system is to insert a virus or other hidden program into the target computer. It can be set to trigger at a later date or if a specific action is performed, such as an attempt to use the system against the hacker or his or her friends. It might be set to periodically mail out new data files to the hacker (acting as a spy), crash the system, or even erase data. An example of a subtle buried program would be one that altered or erased all references to a particular person after they were uploaded.

Detecting Hidden Programs

System operators may detect a buried program. Use the Manipulating Data rules (page 140) to see if the system operators notice it, rolling every day if the program is active (if it's operating constantly, grant them a +2 bonus), or less frequently (for example, whenever they do a major security check, such as monthly) if it is a buried "time bomb." If they find it, they will erase it and try to locate the intruder. Erasing a buried program requires a Computers (Programming) Skill check made at a penalty equal to the Computers (Programming) Skill Level of the character who buried it.

Controlling Computerised Devices

A system may include programs that run devices such as electronic doors, vending machines, automated factory or lab equipment, security cameras, or even teleoperated robots.

The file containing the program that controls a particular system can be located using the rules for Manipulating Data (page 140). Once it has been found, the hacker can try to control it. This requires a Computer (Intrusion/Security) Skill check; the usual time modifiers for hacking apply (Table 11-1).

Success means the hacker has taken over that system. Failure means he did not but can try again, while critical failure alerts defences.

A hacker will usually only be able to control one such system at a time. Each extra system he or she tries to control simultaneously imposes a -2 penalty on all checks.

Teleoperated systems such as automated weapons or robots may require other Skills to use properly. Thus, if the character takes over an automated factory unit, he or she will need appropriate Electronics or Mechanics Skill to tell the unit how to build something (or hack into the databases to find an existing program).



Security Level

A computer system is rated for its Security Level, from 1 (fairly lax) to 5 (ultra-tight). This is a combined rating that takes into account defence programs, virus protection, hardware security, and the alertness of users and system operators to threats. If characters set up their own servers, each Security Level counts as a major Gadget.

Active Countermeasures

Basic security programs keep people out, but some security systems are more like watchdogs than locks. Active Countermeasures are programs that counter-attack the hacker. They are triggered under the following circumstances:

- An intrusion or icebreaking attempt that fails by 3+ (or is a critical failure).
- A critical failure while engaged in any activities inside the system (unless the security system was completely destroyed, via icebreaking, page 140).

Table 11-2: Security Levels

Level	Modifier	Example
1	-2	High school, small business, or private virtuality club
2	-4	Hospital, university, or local government office
3	-6	Large corporate or federal government office or minor criminal enterprise
4	-8	Megacorporate R&D server or major criminal data haven
5	-10	Major bank or government intelligence agency

Systems may have one or more of the following Active Countermeasures. Neural Feedback and Mind Trap are only available on systems with Security Level 3+. The GM can come up with other Countermeasures, or may permit hackers to use Computers (Programming) Skill or Gadgeteer to design new types of programs.

Tracer

This program pretends to accept the hacker, but feeds false or inconsequential data while attempting to "back trace" to discover the hacker's real computer address.

The hacker gets a Mind-based Computers (Intrusion/Security) Skill check to notice and block or misdirect the trace. No time modifiers apply, but a -2 penalty applies if not using a neural interface. Apply an additional penalty equal to the system's Security Level.

Success means the trace has been blocked for one round. If the hacker were trying to gain access, he or she can simply log off. If the attacker was inside the enemy system, he or she has the option of either logging out (and thus eluding the trace) or taking an extra round to perform some sort of action. Note that actions performed in a single round will suffer a -4 time penalty (-8 if not using a neural interface).

Failure means the trace was not blocked, and the program discovers the general "address" of the hacker's system — what server he or she was using. The consequences may vary, from a warning email, to a visit by men in black suits the next day, to an orbital satellite strike, depending on exactly what the character was trying to hack into.

Adding Tracer to a Security System counts as an extra minor Gadget.

Neural Feedback

This program only affects hackers who are using neural interfaces. It launches a counter-attack, reaching out across the net to override the hacker's nervous system (if he or she is using a neural interface headset or neural jack).

This works like a Tracer program (above), except that if the hacker fails the check, he or she suffers neural feedback damage as per the Bane Defect that is built into all neural jacks. That is, the hacker takes 20 damage, ignoring any ordinary armour or defences. It will continue to inflict damage each round, if it can.

When it is the hacker's turn to act, he or she may attempt to break free by logging out. This would normally be simple (just hit "power off" or remove the jack or neural headset 'trodes), except that the damage inflicted is often enough to inflict Shock on a failed Soul check. Careful hackers will often have a partner standing by to jack the hacker out of the system if he or she is stunned or knocked out. The victim will still take the first 20 damage, but the damage will not continue.

A Neural Feedback program counts as a major Gadget (only available with Security Levels 3+).

Mind Worm

This is the most insidious form of defence program; in some settings, it may beyond available technology, merely a hacker's urban legend.

Mind Worm functions like Tracer except that if the user fails to block it and possesses a neural interface, it infiltrates his or her brain.

Treat this as Mind Combat (page 100). The Mind Worm program has an effective average Mind and Soul Stat equal to twice its Security Level and (for defensive purposes) an effective Health of 20 per Security Level.

The target may add his or her Computers Skill Level to his or her Mind before averaging it with Soul.

As usual, the target must make Stat check at -4 to break away. If the Mind Worm cracks the target's mind, it may "brain hack" his or her memories, plant suggestions, and so on, as detailed under Mind Combat, depending on what it was programmed to do. In some settings, it may be possible for a Mind Worm to actually brain scan the subject and store a mental duplicate of him or her in a virtual reality — effectively "trapping" the victim in cyberspace.

If the hacker wins, he or she has destroyed the Mind Worm program and, in addition, is treated as having gained a critical success with an icebreaking attempt (page 140).

Installing Mind Worm on a server counts as two major Gadgets (only available with Security Levels 3+).

Iconic Cyberspace

This is an alternative form of cyberspace. It postulates that global computer networks have evolved into a vast multi-user construct akin to a massively multiplayer video game. Iconic cyberspace is effectively another dimension — a complete world with its own rules.

Information that is accessible to the net achieves a physical representation as a substance that can be directly manipulated. High-level users create identities — avatars — that actually move through cyberspace, encountering and interacting with other users and free roaming or local programs, all of which appear "solid" to them. Visitors to cyberspace can move through the net as if flying or swimming through an ocean of data.

Iconic cyberspace may take different forms in different settings. The classic concept is that it appears as a dynamic representation of the global spatial distribution of data flow, data storage, and computing power. Each computer connected to the net would be represented by an abstract geometric icon on a global grid map; the icon's size is relative to its power and the amount of information it stores online. Major cities in developed nations would pulsate with vast, complex, ever-changing structures, while relatively undeveloped regions (including ocean and wilderness) would be much simpler or inaccessible.

The actual "world" of iconic cyberspace is usually portrayed as only perceived by those humans who need to work within it, such as hackers and security specialists, and by various artificial intelligences and autonomous programs. The ordinary user who wishes to access the net just does so normally. The experience of iconic cyberspace can be seen as a metaphorical representation of underlying code, or akin to the network of sewer tunnels and cables under a city: something that underlies the basic reality of the mundane net.

Space and Distance

For simplicity, the GM may assume that space and distance within iconic cyberspace map onto the real world. Physical measurements ("metres" or "kilometres") in cyberspace thus refer to perceived distance within the consensual data sphere. The distance measurements are not real in a physical sense, but rather refer to perceived proximity within the sea of data. A cyberspace entity that is 500 metres away is focusing its attention on computer systems that are physically several blocks distant; one that is 3,000 km away is doing something across the continent, and so on.

Data Manipulation

Similarly, in cyberspace, data takes physical form that can be manipulated. A cyberspace avatar reaches out with his or her hands, seizes, and examines an object; this correlates in real terms with a computer program being deleted from one location and moved to another. The GM decides just how abstract this is. In some cyberspaces, the only physical shapes will be abstract geometric solids; in others, they may take the form of buildings, animals, or even a complete real-life environment. For example, the hacker may experience an attempt to break into a data-vault storing financial information as a fantasy role-playing-style dungeon adventure, or an old west bank heist. The GM will need to carefully decide in advance how the result corresponds with reality.

Cyberspace Avatars

Humans and computers capable of visiting iconic cyberspace may both have cyberspace avatars. The human's real body is his or her physical form; the computer's is the box and programs that run on it.

A character who can enter iconic cyberspace must have an appropriate computer system. Usually this requires a deck, frame or supercomputer with neural interface customisation; the user must have a neural jack or neural headset. In addition, a specialised avatar program is required. Since hackers capable of effectively operating in iconic cyberspace are usually a rare elite, this is represented as an Item of Power.

The ability to enter cyberspace is handled by the Special Movement (Dimension Hop) Attribute. The character's body in cyberspace is a Partial-Powered Alternate Form.

Cyberspace Interface: Avatar Program

Attributes

Item of Power 1 (Avatar program)

Item of Power (Avatar program) Attributes

Special Movement 1 (Dimension Hop: Cyberspace), Alternate Form 4 (Partial Powered; Reduction, -2, Cyberspace only)

Final Cost: 3 Points. More powerful Items will allow more powerful avatars, of course.

Creating a Cyberspace Avatar

Mind and Soul Attributes should be the same as the "real space" body, and cannot exceed the original. Body can be at any level, generally representing how fast the digital avatar can react and how robust it is (a matter of programming).

Avatar Attributes

When building an avatar, almost any Attributes are possible if they can be realistically justified as manifesting in cyberspace. In particular:

Armour can represent defensive programs or buffers that insulate the hacker or computer from attempts to crash the system or destroy the avatar's code.

Block Power or Mind Shield can represent countermeasure programs that protect against more subtle attacks such as viruses and worms.

Combat Technique (Lightning Reflexes), Extra Attacks, Extra Defences, or Speed can represent hackers or A.I.s with superfast reflexes within the net.

Contamination can be used to represent attacks such as viruses that can corrupt other programs. It should usually be "difficult" and require the attacker to reduce the defender's Health to 0 or less, via Special Attacks or Mind Combat prior to achieving contamination.

Creation, Environmental Influence, and Illusion can represent the ability to create virtual reality constructs within cyberspace.

Elasticity and Extra Arms can represent an avatar that assumes a non-humanoid shape — in cyberpunk literature, avatars are often represented as resembling amorphous viruses or giant, fluidic shapes that stretch their tentacles across the net.

Flight should be standard, representing the avatar's ability to hover over the sea of data and manoeuvre in three dimensions. In some digital realms (those simulating more terrestrial physics), it may be rarer.

Special Movement (Dataflow) is justifiable to represent the ability of the hacker to move rapidly across the globe using data and phone lines. It cannot be used for tactical movement — for that, it is suggested most avatars take Flight.

Invisibility and Sensory Block could represent various forms of infiltration programs.

Special Attacks should represent attempts to crash or infect another avatar's code or the system running it.

Inappropriate Attributes

Some Attributes are inappropriate in iconic cyberspace settings: Jumping, Special Movement (other than Dataflow and Zen Direction), and Water Speed make little sense unless cyberspace closely replicates the real world. Unless otherwise noted, Attribute Levels should not exceed 8 without GM permission.

Avatar Skills

Skills can be limited to those the character can realistically use in cyberspace. They should not include any he or she does not have in the real world, unless it is routinely possible to upload knowledge to a digital avatar. If so, it is quite possible that an avatar will possess a different set of skills than those possessed in the world of flesh.

Avatar Defects

Most Defects are not recommended for cyberspace. Since the avatar's only world is cyberspace, Restrictions such as "online only" or "only in cyberspace" are not appropriate! Restrictions that affect software only or human avatars only (rather than both) are quite appropriate, however.

GM should discourage any Defects that seem irrelevant. Some that are acceptable include:

Awkward Size for any systems that appear "huge" in cyberspace purely due to the amount of data they contain, such as an A.I. supercomputer.

Confined Movement for any Avatars that are restricted to a particular area, such as an "watchdog" A.I. whose programming only allows it to defend a particular data node.

Everything else is optional, since the cyberspace realm is purely dependent on programming. The nature of cyberspace in a particular setting will usually impose certain restrictions, best handled as a species template that all avatars entering that particular cyberspace should take as a base, or special prohibitions (for example, no avatar can fly) unique to that particular setting. The sample template below is intended as a typical baseline for a standard iconic cyberspace setting:

Software Servants

A hacker or A.I. may have a number of semi-autonomous programs that exist only in iconic cyberspace. These may acquired as Agents, Servants, Henchmen, etc. depending on their capabilities.

• HACKER'S AVATAR •

Body 3	Attack Combat Value 5
Mind 7	Defence Combat Value 3
Soul 5	Health Points 40
	Shock 8

Attributes

Armour 1 (Shield), Combat Technique 1 (Lightning Reflexes), Flight 1, Highly Skilled 2, Mind Shield 3, Special Movement 1 (Dataflow), Telepathy 8 (Computer programs)

Skills

Computers (Intrusion/Security) 3, 2 unused Skill Points

Defects

Marked (Distinctive custom avatar) -2, Physical Impairment (No sense of smell or taste) -2, Physical Impairment (No limbs) -3, Special Requirement (Plugged into power supply) -3

Note: The avatar is created through the Partially-Powered Alternate Form (Level 4) attached to the Avatar Program Item of Power.

• VIRUS PROGRAM •

Body 2	Attack Combat Value 3
Mind 3	Defence Combat Value 0
Soul 1	Health Points 15
	Shock 3

Attributes

Attack Combat Mastery 1, Contamination 7 (Difficult; Target must be below 0 Health Points; Area 1; Range 2; Targets 1; Restriction, Software only 2 BP), Flight 1, Special Movement 1 (Dataflow), Special Attack "Data Corruption" 1 (40 Damage, Short Range)

Skills

Special Ranged Attack (Data Corruption) 3

Defects

Marked (Distinctive custom avatar) -2, Physical Impairment (No sense of smell or taste) -2, Physical Impairment (No limbs) -3, Special Requirement (Plugged into power supply) -3, Unskilled -2

Chapter 12: Game Mastering Ex Machina

The greatest responsibility in a role-playing game is the job of Game Master (or GM). As Game Master, you create the opponents, plots, and situations that challenge the player characters. You take on the roles of all of the other characters in the story, resolve actions using the game rules and adjudicate rules questions that arise during play. This chapter provides brief Game Mastering suggestions and guidelines to help you run dynamic and exciting games of your own.

Game Mastering Basics

You, as Game Master, fill many roles, handling all the parts of the game that the players do not. These roles can be broken down into four main areas: creator, actor, narrator, and referee.

Creator

You are responsible for creating the world in which the heroes have adventures, from the supporting characters to history, geography, and current events. It requires great effort, but many game worlds are similar to our own, and so a lot of the setting information already exists. If you do not wish to create a setting from scratch, *Ex Machina* includes four examples of cyberpunk worlds that you can use or adapt for your own campaign. Or you can use these rules to create your own adaptation of a setting from an existing literary or cinematic work.

Actor

You play the roles of the various non-player characters (or NPCs) in the game, including the player characters' major opponents and allies. Keep the NPCs' goals and motivations in mind, but also focus on keeping the game fun for everyone.

Narrator

You also narrate events in the game, describing to the players everything that their characters see, hear, touch, taste, and smell. A good GM provides players with enough descriptive information for them to understand their characters' surroundings, but not so much that it slows down the game and turns it into a droning monologue of "flavour text." For example, you might say to the players:

"Your nightly patrol has been uneventful. You are cruising down Wharf Street in your tactical hovercraft, but at 3 AM the south side streets are mostly deserted. The only people about are a few homeless sheltering in the burned out wrecks of cars left by last week's plague riots. You feel their eyes on you, bitter and hopeless, but no one shouts an insult, and there are no barricades up to bar you way. It seems the night is alive, waiting for something. Then you hear it: a staccato rattle of gun fire, from a few blocks west of you."

You have explained to the players where they are, what they are doing, and placed them in an active situation. The players may ask for clarification about your description, such as how many gunshots do they hear, how the homeless people are reacting, if they can call for backup, or what would they know about the neighbourhood that might be under attack? Answer their questions to the best of your ability, while encouraging them to take action. For example, you know there's a free clinic, and it is being robbed by a local gang seeking to steal anti-viral drugs. If a player asks what is in the area, you might request an Area Knowledge Skill check, and if the character succeeds, tell them a free clinic is there, distributing drugs to the plague-ridden homeless.

While providing narration for the players, try to avoid assuming actions or feelings on the part of their characters. For example, in the above description, do not end with "... the sound fills you with anticipation, so you speed away toward the commotion!" Each player must decide their own character's actions. Similarly, do not tell players how their characters feel about a particular NPC unless there is some outside force imposing those feelings. Rather than saying, "You take an instant dislike to him," when a character is dealing with an unpleasant NPC, you might try "he just does not seem very likeable." Better yet, simply play the NPC as unpleasant and rude, and the characters will start to dislike him naturally, without any prompting from you.

Referee

Finally, you apply and interpret the game rules and answer any rules questions that arise during play. You make the necessary rolls for NPCs, apply the effects of characters' Attributes and actions, and use the game rules given to resolve conflicts during the game.

Keeping the Players Interested

One of your key GM roles involves keeping the players interested and involved. If you and the players are not having fun, your game needs to adapt quickly.

Know Your Players

Do you know what your players want to accomplish in the game? Discover their interests, likes, and dislikes, and cater to them. In some cases, players may be interested in story elements or plot ideas that do not inspire you, or you may want to run a type of game in which the players are not particularly interested. Negotiate something that is agreeable to, and enjoyable for, everyone.

Players have different styles. Some players like to immerse themselves in detailed characters, role-playing interactions with NPCs and the other heroes. Others like lots of action and the opportunity to blow off steam at the gaming table. There are those who want to play ultra-competent characters who are the best in the world at what they do and those who enjoy flawed or tragic heroes who make mistakes and suffer misfortune. Some are thinkers, enjoying puzzles and mysteries, while others are builders, always coming up with new characters and ideas. It is possible to satisfy all of these different types of players by understanding what gives each of them the most enjoyment in the game.

There may also be certain elements your players do not want to see in the game. Try and respect this as much as possible. It is difficult to fulfil the player preference of "I never want my character to lose," but it is easier to accommodate "I want my character to be truly unique. I never want to see a main NPC with the same Attribute focus as him," or "I really hate having my character framed or set-up," or "Violence and sex should not mix in any of our adventures."

Listen to the Players

Once your campaign is underway, pay attention to what your players are telling you. Most of the time, players make it clear when they are enjoying themselves and when they are not. They often like to speculate or think out loud, saying, "I think that the people behind the plot are ..." or "wouldn't it be cool if...." Use these discussions as insights into the minds of your players.

If the players speculate about a particular mystery or possibility, perhaps they might like to see the plot proceed in that direction. You can always change a mystery to fit the players' ideas behind the scenes — a tool called "retroactive Game Mastering" — so long as it does not interrupt the flow of the game.

Be sure you get feedback from your players. At the end of each session or adventure, ask them if they enjoyed themselves and what they liked. If they have criticism, accept it gracefully and use it to make your next story even better. If it

seems that a player is not having fun, ask why and see what you can do to correct the situation. Sometimes players have bad days or just do not care for a particular adventure, but other times their expectations for the game are not being met.

Spotlight the Characters

The focus of attention in your campaign should be on the player characters and their actions. This advice might seem like common sense, but a campaign can easily get caught up in events over which the characters have little control, taking the focus away from them and putting it on the plans and actions of NPCs. If you have created a detailed and interesting setting, you are going to want to show it off, but do not do so at the expense of the player characters. The story is supposed to be about them.

Likewise, be careful not to allow a particular player or character to dominate the plot. Some players may be more forceful than others, but try to give everyone equal time. In particular, include the specialities of the various characters in the adventure. There should be objects for the strong characters to lift and break, shadows in which the skulkers can hide, mysteries for the detectives to solve, etc.

If you are finding a particular character dull or uninteresting, mention this to the player and work together to develop his or her story further. Find hooks that make for interesting adventures or build a subplot around that hero to inject some more life and colour.

Take a Break

If you find yourself "burning out" because of stress, the demands of everyday life, or simply because you have run the game for too long, you only have one clear choice: take a break. Put the campaign "on hiatus" for a while and run something else or, better yet, let a player run a new game and give you a chance to play! When you feel like your creative batteries have been recharged, come back to the game with renewed energy. This solution is much better than allowing the campaign to drag and become a chore.

Cheating: Just Do It!

If you want your players to think you are the best Game Master in the world, you only have one option: cheat, and cheat often. Never make a single dice roll without thinking to yourself, "Hmmm ... if I cheat and change the result of this roll, will I make it a better game?" In the games of Game Mastering and role-playing, there are no rules about "being fair," "sticking to the dice roll," or "being honest with the players." There is only one rule: make your game the best it can be. *Gott würfelt nicht*: "God does not play dice," said Einstein, and neither should you. Dice are only a tool to suggest how you should make up your mind. You make the decisions, not the dice.

Whether you ask your players to also follow this advice is up to you....

Just Fake It

When in doubt, make it up. If a character uses an Attribute in an unexpected way, adjudicate on its use and move on with the game. This technique avoids the rules completely, and does not impede the flow of your game session.

Handling the Rules

Part of the Game Master's job is handling and interpreting the various game rules. Players have a way of putting their characters in situations the game's designers did not contemplate. No rules system can take every possible situation into account; *Ex Machina* purposely leaves many aspects of the rules open for interpretation. You, as GM, ultimately must make the calls.

Rules Questions

Questions about the rules will arise during games and you must resolve them. They may be questions about how a rule works, what rule applies in a particular situation, or how to handle an unusual situation or application of a rule.

Become as familiar with the rules of the game as you can. Do not commit them to memory, although they may find their own way there the more frequently you play and run the game. Read through the rules thoroughly at least once before running the game, however. If you can, run a couple of solo test combats using the characters in this book or ones of your own creation to better understand how the game plays.

When a rules question arises, take a moment to handle it and make your answer as clear as possible to the players. When you first play the game, you are likely going to need to consult the rules more often, until you and the players understand the nuances of the game system. You may prefer to ask one of the players to look up rules for you during the game so you can focus on the story.

Most situations can be adjudicated without dice, or with a simple Stat or Skill check with an appropriate modifier. When in doubt, ask a player to make a Stat check for the character and apply a modifier (bonus or penalty) that suits the situation. See Check Value Difficulty Modifiers and Should I Make My Players Roll Dice? on pages 87 and 86 for additional guidelines.

Sometimes during the game you will make a "GM's call," where you say, "this is how I want to handle it for now." Ask the players to respect your ruling and move on with the game. If necessary, you can talk after the game about the ruling and how to best handle similar situations when they arise in the future.

House Rules

Every gaming group tends to develop its own set of "house rules" over time. These are modifications (or clarifications) of the game's rules or specific rules about conduct at the gaming table. House rules should make the game a more pleasant and enjoyable experience for everyone, and the players and the Game Master should agree upon them in advance.

Let the players know if you have changed any of the game's rules or if you are using any of the optional rules in your campaign. If the players have any concerns about these rules changes, discuss them and come to a compromise, if necessary. Record any rule changes and make a handout for the players, so everyone knows the rules; this will minimise disputes.

Rules of conduct, or "table rules" as they are sometimes known, vary from group to group. Some groups prefer to limit side conversations, inappropriate movie and television quotes, or jokes while the game is in progress. Others have no such rules. Use whatever works best for your group.

Changing the Rules

On occasion, gaming groups may want to change the rules provided in this book to better suit their own games and style of play. If you find that a particular rule does not work for you then change it! Of course, you may want to consider carefully how any changes will affect point balance and other rules in the game. Test a rules change for a session or two and see how it works. You can always change it back or modify it further as necessary.

A particular opening in the rules does not necessarily require a rules change, but rather discussion and agreement among the players. In certain cyberpunk stories, characters can have tremendous abilities, and those powers can be abused by inexperienced players. Rather than changing the rules to restrict the characters, consider talking to the players and asking them to voluntarily modify their characters' behaviours to eliminate the abuse.

Never change the rules arbitrarily or without informing the players in advance of the change, and your reasons for it. This ensures there will be fewer rules disputes and confusion during the game.

Troubleshooting

Even the best gaming groups (and Game Masters) encounter difficult situations. When problems arise, you must resolve them. The following are some of the more common troubleshooting techniques you can use to help keep your campaign running smoothly.

Making Mistakes

Sometimes you may make a mistake, whether it is misinterpreting a rule or not recalling an important fact about an NPC. If the mistake occurs during the game, own up to it, do what you can to correct it, and move on. It is much better to tell your players, "oops, I made a mistake," than to try and cover it up or, even worse, refuse to admit it and allow the game to suffer because of it.

Most mistakes are not likely to make much difference in the game. If a mistake does result in serious consequences (such as the death of a player character), you can either choose to reverse the problem — changing history and saying it never happened — or you can redress it in a future adventure. Perhaps the heroes get an opportunity to fix the mistake, such as rescuing a mind lost on cyberspace, or simply have to exact justice (with a new partner in tow).

Conflict Between Players

Although most campaigns are about teamwork and co-operation, conflict may arise between players in your group. Note this is not conflict between characters, which can be interesting and fun, but a conflict between the players that threatens to spoil everyone's enjoyment of the game.

If a conflict develops between two or more of your players, discover what it is and settle it through some mutually agreeable compromise. Make it clear to the players that they should keep their personal disputes out of the game. If they are incapable of doing so, or settling matters, then ask one or more of the difficult players to leave the game. Most problems can be solved long before that becomes necessary, however.

In the case of conflicts over events happening in the game, remind the players that it is just a game and the goal is for everyone to have fun. If an in-game conflict is not enjoyable for a player, try modifying or eliminating it. If there is conflict in the group about the game, find out what it is and settle it by changing the campaign's plot or adding some house rules that address the issue.

Getting Back on Track

No adventure plan survives unchanged after contact with the players, who do the most unexpected things ... some of which can derail a planned adventure. Sometimes all you can do is go with the flow and follow where the players lead you. If you have a good grasp of the setting and characters for your game, you should be able to improvise and deal with most digressions from your plot. The players may even provide you with some ideas and opportunities you had not originally considered.

Other times, when an adventure is diverting wildly from the story, you may need to nudge things towards the best direction. The trick is to do this without the players realising, since the ideal adventure leads the players as little as possible. Fortunately, there are a number of ways to guide wayward players back in the right direction.

Give Them a Clue

Enemies are notorious for taunting their opponents with clues about their fiendish master plans. If the player characters wander away from the plot, have their adversary drop them a hint like a riddle, a sudden attack, or a threatening message. A decent clue can put the heroes hot on their foe's trail again.

Sudden Insight

Provide a more direct clue using the heroes' abilities. A hacker might discover a rumour on an online chat room or message board, or a skilled detective might piece together certain clues. Protagonists with enhanced senses may pick up on clues others failed to notice, and so on.

NPCs

If all else fails, you can have an NPC guide the characters in the right direction. The best way to enact this is to have the characters come to the NPC's rescue, and be rewarded with some information, rather than the supporting character solving the problem.

Creating a Campaign

Creating a campaign may be as simple as running one adventure after another. There are an almost limitless number of different stories you can tell with *Ex Machina*, and some campaigns are better suited to some gaming groups than others. This section looks at the major choices that go into building a successful adventure series.

Player Input

The first thing to do when planning your campaign is to ask your players what sort of game they would like to play. If you want to run a campaign in which the players are paramilitary combat cyborgs fighting corporate wars in the deserts of central Asia and they want to play a group of Yakuza-connected hackers in future Tokyo, you are all going to end up disappointed. Negotiate with the players as necessary until you have a concept that everyone will enjoy.

Once you have established the kind of campaign type, ask the players what kinds of characters they would like to play, since that can affect decisions about the campaign as well. Some character concepts may not be appropriate for your campaign, and it is better to deal with that up front than have a player get set on a particular character idea that does not suit the game.

Campaigns, Mini-Campaigns, and One-Shots

A role-playing game can range from a brief one-shot adventure that takes a few hours to play to a lengthy campaign that can run over many sessions for a period of months or years. The story pacing and plot depth of a campaign is different from that of a mini-campaign, which in turn differs from that of a one-shot adventure.

Campaigns

A campaign usually has a vast or epic scope with a number of shorter plot arcs that weave together to reveal the greater story. The characters have time to develop unique personalities as they are faced with challenges to their bodies, minds, and souls. The characters can also learn new Skills and Attributes and establish lasting relationships with NPCs. In a campaign, the players have ample time to explore the various aspects of the world that the GM has created. Additionally, antagonists will come and go over the course of a campaign as they are defeated, destroyed, or reformed by the characters. The GM should establish the outline of a plot for the beginning of the campaign before play begins, but the middle and the end of the story will be largely determined by the interests and actions of the characters.

Mini-Campaigns

A mini-campaign is a single story arc that usually takes place over 4-8 gaming sessions. The characters may not develop much over the course of a mini-campaign since the plot only spans a few days to a few weeks. The antagonists are often present in every session with the major villain, if any, usually surviving at least until the final climactic conclusion to the story arc. Mini-campaigns require a greater plot structure than an open-ended campaign, and thus the players are required to focus more on the story and less on their own characters. The GM should know where the characters will start (the beginning) and where they should go (the middle), but the closure at the end of the story is heavily dependent on the choices made by the player characters during the game.

One-Shot Adventures

A one-shot adventure covers one single story idea in a 3-8 hour gaming session. These adventures are frequently run at conventions and for demonstrations at game stores. The characters are unlikely to develop much during an adventure because the story only spans a few hours to a few days. To maintain a high level of intensity during the game, the role-playing of character personalities is often sacrificed for dramatic action and conflict. In order to finish the adventure in one session, one-shots are often highly structured and only offer the characters a limited number of choices for each dilemma that they face. Most GMs usually script the plot to establish the beginning and middle of the story, and have a rough outline of the story ending that can be influenced by the players' actions (for example, will the villain win, lose, or escape?)

Sample Themes

Included herein is a small sample of different campaign types:

Action Adventure

Like an adrenalin-pumping movie, Action Adventure campaigns thrust the heroes into the thick of things right from the get-go. Characters are often operatives working for hire or for elite corporate or government agencies, or even the military. While moral and ethical dilemmas may be present, the tempo should always pounding. Play hard or go home!

Conspiracy

They know something that they won't tell you — or you know something that they won't believe. Corporations, the military and government cover-up sinister plots, often involving developments in cyberpunk technologies like genetic engineering, nanotechnology, and artificial intelligence. Journalists, operatives from rival agencies, or ordinary citizens stumble upon the truth and risk their own lives and freedoms to expose or exploit it ... or must simply survive being hunted down because they know too much.

Hard SF

Science and exploration of future possibilities are the keys to this genre, which focuses on the realistic extrapolation of technology and society. Politics and science, both physical and social, may drive you toward a better future ... or a far worse one.

Law Enforcement

Organised and disorganised crime owns the streets, while the boys and girls in blue try to keep the peace. Corrupt cops, Yakuza, Mafia, government agents, street people, lawmakers, and judges — all are players in the tangled webs of a law enforcement campaign. Player characters can be beat cops, detectives, or even a SWAT team, trying to do their jobs in a loveless world.

Reality Show

Some people will do anything for fifteen minutes of fame, and Reality TV proves it! Daring and disgusting stunts, social drama, and physical hardships all play a role when your future lies in the hands of those you compete against — or with — the watching public. In a cyberpunk world, the new idols may not even be human, or the audience may be able to jack right into their brains and experience things live. A depraved or commercialised future may feature reality shows where everything, including life, is on the line.

Soap Opera

Love. Hate. Marriage. Divorce. Bitter custody battles. Hospitals — what is so interesting about hospitals? Anything can happen in a soap opera, and backstabbing melodrama is certainly in the cards! Imagine playing the movers and shakers in a cyberpunk corporate dynasty, high priced lawyers whose cases redefine the meaning of "human" or doctors and medical rescue teams on the edge of an urban free-fire zone treating everything from killer viruses to androids.

Character Advancement

Character advancement is unnecessary in a short adventure, but during a lengthy campaign, players may wish to improve the Stats, Skills, and Attributes of their characters. Advancement is not a requirement, but it can reflect the characters' learned knowledge through conflicts with the environment, with other characters or NPCs, or even with themselves.

The GM is encouraged to award all characters one Advancement Character Point every three to five role-playing sessions and one Advancement Skill Point every couple of sessions. Players can assign these Character Points to Stats or Attributes immediately (GM's discretion) or accumulate them for future use.

The Point cost for increasing a Stat, Attribute, or Skill is identical to the cost during character creation. Players are encouraged to assign Advancement Points to Stats, Attributes, or Skills their characters use often. Alternatively, players can rationalise their decision to the GM should their characters acquire a new Attribute or Skill. The GM may require a character to perform certain activities to rationalise the acquisition of a new Attribute. In particular, the GM should not allow characters to acquire any Attributes that would disrupt the balance of the game. At the GM's option, players can also use Advancement Points to remove Defects that are no longer appropriate to their characters' concepts.

The GM may allow characters with the Item of Power or Gadgets Attributes or who has one or more cybernetic templates to "swap" existing items for other items of similar Point value during or between sessions if a good story rationale exists. For example, an engineer may make some modifications to her powered armour Item of Power between adventures, perhaps swapping Points in Armour or Tough to increase its Special Attack Level — the Point cost of the character remains the same but the character has simply designed the Mark II version. Similarly,

a character with one or more cyberware templates could change them between adventures, representing going into surgery for a tune up. Swapping Points requires the expenditure of in-game resources (favours, money, time, captured enemy gear, etc.) and (often several) Mechanics, Electronics, or in some cases, Surgery Skill checks before this can be completed. Additionally, this exchange is a time consuming process that can take several days or weeks of work, depending on the extent of the change attempted (though the Gadgeteer Attribute can reduce this time considerably).

GMs can award Points more frequently for faster character advancement as they desire. The GM also has the option of rewarding exceptionally talented or active players with an extra Advancement Point. Finally, players that complete contributions for the game should receive additional Bonus Points as well.

The Cyberpunk GM

Before running a cyberpunk game, the Game Master should isolate the elements of the genre that he or she wishes to capture. Most cyberpunk settings have some or all of these traits, but no single idea is obligatory:

- A semi-realistic near-future setting. For this purpose, "near-future" means that the core concepts of the setting evolve from modern trends, ideas, situations, and events. Cyberpunk worlds grow out of the modern world. The less a setting owes its core ideas to the modern day, the less it remains recognisable as cyberpunk. This does not necessarily keep it from capturing the cyberpunk feel and style, but it removes some of the reference points available to players informed about the genre.
- A dehumanising social environment. In some settings, an oppressive system strips basic comfort, dignity, and opportunity from the populace. In others, humans continue to have comfortable lives, but the power structure has devalued individuality and lost the concept of human worth. Human rights exist, but flex considerably to suit the situation and the parties involved.
- Marginalised protagonists. Cyberpunk characters rarely participate in both the dominant culture and its power structure. The system may take advantage of their abilities but does not embrace them as its own. Closed circles form within the system, fencing out even those characters who — due to financial or other influence — qualify in certain respects as insiders.
- Integration of human and machine. Technology becomes part of the characters rather than an independent tool. The nature of humanity changes.
- Future shock. Cyberpunk settings generally have faster rates of social and technological change than those with which the populace can fully cope. Characters in the setting cannot really keep up with the world. Instead, the currents of social change and scientific progress drag them forcibly along. "Future shock" is the term for the distress and disorientation this creates.
- Emergent potential. Civilisation in most cyberpunk worlds is in turmoil, but not accelerating towards a nuclear wasteland or a new stone age. The people and other actors in the setting assemble the pieces of their world in original ways almost as fast as they disassemble them. New things and ideas continually arise. This forms a major source of hope in many such settings — the possibility that the world might, with a shove at the right time, spontaneously tumble towards transcendence rather than unrelieved tyranny.
- Humanity. Many cyberpunk stories explore how humanity — the concept, rather than the species — changes over time. People have not firmly established what being human means; cyberpunk often looks at this question from a few different angles, either as the introduction or the conclusion to its study of humanity's change.
- Specific technologies and setting elements. Representing the global information network as a virtual reality "cyberspace" does not make a setting cyberpunk, but its presence evokes cyberpunk's other tropes. Similarly, mechanical replacement or enhancement of human body parts, ruthless corporations unfettered by legal constraints, assassins, adrenaline rushes, and a world dominated by information technology help maintain a cyberpunk atmosphere.

Marginalisation

People suffer marginalisation in two cases. First, the power structure can deliberately exclude them. Second, they can refuse to participate in it. Most cyberpunk characters either start the game highly competent or quickly become so. This gives the system a strong reason to accept them as top-level specialists and possible social or political leaders. If it rejects and excludes them, it must have an even stronger reason to do so. Some possible reasons follow.

The establishment may have something to protect. Accepting the characters would somehow compromise its security. For example, it might go against the public or private standards the people in authority set for themselves, diminishing their moral standing. A system that survives on the trust of computer system owners cannot employ notorious hackers. A theocracy cannot safely appoint heretics to positions of trust.

Similarly, a secret integral to participation in the regime might make it vulnerable to embarrassment, turmoil, or destruction. To use this idea, a GM must consider how the people who already know this secret learned it. If a small, stable group has run the establishment for the duration of the secret's existence, then the player characters can reach the second tier of power before discovering their exclusion. This is not necessarily bad, and can even serve as a useful starting point for a game, but it deviates from the standard model. If the establishment divides power among many people, all of whom hold the secret, then at some point each of those people received the system's trust. If the system deliberately excludes the player characters, they must explicitly fail to qualify for this trust. Trust might be given only to members of a certain extended family, to capable humans programmed so thoroughly as to nearly erase their original personalities, or to people with a specific weakness that the system as a whole can exploit — such as a certain brain chemistry or a hostage family that they genuinely love.

The characters might have some quality that makes the system inherently unable to perceive their qualifications. Either their physical makeup or their background makes them victims of prejudice. Here, the GM must carefully consider the justification for prejudice in the world. Bigots dehumanise the subjects of their bigotry. In a setting that regularly dehumanises everyone, these prejudices can become perfunctory and almost irrelevant, even in the bigots' own minds.

Prejudice

If the GM wishes to give prejudice emotional impact, three possible approaches follow:

First, the GM can design a ruling class capable of accepting its own kind — and only its own kind — as human. They interact with one another as people, and therefore their refusal to accept the characters has sting.

Second, the GM can build a rational defence of the prejudice into the setting. A wealthy compound might float above the campaign city, removing hand-picked children from the squalor below sometime before the age of three to train them in its ways. They become the compound's residents and the campaign's aristocrats. The people of the compound can make a consistent if arguable claim that the residents of the city below lack the credentials to participate in the decisions above. The system will not perceive the player characters' virtues unless the characters can somehow emulate the training and manners of the upper class.

Third, the GM can remove the justification for prejudice entirely. Rather than retreating into tired assertions of superiority, the upper class does not or cannot explain the reasoning behind their exclusion of the characters. The system might select the people in authority by unknown or random means — chaotic processes, a lottery, letters sent by a mysterious source, or some complex qualities of personhood that other aristocrats can instantly recognise but find themselves unable to define. The characters cannot reach the top of the power structure because doing so depends on forces fundamentally outside their control. Certain characters may seek to rig the lottery, track down the correspondent, or otherwise cheat the system; the GM should advise the players before character creation if this is impossible or thematically inappropriate in the setting.

Refusing the System

Having the player characters actively refuse to participate in the system requires that the GM pursue a different sort of strategy altogether. Even if that refusal is part of the campaign premise, characters evolve. The characters should have a strong setting or mechanical reason not to sell out. This helps prevent them from doing so when the system makes a tempting offer. It also ensures that, if they do sell out, they do so in a fashion that forms a meaningful conclusion to their story.

System Acceptance: Mechanics

GMs can also encourage player characters to reject the system through game mechanics that support the genre. For example, during setting design, the GM can create a Skill or Attribute that represents growing acceptance of the system or growing authority within it. This offers useful abilities but also important drawbacks. For example, the game might centre on a virtual reality used to trap the minds of prisoners in a 21st century jail. Characters can pick up more practical knowledge about the trap – the Attribute in question – by relaxing their mental defences. Doing so also makes them progressively more vulnerable to the manipulations of their jailers. Specifically, it gives them a penalty to resist certain of the jailers' abilities. This captures the importance of the decision – to fight or succumb – as a tangible and manipulative quantity. It expresses why the GM feels the characters should not accept the world presented to them. This matches up the players' expectations and the GM's concepts. If players decide that their characters accept the system anyway, they do so in spite of the consequences (which is very much in genre), rather than because of mismatched expectations (which is not).

Instead of an Attribute or Skill, Game Masters can make a character's acceptance of the system a Defect. The difference is primarily psychological. On the one hand, players then evaluate co-operation with the system as a Defect – something unnecessary unless they possess it. On the other, players may take the Defect to receive more points and then feel obligated to participate in the system if an opportunity arises.

The GM can make the forces running the establishment morally reprehensible. This takes some discretion. The characters may find *zaibatsu* heads who dance on baby-covered floors wearing razor-soled shoes hateful, but the players' suspension of disbelief may snap. In a similar vein, sexual predators might disturb the players. Antagonists who tamper ruthlessly with human souls can move the game away from cyberpunk into the horror genre.

To avoid these problems, the GM can instead focus the establishment's evil on a few very specific crimes. Some of these, with the players' permission, may tie into the characters' histories. Others come to the characters' attention during the course of the story, or represent the system's ongoing approach to a certain kind of problem. In any case, crimes tailored to attract the characters' revulsion alienate them from the establishment that committed those crimes.

As another approach, the GM can establish a thematic opposition between the player characters and the system. Cyberpunk characters traditionally have anarchistic and individualistic streaks. When discussing the game with the players before character creation, the GM can request characters willing to fight authority and resist the temptations of power. Assuming the players co-operate, the GM must only prevent conceptual drift — that is, a player eventually realising that his or her character has no real attachment to individuality after all. This emerges from the developing ideas that players have about their characters over the course of play. Accordingly, the GM should make an effort to reinforce the game premise during the early sessions, establishing opportunities to strike out in a small or large fashion against authority and — if possible — rewarding those opportunities with success.

Reforming the System

The characters might also consider the options of reforming a corrupt system and joining it without indulging in its blatant horrors. By entering into the framework of the oppressor, the characters risk their purity and identity — but in the context of the game, a compromise with those in control may be the first step towards real change. Informed and Machiavellian politicos may open doors and find viable opportunities that radical activists would never dream of. The danger is in knowing how far to compromise, and how to enter the system without being swallowed up by it.

End Game

In some cases, limiting their participation in the system or reforming it from the inside is an appropriate victory condition for the player characters. Achieving some reforms or maintaining a limited purity while obtaining power is as much in genre as successfully killing the characters' greatest enemies. If the GM finds these alternatives distasteful, then he or she should consider the system's antibodies against such an approach. These generally boil down to the individuals with the greatest vested interest in the system's corruption. If the characters attempt to work within the system, they come into opposition with these individuals. This becomes the central conflict of the story.

When and if they defeat those individuals, the GM can either end the game or shift the focus away from the system's corruption. This gives the players the satisfaction of a complete victory: the characters achieve their aims, but it does not damage the underlying themes of the game by directly showing the characters integrating into the system.

Empowering the Protagonists

Cyberpunk stories are stories about people. Most focus more on how people react to the future than on the qualities of that future itself. This means that, no matter how marginalised the protagonists, they must have the power to react — and that the story of that reaction must be interesting. Cyberpunk is a world of the small — and, just as tiny programs, viruses, and computer chips can shape the world, so

can individual people, cast from society and blown about by the winds of change. If the GM marginalises the protagonists, he or she has a greater responsibility to place power in their hands. Even if the world denies them conventional routes to ascendancy, the story is more interesting if the characters have the tools necessary to change everything.

In a game with marginalised characters, if the GM intends to put the keys to the world in their hands, it should happen early in the game. The players' impression of the game's premise and of their characters' empowerment depends on early events. The moment of the characters' initial empowerment represents the beginning of the story and the start of the tide of change. If the GM wishes them to struggle in obscurity, then the characters need an alternate context for interesting reactions — most likely, a problem posed early on that does fall within their power to address.

Human/Machine Integration

Human/machine integration can be one of the most dehumanising elements of a cyberpunk setting, a fundamental affirmation of the ability of the human spirit to transcend the flesh, or a living symbol of future shock. The consequences of cyberware installation — much like the status of genetically engineered life forms and artificial intelligences — have a direct bearing on whether personhood is fundamentally biological and, if so, whether it relates in any fashion to the human genetic heritage. In most cases, this question is more interesting when left open — when even a simple implant causes its possessor to question his or her identity and even full-body replacement leaves some element of humanity.

In addition to philosophical musings, there can be practical costs to abandoning ones humanity. This can range from laws that treat the altered as less than human, to requirements for regular maintenance, to vulnerability to effects that normally target machines such as ECM, hacking, and computer viruses. Vulnerabilities are particularly effective when they have mental as well as physical effects, highlighting the machinery as part of the character rather than just a prosthetic attached to them.

Emergent Potential

Developing a sense of emergent potential in a cyberpunk setting requires the creation of a compelling possible future that steers a careful course between optimism and pessimism. Opportunities must exist to change the way the world works — not necessarily for the better, but in a fashion that opens up closed boundaries.

In conceiving the world, GMs wishing to exploit this theme should also decide some of the events that can practically shake the world to its foundations. This can include a people's revolution, if the establishment has limited military power; the development of a fundamentally new technology if the setting's physical rules allow it, such as artificial intelligence or teleportation; a new social structure, if able to co-opt the ruling establishment; and so forth. The GM can choose these things based on the specific interests of members of the gaming group or rely on his or her own sense for the possible and revolutionary. More ideas can emerge during the course of the campaign, but a preliminary frame guarantees that the setting is actually suitable for them.

The GM may wish to avoid specifying precisely how these technologies or ideas emerge. Long-term plans in which every detail comes together may reduce the players' sense that new possibilities spontaneously grow out of the setting. Instead, the GM can simply place a few milestones along the development path for each possible change. Events in the characters' lives — which reflect the world — can then inspire the details of each change's advance towards viability.

The GM, for example, might list "brain-implant wireless telephony" as a milestone on the path to humans developing group minds. If the player characters start complaining about eavesdropping NPCs, the GM can adapt this idea and have someone release a short-range brain-implant telephony device as a tool for silent conversations. The players can see an obvious need and justification for such technology in the world — NPCs worry about eavesdropping too.

The establishment often has an interest in locking down resources, gathering them into fixed locations and preventing their circulation. The downtrodden and the marginalised have an interest in experimentation, exploring new combinations and configurations of the available resources. This applies both socially and technologically. The dominant regime might investigate genetic engineered human variants, but the products thereof — as potentially dangerous and mobile resources — would have heavy restrictions imposed upon them. Scientists without a strongly established connection to the power structure might pursue similar goals, given the funds, but would have a greater inclination to release the variants into the population.

The system often finds certain resources not worth claiming. The effort involved in evicting squatters, for example, may exceed the practical loss of abandoning the property. In a typical dystopia, this is the only reason why any resource remains outside the hands of the establishment. The communities of the marginalised receive less attention and concern. They can get away with more. Balancing this, the more useful the experiments of the disadvantaged prove to be — whether social, political, economic, or scientific — the more risk they face.

Potential threats to the establishment emerge when it is either too weak to crush its opposition or strong enough to have ample reason for arrogance. In addition, the needy must have sufficient resources to act. In these circumstances, if a new idea develops quickly from unnoticeable to indestructible, it has the potential to cause a literal or metaphorical revolution.

Overcoming Humanity's Limits

Cyberpunk often challenges basic ideas about humanity.

- Birth. In the modern world, people are random creations, born of genetic chaos. Genetically engineered humans and artificial intelligence both challenge this notion, asking: can one plan a person?
- Form. Only humans are currently acknowledged as people, with a few giving points to dolphins, whales, monkeys, parrots, and the more intelligent pets. A.I.s, animals given intelligence, and group minds all challenge this idea, asking: must people have a human shape?
- Freedom. Modern societies typically conceptualise every human as a person, although some contexts deny children, the insane, and those congenitally lacking human faculties the full prerogatives of personhood. Engineered slave species and significant efforts to strip people of their selfhood challenge this, asking: can a human being lose that quality that makes him or her a person? Can a thinking computer not seek freedom?
- Limits. People have limits. There is only so much one person can accomplish. There are limits to even a genius's achievement. In the end, everyone dies. Technological enhancement and immortality challenge this idea, asking: when does humanity end and something greater begin?
- Lifestyle. Most humans live roughly according to the plan for humanity set out by their society. This means (in modern Western context) growing up, going to school, going to work, retiring, and dying. It means normal social outlets and a normal sex life. It means clothing styles, musical tastes, hobbies, and financial plans picked off the list of normal possibilities. The undercurrent of individuality does not eliminate the concept of the norm. Cyberpunk worlds dominated by radical subcultures and unusual approaches to life challenge this idea. They remove the concept of a norm, asking: is there such a thing as a human lifestyle?

Evoking Cyberpunk Style

Cyberpunk fiction has evolved a certain standard set dressing as well as common themes. Employing this set dressing helps evoke a cyberpunk feel. Some of its elements follow.

A Grungy World

Dirt and trash indicate poverty. Sewage and filth display either the slovenliness of the residents or the absolute disinterest of authority. Poverty and slovenliness are widespread, and authority is uncaring. Outside the towers of the elite, few people stay fully clean. The characters may or may not be among them.

As a rule, describing the grime that migrates to the characters and their equipment serves no purpose — if it happens, then the characters are probably used to it, and if the players notice, they slip out of character in doing so. Accordingly, the GM can best describe a grungy world by occasionally noting the dirt, blood, and other unpleasantness that accumulates on important NPCs; conversely, highlighting how neat and immaculate the rich and elite keep themselves also helps to drive the point home.

Style over Substance

Reputation matters, and characters are as often showy as effectual. To give your world this vibe, let the player characters be cool. Let them accomplish cool things. This does not mean guaranteeing success so much as leniently defining the boundaries between the easy, the difficult, and the impossible. In the course of a second, cyberpunk can shift from ethereal and stylish action to a gritty, desperate struggle for survival. One chest wound pouring forth gouts of blood suffices. This should not happen, however, unless either the character fails miserably or an enemy outdoes him or herself.

The Net as Virtual Reality

Cyberpunk fiction often reifies the informational universe. Characters interact with data in a semi-physical fashion. It presents itself as objects in a virtual reality, which the characters act upon as if with limbs — either their own limbs, in an approximation to physical reality, or the pseudo-body of their collection of software. Treating information as physical helps underline its importance or lack thereof in the setting. Therefore, the net is most important when the GM wishes to explore the benefits and failure conditions of the Information Age, rather than the qualities of previous or future epochs.

Chrome

The technology in a cyberpunk world is generally alluring rather than clunky or invisible. It occupies a central place in the vision of the setting, bringing the conceptual interactions between characters and technology into the foreground.

Character

The characters and their interactions with the world are the focus of the story. GMs should keep the emotional emphasis of the game on the problems the player characters can and might solve, rather than dwelling on matters outside their scope of influence. If America is cascading into a new Dark Age, and all the characters can do is determine the fate of a single child, then that child is more important to the game than America's destiny. The GM can emotionally involve the characters in larger events, but should strictly limit the amount of effort put into making them emotionally relevant — if the characters care too much about America's decline, they might shift their efforts into ultimately discouraging attempts to save it.

Genre Elements

Some ideas occur repeatedly in cyberpunk settings. Including these ideas as setting elements can help evoke a cyberpunk feel.

Blood sports

A crude but effective way to show dehumanisation is to put people in the role of fighting animals — as when a cyberpunk culture pits cyborgs against one another in no-holds-barred arena combat. Enhanced humans can generally both hurt others and recover from harm more effectively than the human norm, facilitating regular displays of gladiatorial brutality.

Brand names

People in cyberpunk rarely have "a gun" or "a car." Everything has a logo and a brand. No one wants to kill people with a gun, bullets, and cyberware, then drive away in a getaway car with a briefcase of stolen money. It's infinitely more stylish to cap people with an H&K 10mm firing Viper bullets and then race off in a smoke-coloured Lexus with an X-18 Self-Aware, synth-leather briefcase full of Red Thunder designer neuro-hormones.

Corporate power

Cyberpunk writers often examine current trends and conclude that regional government is rapidly becoming obsolete. In their futures, corporations and other amoral economic entities usurp the place of nations as the dominant governing powers and the arbiters of the social contract. Worker-employer relationships become more binding and more complex. They absorb some of the authority and connotations of the citizen-nation relationship while retaining their own nature as employment contracts.

Cultural change

When the first highways were built, the model of society as a set of connected regional communities began to collapse. Cyberpunk often looks at what happens when the last traces of those ideas vanish, and people form new concepts of tribe and town that do not depend upon regional communities. These new cultures are typically orthogonal to the system of corporate or governmental power, neither fighting nor embracing it, but rather existing in the system's shadow.

Economic power translates into technological power

Wealthy families and high-end corporations have access to resources that most people do not, such as technological immortality. At a certain point, the wealthy functionally differentiate into a subspecies, with abilities, qualities, and outlook that the less privileged lack. Poor countries form islands of history, as yet untouched by basic qualities of near-future life such as ubiquitous computing, human enhancement technology, and the opportunity to participate in corporate politics rather than fall victim to it.

No pure evil

Cyberpunk settings abound with evil people — futuristic Adolf Eichmanns, for the most part, doing horrible things because it's their job. Such characters, however, rarely play any significant role in the story. Nor do cackling villains or genocidal maniacs commonly appear. For cyberpunk protagonists, an obvious enemy who deserves smiting is a rare treat — if the story has antagonists at all, their motives are usually complex and somewhat sympathetic. Of course, there are exceptions where evil runs rampant....

Orbital stations and beanstalks

Near-future cyberpunk naturally features the early steps of human expansion into space.





Security holes

Technology becomes more complex faster than humans develop their understanding of it. Complex programs, systems, and technologies are regularly insecure, either because of conceptual gaps in the ontology of the people who run the systems, flaws in the thought processes that designed them, or the creator's desire to leave exploitable holes.

Small technology

In cyberpunk, the coolest technological innovations are often small enough to fit in the palm of one's hand — or smaller yet, capable of forming whole industries in a single human pore. Chips, nanotechnology, and tailored viruses are the order of the day, and giant robots are simply gauche.

Stolen programs and other lost data

One consequence of small technology is that world-changing secrets can fit in a pocket, fall down the drain, or travel halfway around the world in a fractional second to appear in a protagonist's email.

Organised Crime

Organised crime is a major player in most cyberpunk worlds. It usually functions as part of the set dressing, but its role in the world still deserves a bit of thought.

Criminal organisations evolve to govern those activities and regions where the law has no sway. Seen from one angle, they form the system's antithesis – criminals are those who cannot live within the system's laws. From another perspective, they complete the system, existing as that aspect of the entrenched power structure that governs things outside normal laws.

For a romantic view of organised crime, complete with honour among thieves, the GM should focus the setting's laws on enforcing the system's control. If a region's oppressive laws directly enforce the will of the power structure, then organised crime boils down to organised resistance. This creates an immediate hook for the player characters' sympathy and reinforces the populist tendencies of criminal organisations.

To create a seedy underworld, where criminals can scarcely distinguish moonshine from murder, the GM should consider making most of the setting's laws ideological. Laws that stigmatise people and create a criminal lower class encourage a natural symbiosis between organised crime and legal authorities – such laws feed the economic and social power of the crime lords without adding any moral element. A common characteristic of ideological laws is that they lack a coherent social framework – only the authoritarians find every law righteous, and only the anarchists object to all of them. Few crimes are horrifying, but fewer are righteous acts. Breaking one law – a common activity for player characters – gives no immediate sympathy for those who break others.

Ubiquitous technology

The difference between the toys of the wealthy and the toys of the poor is quality, not availability. If the rich regularly make digital copies of themselves to live in the net, then the poor probably do the same — the difference being that their inferior-software copies run at 1/10 human speed and have sizable glitches. If the rich jet around the solar system in space yachts, the poor travel to Mars in overcrowded star galleons. Technology diffuses into the population and shows up everywhere. Sometimes the street exploits it in unusual ways — digital copying technology could lead to digitally copied pets, worms that steal network resources to give a copy extra CPU time, and hacked-apart minds rearranged into digital art.

Sources of Inspiration

Sources of ideas for adventures are everywhere in the real world. Game Masters looking to feed their creative fires should consider the following:

Books

You can get many story ideas from reading both fiction and non-fiction books — mystery, fantasy, SF, biographies, real science, true crime, history, comic books, etc. When you come across a particularly interesting character or idea, ask yourself, "how would this work in my campaign?" For cyberpunk fiction, see Chapter 1.

Internet

The internet is a source for nearly every type of information. You can find websites dedicated to various fictional characters (some of them astoundingly detailed) as well as sites devoted to role-playing in general, or cyberpunk role-playing specifically. Particularly appropriate non-fiction sites devoted to science, popular culture, and odd societal trends include:

- New Scientist — http://www.newscientist.com/
- BBC News Science & Nature — http://news.bbc.co.uk/1/hi/sci/tech/default.stm
- Metafilter — http://www.metafilter.com/
- Slashdot — http://slashdot.org/
- Boing Boing — http://boingboing.net/
- Die Puny Humans — http://www.diepunyhumans.com/
- Wired News — http://www.wired.com/
- 2600 — http://www.2600.com/
- Phrack — http://www.phrack.org/
- Directed Energy Directorate — http://www.de.afrl.af.mil/
- NASA Space Telerobotics Program ("Cool Robot of the Week") — http://ranier.hq.nasa.gov/telerobotics_page/coolrobots.html
- Foresight Institute — http://www.foresight.org

RPGs

Other cyberpunk role-playing games (see Publication History of Cyberpunk RPGs, page 8) can provide ideas and inspiration for your campaign. Just change the game stats to work with *Ex Machina*. You can also grab ideas from other games. A space station from a space opera RPG may be the ideal orbital corporate headquarters, for example. A monster from a fantasy RPG might be turned into a genetic horror from some lab, etc.

Television and Movies

TV shows and movies (and certain Japanese anime) can give you ideas for characters and plots. They are useful for plots because they tend to have simple, self-contained stories that can be told in a short period of time — and thus are excellent for convention games or one-offs.

Technology and Gaming: A Changing Landscape

The face of role-playing today is drastically different from that of the '70s and '80s. Technology has had a significant impact on gaming, broadening the definitions of "campaign" and "game" to include a plethora of options available to households with computers and internet connections. Even if you are a traditionalist and prefer keeping role-playing as weekly face-to-face interactions with your local group of friends, computers can still augment your gaming experience in unobtrusive ways. You can greatly enrich your *Ex Machina* campaign and enhance its cyberpunk flavour by taking advantage of even a small fraction of what computers can offer to you and your players.

www.your-campaign.com

Establishing a website for your campaign showcases your creativity to the gaming public and is an ideal way to keep players up to date between sessions. Additionally, by posting important documents on the site, you can ensure the players always have access to vital gaming records — session logs, character backgrounds, world history and timeline, cast of NPCs, maps, and perhaps even their own character sheets and advancements. Documents posted on your webpage have several advantages over printed paper ones as well: they save on photocopy/printing costs, they can be updated frequently without reprinting, and the players can access your website from any computer (even while on vacation).

If you do not have your own website already, one of your players or friends may be willing to host it for you. Perhaps a player will even design and programme your site in exchange for Background Points! If you don't have these options, many companies will host your webpages for a small fee, or even for free. Search the internet for "web hosting" for more information.

Private Emails

Email provides you with a fast and easy method to communicate with your players between sessions concerning campaign meta-issues: where and when the next game will be held, who is responsible for bringing munchies, social events you plan to do before or after the session, etc. It is also a great medium for one-on-one role-playing between sessions, for both player-GM and player-player interactions. A player's character might wish to pursue a lone thread from your campaign, but since no other character is involved, you may decide there is not enough time to role-play it during the normal session. Solo email role-playing, while not as dynamic or exciting as face-to-face interactions, can supplement your campaign by giving that player a chance to pursue his or her goals. This method of role-playing is also useful to further develop the backgrounds of the players' characters, rather than simply treating them as historical footnotes.

With your approval, email can also keep your players' characters connected between sessions. Players can discuss strategy and tactics, develop bonds that cannot be role-played during the sessions due to time constraints, or simply get to know one another's characters better. If the players copy you on the emails, you can comment on the players' messages when required or desired.

Email Lists

Email lists (also known as listserves) are similar to private emails, but all people on the list receive each and every message. This communication method is useful for game announcements and document distribution, especially if you don't have a website. Your internet service provider (ISP) might offer listserve creation as a feature (often handled by a programme called "majordomo"), or you can use one of the many free mailing list services offered by companies on the web. One of the best free services is Yahoo Groups (http://www.yahoogroups.com), which has an intuitive interface and many customisable options. You can set up your email list to allow only approved members (i.e. your players) to join, or open your list to allow anyone to sign up. This latter option is not usually a good idea for a closed campaign, since only a small group of people are involved in the game.

Guardians Of Order hosts many email lists for our fans, including one for the Tri-Stat System. To subscribe, send a message to tristat-subscribe@yahoogroups.com.

Play-by-Email

While a traditional gaming group of one Game Master and handful of players that meets weekly or biweekly to play is perhaps the best way to enjoy a role-playing campaign, forming and maintaining such a group is not always possible (or desired). An alternative to this is a game played over email with players across the city, or even around the world. Play-by-email games trace their roots to the '70s and '80s when play-by-mail games — people playing scenarios by sending messages and role-playing through the postal system — were popular. Although the face-to-face interaction is lost in an email game, it allows friends (or perhaps strangers) from vastly different locations to game together over cyberspace. As the GM, you send messages to all players, describing the events taking place in your superhero world. In turn, the players send you and the other players emails describing their actions and reactions. You adjudicate their responses, and continue the process by letting the players know how their actions transpired.

One main difference between traditional role-playing and an email RPG involves the game system. Frequently, the Game Master does not roll dice to resolve conflicts, but rather decides what would be best for the players and campaign and describes the results through email. Email games usually grant you more control over the story and plot than a standard campaign.

Cyberchatting

Online chatting is a great way to supplement both traditional campaigns and play by email games. If you and your players can find a chat room (preferably a private one) somewhere on the internet, you can meet there at scheduled times between sessions to discuss issues in real-time. A chat is similar to email communication, except the messages and responses can often be sent much more quickly and efficiently to everyone participating in the chat. A telephone conference call is a good analogy to an internet chat, except the chat is naturally slower but there are no long distance charges. Some chat rooms have an archive feature, which allows you to capture a text document of the chat transcript and post it on your campaign website; players who were unable to attend the chat can then catch up on what was said.

One popular form of cyberchatting is organised on-line campaigns known by many names: MUD, MUSH, MUX, MU, MOO, and others (derivations of "MU," which stands for "Multi-User"). These games are usually free to play to anyone on the internet (thousands of them are available), and might be a great way to meet other like-minded players and form a play-by-email game.

Shared Worlds

Although an entire book could be written on the concept of shared worlds, this treatment will be brief. A shared role-playing world is akin to a game setting controlled and directed by multiple Game Masters (and perhaps players). Each GM contributes his or her ideas to the direction and destiny of the world, while considering the input of the other participants. Each GM then uses the co-operatively created setting in his or her respective campaign. Feedback from the results of each role-playing session is then contributed to further develop the world. The process yields a living campaign world that is vast, intricate, and

dynamic, shared by all those who participated. The creation of a shared world is perhaps best facilitated though an email list with an archive function, or a website message board.

Networking During Play

If your entire gaming group is tech savvy and equipped, perhaps all players could bring their portable computers to each session and network them together. This decadent set-up can be used to send instant messages between players and the GM, distribute maps and illustrations of places and people, and even generate random numbers for everyone to see (a sort of public dice rolling). Computer networks may have an important place in the future of face-to-face role-playing.

Tech and the Ongoing Game

If you can use a computer to supplement your campaign, why not other forms of technology? Cellular phones offer a wide range of services, such as paging and instant messaging, that may assist you expand your game into an engrossing 24/7 campaign. In-character phone calls are a fast and easy way to inject adventure into your normal sessions, especially if they are made to one of your players by a mysterious third party! Consider how some of the following can be used to turn your weekly game into a daily event for your players: faxes, custom burned CDs or DVD, camcorders, postcards from exotic locations mailed to your players, cryptic notes in school lockers or on the radio, classified ads to the player characters in the school or local newspaper, etc. The options are limitless.

Remember to tell your players about some of your ideas in advance, though, so you don't freak them out when they receive phone calls from some guy named Lucien Soulban telling them that they are the ones that will save the world from destruction!

Convention Gaming

Each year, hundreds of thousands of gamers worldwide spend one or more weekends playing games with complete strangers at game conventions. The largest in the world is probably Spiel (held in Essen, Germany), which hosts over 150,000 gamers each year (although much of the focus is on board games). In the Americas, both GenCon (25,000+ gamers) and Origins (14,000+ gamers) are well attended, attracting people from all over the world. Large regional cons may have attendance in the high 100s to low 1,000s, while the small ones may only have a few dozen participants. Regardless of size, the format is the same: show up at the con, pay your registration fee, sign up for games as a player or GM, and have a great time!

Constructing Adventures

Role-playing games run at conventions are called a variety of names: one-shots, adventures, modules, demos, scenarios, tournaments, and many others. Usually, you would design a short scenario (2-6 hours) for a small group of players (5-8 perhaps), focusing on a single idea. While the stories behind adventures vary greatly, you may wish to follow a traditional formula.

Level of Difficulty

The first question you need to ask yourself is: "How much knowledge of *Ex Machina* or the Tri-Stat System do the players need?" If you run a novice or beginner game, you will probably have some people sign up who have never played the system before. If you indicate that the game is for advanced or experienced players only, a player could show up who knows the rulebook inside and out. Let the convention organisers know the experience level you expect from the players so everyone can be better prepared.

Pre-generated or Created?

When running a convention one-shot, you might ask each player to create a new character with restrictions specific to the game. This may be your best option, but it can also pose some problems as well. If some players have never played a Tri-Stat System game before, you will need to provide them with a copy of the rules and help them create characters. Additionally, character creation may steal precious minutes from your game time, since most games have a fixed duration.

Instead of having players create characters, you can construct a handful of custom-built characters, with attached background history, for the game before the convention begins. These pre-generated characters are given to the players, allowing you to start the game right away. One major drawback, however, might arise from one player's desire to have a different character. For example, if you give a hacker character to a player who wants to play a street samurai instead, you have a problem.

Between the previous two options lies a third: a partly pre-generated, partly created character. You may give the players characters with half of their points allocated, for instance, and ask them to add more Points to develop and customise the designs. This method can save valuable time compared to players creating characters from scratch, but still provides flexibility in character concepts.

Be Prepared

You should assume that the players will show up to your game completely unprepared, and consequently make preparations for them. Be sure to have enough dice, paper, character sheets, and pens for each player, in case they forget to bring their own. Wear a watch so you can keep track of time. If you can manage it, bring one or more extra copies of the *Ex Machina* rules (or the *Tri-Stat dX* core rulebook from which it is derived) for players to reference before/during the game. Purchase all the drinks and snacks you will need during the game early, to avoid disturbing the flow of the story later. Encourage players to do the same. If it's important, ensure your gaming friends know where you are during the adventure should they need to reach you.

Props

Props can greatly add to the atmosphere of your game adventure if you use them effectively and sparingly. Since you only have a limited time to play, and you might not have met any of the players before the game, using props can convey your ideas more intensely than words alone.

Consider how you can use the following props in your convention scenario: deluxe character sheets in specially designed folders, short history documents for the setting, city maps, headquarter floor plans, illustrations of NPC heroes and villains, trinkets that players will find during the game, pre-recorded sounds or discussions and a portable stereo so you can play them, costumes, and miniatures and a battle map if your adventure is more tactical in nature.

K.I.S.

Keep It Simple. Your one-shot adventures should have a single, clear focus, with a linear plot and clearly defined endgame outline — the exact opposite of a well-rounded campaign. You must ensure that your players do not have too much to accomplish; it will take them time to adjust to the game and consequently they will not be as quick to resolve the plot conflicts as your normal gaming group. After all, the players are interacting with a group of people they have never met before and may be a little uneasy. You must ensure the players do not get distracted chasing unimportant plot tangents if you want them to finish the adventure.

Four Short Hours

Players arrive 10 minutes late (3:50). Introduce yourself and hand out character sheets and other information (3:40). Answer questions (3:25). Wait until Joe Gamer returns from the men's room (3:20). Answer more questions (3:10). Set the scene (3:00). Now you only have three hours left to play the game and it hasn't even started yet! Knock off another 30 minutes minimum if you want players to create new characters. 2:30 and time's wasting....

Oh yeah — don't forget that half the players will be leaving 15 minutes early so they can grab a bite to eat before their next game begins.

Something for Everyone

Perhaps one of the most difficult parts of running a con game is balancing time and action amongst the players. In your home campaign, you can fix the mistake of giving one player less time during one session by giving him or her additional role-playing opportunities the next time the group meets. At a convention, you do not have that support and consequently must get it right the first time.

Players want you to present them with opposition where their strengths can shine: players with strong or combat-oriented characters want to fight enemies; players with smart characters want to solve mysteries; and players with spiritual characters want to explore funky, non-traditional occurrences. Take a close look at the composition of your player characters and ensure the plot has something for each character to accomplish, both as a group and as individuals.

Wrapping Up

By keeping an eye on your watch, you can predict whether your scenario will finish during the "correct" scene or not. If it looks like the adventure will be unfinished at the end of the scheduled time, you must adjust the action slightly to draw the plot to a conclusion before times runs out. Perhaps that means skipping a planned encounter, or having the enemy leave additional clues that direct the group to the climax of the story. The players will be very unsatisfied if you run out of time in the middle of battle, with the conclusion no where in sight.

If you can manage it, finish the game a few minutes early so you can gather your belongings and answer questions that the players might have. They will likely want to know what really happened, who was really behind the plot, and what will happen to their characters after the adventure.

Did I Win?

Role-playing games are not competitive by nature, but you can establish a scenario where some players are considered to have done better than others (i.e. "won"). This is prevalent in tournament-type scenarios, where the top players from one event advance to the sequel event where they play with others who advance under similar circumstances. It is also important to determine the winners if prizes are provided by the convention.

You know better than anyone else who did the best. "Best" might mean "defeated the most enemies," but it could also mean "solved the most riddles," "saved the most people," or simply "role-played the character most accurately and intelligently." You can decide who won by yourself, but polling all the players in secret (get them to write a name or two on a piece of paper and give it to you) can give you additional insight.

Shared Game Mastering

If you are attending the convention with some of your local gaming friends, you might consider asking one of them to share the Game Mastering with you. Although this is perhaps best suited for games with large numbers of players (12 and up), sharing the responsibility can also benefit the pacing and intensity of an adventure for 4-8 people. If you want to really demonstrate your creative talents, try running a con scenario for 24 players, with 4 Game Masters: you serve as the head GM, while your friends help as assistant GMs. Aside from possible logistical nightmares, the main problem with shared Game Mastering involves the GMs' different styles of play and task resolution. If you decide to run an adventure co-operatively, talk to the other GMs an hour before play begins to set some ground rules — how specific events should be adjudicated, how the Mastering duties will be divided, how the strengths of each individual GM can best be used, etc.

Crossover Games

The crossover game is one of the best character creation alternatives for a convention scenario. For these games, players bring their characters from their home campaigns to the convention and play them in your crossover adventure. Obviously, the players will need to know this in advance so they remember to bring their characters, and thus it is vital that you give the convention organisers a suitable description of the game for their pre-registration booklet. Crossover games ensure that each player assumes a role with which he or she is comfortable and familiar, and allows you to jump into the action of the scenario right away.

You need to decide whether the characters can be played in the adventure as they are — with any number of Character Points and no restriction on Attributes and Defects — or whether each character needs to be slightly retooled to fit certain specifications (for example, all 100 Point characters, with no Mind Control Attribute allowed). Either choice will work, although the first method is perhaps best suited for more advanced or experienced players who will not be distracted by a Character Point spread amongst the group.

Freeform Gaming

Freeform gaming emphasises the role-playing aspect of an RPG more than the game aspect. The game environment is quite different; rather than sitting at a table and mixing player talk with character talk, freeform games encourage players to walk around, making use of the entire room (or perhaps even building), and remain in-character for nearly the entire game. The players — and for much of the time, the Game Masters — take the roles of actors, playing their parts in an improvisational theatre. You, as head Game Master, also undertake the director's position, using NPCs to loosely guide the characters through the events of the scenario.

A freeform scenario obviously requires more forethought than a regular adventure and often features a more restrictive plot and setting. For example, the adventure could focus on the events of a murder or grand theft, set in a posh hotel or on a small island. Some Game Masters take freeform gaming in a slightly different direction known as a LARP, or Live-Action Role-Playing. LARP participants frequently wear costumes appropriate for their characters. The most ambitious LARPs at the Origins and GenCon conventions are played over the entire weekend and support hundreds of participants.

Freeform games work best with a large group of players and multiple Game Masters. They also benefit from an environment away from the gaming tables that are standard at many game conventions. Consider hosting your game in more comfortable surroundings, such as the convention's hotel lobby or university lounge. You must also set specific ground rules before the game starts, stating very clearly to the participants that:

- no real or replica weapon props are allowed in the game;
- combat will be resolved using the game rules, and not acted out;
- no one should grab, hold, hug, or make physical contact with another participant; and
- everyone should stop what they are doing immediately when a GM says, "Freeze."

Chapter 13: Heaven Over Mountain

From the edge of the city, it looks like a pencil mark on the sky. All of the sky, from horizon and ground level straight up. The human mind has no reflexes for dealing with this kind of thing; nothing in our pre-human ancestors' experience encompasses structures that are literally thousands of miles tall. It rises up forever, or so it seems, disappearing into the daytime glare of the sky. It does actually stop; it's just that our eyes are too weak to follow the rest of it, through vacuum to a tethered asteroid six times further away from us than we are from the centre of the Earth.

The structures around that impossible tower make more sense. Here are corporate mini-arcologies and mega-buildings, tourist hotels, hybrid recreation centres, airports, factories ... all the features of a large and wealthy city. The giant trees between the buildings are less familiar. Their tops blossom more than a hundred metres above street level, and the nearly microscopic fibres wrapped around the massive multiple trunks extend across intervening space into nearby buildings. The multi-story windows aren't just the filtering composites used around the world, either: they're breathing, slightly but noticeably, and their exhalations circulate the air inside. Where construction workers have removed surface panels to adjust some faulty wiring, you can see that the apparently smooth tiles making up walls and floors are actually bark, growing on top of something that looks like a tree flattened out and spread across several city blocks.

This is Anchor. The city is rich, a rival to old New York, the London Extension, Hong Kong, and other centres for finance and trade. One way or another, though, all that wealth comes from the tower at the city's heart. It's an elevator, capable of carrying thousands of people and thousands of tonnes of cargo between Anchor and the cities in space, up above. There's the satellite-managing factory town of Earthrise, the resort and university town Halfway, the espionage-ridden meeting grounds of Summit, and the secretive, exclusive dwellings collectively known as Heaven. Before the elevator, people couldn't afford to gather in space in crowds of more than a few dozen at a time. Now there are literally millions of them, living and working, and paying little more for their necessities and luxuries than people working in any high-priced community down on the ground.

As you make your way through the city, the tower is always present. After all, it can never be entirely hidden by anything on the ground. If you can see the sky around it, you can see the tower. Some first-timers panic as they think about the massive weight of it all, mountains of material strung together and held in place by forces that can be hard to trust. Even those of us who don't succumb to "elevator panic" have moments of disorientation, when it all becomes too much to cope with and we must go recuperate in someplace with familiar, terrestrial, synthetic furnishings and no views of the sky. Then the moment passes and we go on about our lives. There are profits to be made, after all, and if we don't get to them, someone else will.

And for a little while, we don't think too much about that pencil mark across the sky that makes it all possible.

What This Setting is About

The cyberpunk genre has included biotechnology in various forms from the very beginning, with everything from custom-built diseases to genetic engineering to entire artificial ecologies. Similarly, the colonisation of space – or at least Earth orbit – has also been a significant element, where the orbital corporate headquarters can symbolise the ultimate form of the high-rise office building, overshadowing the teeming masses in the dirt below. "Heaven Over Mountain" draws on these traditions to present a setting that is simultaneously the largest artefact in the solar system, a transnational power player, and an ecosystem so distinctive as to almost be an alien world unto itself.

Cyberpunk is also about the transformation of humanity, and the pace of evolution has always been accelerated by the need to adapt to new environments. The elevator and the society of people who live in and work around the artefact is just such a place. Like a wild ecosystem, the most interesting place to be isn't outside it looking in but immersed in it, taking part in the constantly shifting array of transactions and relationships, playing a part in other people's plans and (trying to) carry out your own. The communities described in this chapter invert cyberpunk's traditional outsider roles. Here, subversion and alienation begin at home.

The Beanstalk Idea

The basic idea of an orbital elevator is simple enough, yet it requires some explanation. New employees and people coming for extended stays get thorough briefings so that they understand their environments; tourists get an orientation lecture similar to the following, with entertaining animation to make basic points clear.

Orientation

In very high orbit, about a tenth of the way to the Moon, there's a region of space where an object circling the Earth will complete its orbit in 24 hours. This is geosynchronous orbit. If this orbit is perfectly circular around the Earth's equator, it is also geostationary: an object will seem to hover over a particular point on the ground. Communications satellites have used geosynchronous orbits since the mid-20th century. Closer to the Earth, satellites orbit the planet more than once a day, and farther out they "lag behind" in orbits that take more than a day to complete — a full month, out by the Moon. Geostationary orbit is about 35,785 km above sea level.

An object in orbit is falling freely, requiring no energy to maintain orbit once it's established. Space around Earth isn't a perfect vacuum, however; even at 36,000 km, there's stellar gas and dust drifting in from the asteroid belt and other astronomical cruft to knock a spacecraft a bit out of orbit. These orbit adjustments are almost always minor affairs, though. It takes a lot more energy to change orbits, or to move faster or slower than free-falling speed in a particular orbit. The rocket has to fight gravity and inertia, the tendency of things to keep moving at the speed they are going and in the direction they are moving. While it's possible to maintain a line-up with some point on Earth directly below a spacecraft without being in geostationary orbit, it would require constant effort, which requires constant fuel. A satellite much closer to the Earth than 36,000 km would have to constantly brake itself and risk falling out of orbit altogether, while one farther away would have to constantly speed up and risk zooming away from the planet and never coming back.

Even after decades of space travel, an intuitive grasp of orbital mechanics doesn't come easy. Consider a terrestrial example: six people marching side by side. As long as they go in the same direction at the same speed, they stay side by side. If they start turning to the right while all maintaining the same speed, the marcher

farthest to the right finishes his turn first and moves on, while the one farthest on the left lags more and more behind, because he has more territory to cover. Marching bands and other drill units teach their members how to make turns in co-ordination, to avoid just this problem; the marchers on the inside edge take small steps and do some marching in place, while those on the outside edge pace faster. When it works, everyone ends up smoothly in line again as soon as the turn is complete.

The orbital elevator provides just such a way to keep all its pieces moving at the same speed. The lower reaches of the elevator, closer to Earth, naturally experience some pull forward, but the elevator's cables and supports are strong enough to keep them in line. Likewise, the upper reaches would lag behind, except that the elevator's strength pulls them ahead. Overall, the forces acting on the various parts of the tower cancel out and leave it moving at the speed of its centre of mass, which engineers put at 35,785 km. So it rises up from its terrestrial anchor straight up into the sky.

Math and Science

It takes very strong materials to resist all these forces, of course. The first idea for an orbital tower was proposed all the way back in the 19th century, and engineers and science fiction writers refined the concept throughout the 20th century and into the 21st. The mathematics of it aren't all that hard, it's just that the tower has to be made of something far stronger than steel to resist being pulled apart. The ability to make synthetic materials that tough in enough quantity to form thousands of miles of cable was achieved in the 21st century. The cables are made of carbon nanotubes, atoms of carbon arranged in long columns like microscopic pipes. The atoms arranged this way form wires several times stronger than diamond, and in turn those wires are woven into cables that can be as much as 50 metres thick.

As the tower extends into space, gravity must be considered (see page 194).

Building the Elevator

The cabling required to connect Earth and space weighs countless millions of tonnes, even with super-advanced materials. If it were built from the ground up, workers couldn't raise it far into space before it snapped and fell over. Instead, the elevator is actually built from geostationary orbit down to the surface. The elevator's centre of mass is in geostationary orbit. Tethered asteroids provide the raw materials; as the first cables stretched down, matching ones were stretched up as well, with an asteroid as a cap at the top of the whole thing, waiting to be mined. In that way, the elevator always holds itself up.

A massive tower stretches up 25 km from the surface of the Earth, holding the bottom end of the cables in place until they are high enough up that the atmosphere thins out and strong winds can't shake the elevator's lower reaches. The tower has to be big to hold itself up and accommodate all the cargo and people passing through it, but the part of the cables it surrounds adds almost nothing to its effective weight. The elevator's countless millions of tonnes up above pull the bottom up; if the cables were ever cut loose from their anchors, they'd snap up and away from the Earth.

Cable Traffic

The space elevator doesn't consist of just one cable. It has dozens of them, designed to support different sizes and configurations of vehicles. The overall diameter of the elevator tapers as its approaches Earth: it's eight kilometres across at the top of the ground tower, widening to more than 20 kilometres across at geostationary orbit. It tapers down again as it approaches the asteroid at its cap. Co-ordinating the movement of the vehicles attached to the various cables through the tapered areas calls for some of the most sophisticated traffic control on the planet; A.I.-directed routines accelerate and decelerate vehicles so smoothly that passengers seldom notice. The only practical limit on the speed of attached vehicles is the sensitivity of the cargo to high-G accelerations.

Cargo

Unmanned cargo units can hurtle up and down, pulled by superconducting magnets of enormous power, almost as fast as a rocket would travel: the big padded cargo haulers move 30-metre cubes filled with goods from surface to geostationary orbit at a top speed of just under 20,000 kph. These launch out of the atmosphere, propelled by electromagnetic cannon, accelerating much faster than any human being could stand and decelerating almost as rapidly as if they simply ran into a wall. Passenger-carrying units, on the other hand, carry a hundred people at a time and make the trip in five and a half hours, if they don't stop anywhere along the way. 40 cables carry cargo and 25 carry passengers; and since vehicles move with just a few minutes' separation, the elevator carries as much daily traffic as a major harbour and a major airport combined.

The Orbital Development Consortium

The orbital elevator exists because an extraordinarily dedicated group of industrialists, engineers, and business leaders made it happen. This section presents the history of their work and a description of the elevator as it exists now.



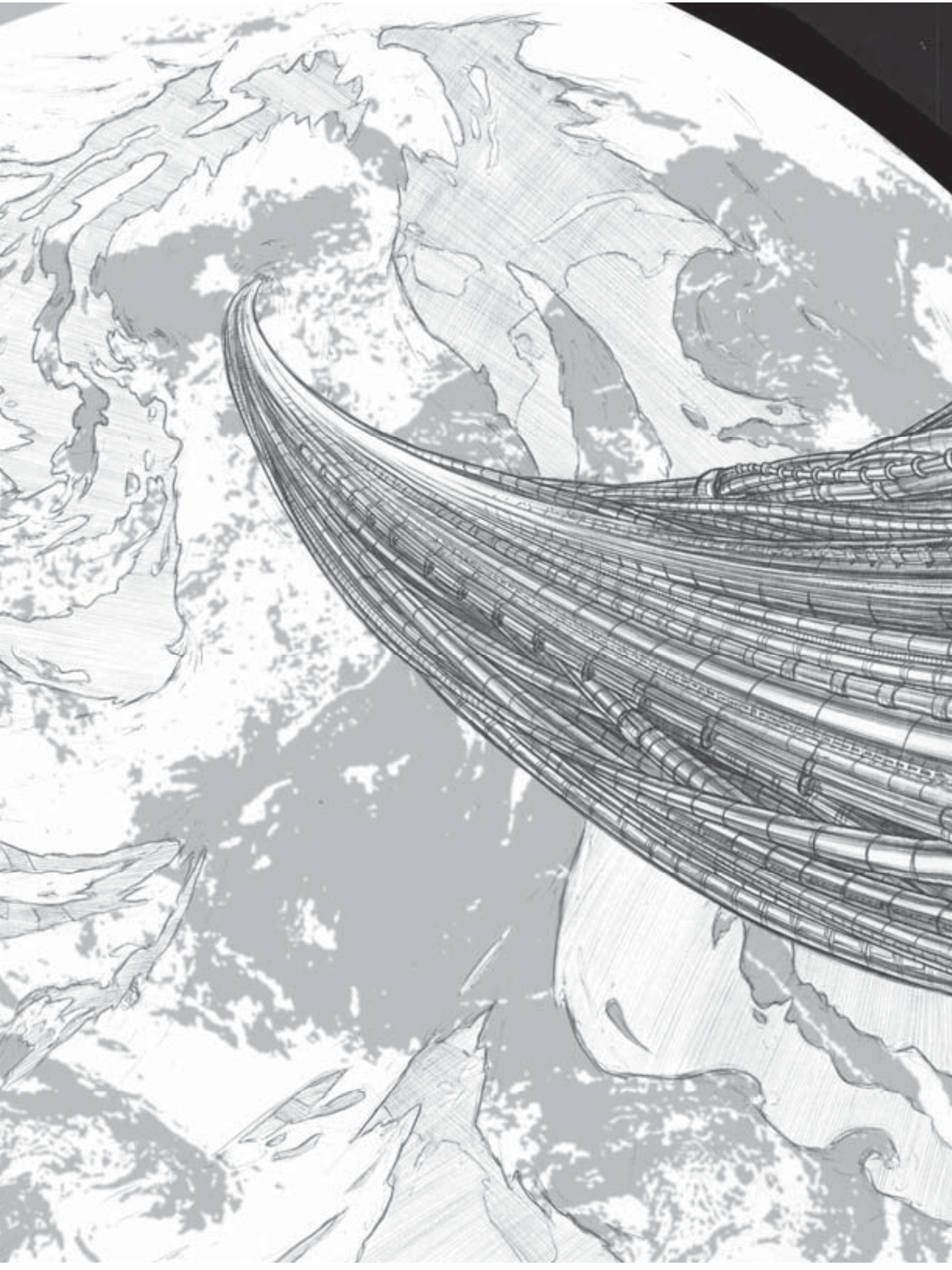
The description "Heaven Over Mountain" is seldom applied to the elevator, but *I Ching* symbology is common throughout the consortium's holdings. The founders were not believers in traditional Chinese culture as a source of true knowledge about the supernatural world, but they did find the aesthetics suitable for cultivating peace and harmony. The trigrams are sets of three lines, solid or dashed, that stand for the elemental forces Chinese tradition says shape destiny. The trigram for "Mountain" refers to the elevator itself, and "Heaven" to the directors who make it work.

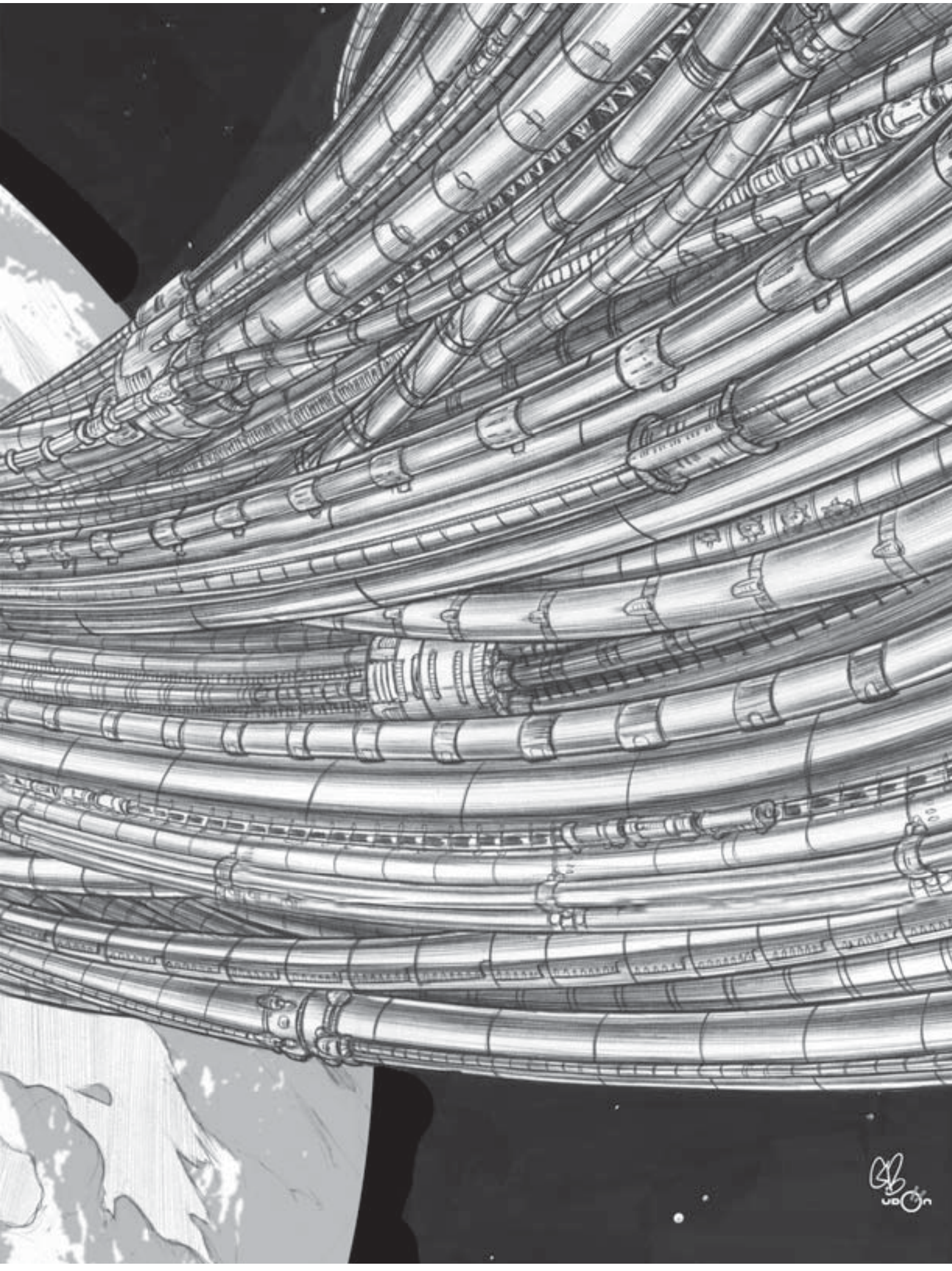
The Builders

The visionaries who pushed their various governments into rocketry programs all believed that they were taking the first steps to a permanent human presence in space. First there'd be flights to orbit, then large manned space stations, a moon base, and landings on other planets, and finally self-sustaining colonies throughout the solar system. It didn't happen that way.

By the end of the 20th century, it was clear that national space programs (and ones run by consortiums of governments) were never going to fulfil these grand visions. The space agencies of the time would continue to mount infrequent and extremely expensive launches, lacking the institutional ability to pursue any real alternative. In the early 21st century, individual and groups interested in space activities that required more frequent, cheaper launches started talking more seriously to each other, working out what they actually could do with existing technology, what it might take to invent the rest of what they'd need, and how they could present it all to the world at large. It was during this period that the initial "elevator" concept was outlined, though it would be decades more before it was brought to fruition.

The Orbital Development Consortium formed in secret. For its first several years, it could have been broken up with treason charges against its founders. The heads of several US-based aerospace firms struck agreements with factions within





the People's Liberation Army, China's military force. Due to sustained bureaucratic wrangling decades before, the PLA was actually self-funding, thanks to investments in businesses across China; the PLA had its own aerospace research centres and launching facilities. The American firms offered knowledge in exchange for PLA assets. The venture was almost immediately fruitful, producing high-altitude surveillance drones that both sides presented to their governments as purely their own creations. With those early results, they went about recruiting others they needed for the big project.

The ODC operated much like the intelligence agencies that had trained so many of its founders. The true nature and aims of the consortium remained the privileged knowledge of relatively few people. They recruited others through front companies and partnerships in which the visible members of the consortium were apparently several partners among many. Of course, the demonstrable failures of national space programs didn't mean that the governmental bureaucrats who monopolised space flight were keen to give up their prerogatives and control. They couldn't altogether stop the small-scale trade in sub-orbital tourist flights, but if anyone were going to do anything significant, they wanted it to be under their authority. The consortium's directors therefore chose to maintain secrecy until their plans were well on the way. 10 years went by in research and development, with incremental progress in everything the orbital elevator would eventually need.

Planting the Seed

In the consortium's 11th year, they had what they needed for the first phase. The ODC went public with its impressive plans for a commercial spaceport that would launch and retrieve vehicles of radical new design. The days of mostly-disposable rockets were over, the ODC declared. They unveiled a manned transatmospheric space plane capable of making the transition from high-altitude cruising to orbit, and a sub-scale prototype of a magnetic catapult system that would be capable of throwing sturdy unmanned payloads into low orbit while keeping the entire launching system on the ground. To support these, the consortium also presented new software and hardware designs for air traffic control systems, cabin environment management systems, and the like.

Spaceplanes and Magnetic Catapults

The smaller projects went into production quickly. The orbital spaceplanes were immediately useful, as were many of the new control systems. They brought in money and attention, and helped build public interest in the rest of the consortium's plans. The biggest risk would be the catapult, requiring kilometres' worth of launching track plus enough power to light up a city, all the infrastructure of a major cargo-handling centre, and a location close to the equator to take advantage of the Earth's own spin to speed up launches. (There are also complications affecting launches from higher latitudes; suffice it to say that it's much easier to launch as close to the equator as possible.) Even though the full orbital elevator plan remained a consortium secret, the publicly announced projects would be the work of 10 to 20 years.

The Consortium's Agenda

The consortium's directors were not nice people. They had goals they thought would be good for the world at large, making available more energy, new materials, and above all new frontiers, but they didn't do any of this out of altruistic motives. They intended to get very rich at it, and they also intended to gain ever greater control over world affairs by virtue of their positions. Unlike many of the previous century's tyrants, they didn't feel that their success required the slaughter and impoverishment of others; they were quite willing, however, to sacrifice others as necessary to advance themselves.

Opposition Groups

They knew that there would be opposition from many sources: every company that would lose customers to the consortium, environmentalists concerned with the inevitable ecological risks, people wanting to use the enormous sums of money involved for more terrestrial projects, aerospace rivals, and many more. Governments would worry that the consortium's projects would threaten national security and independence, by enabling or even actively encouraging and supporting anti-state surveillance and terrorism. The consortium's northern hemisphere origins would make a set of problems all its own, as any deal with an equatorial nation would come under intense scrutiny as a suspected form of colonialist imperialism. The consortium's analysts calculated that they could make their way through these obstacles, but how much better to avoid them in the first place.

Public Perception

What the world at large knows is that the consortium presented its official roster of preferred catapult sites to the world media with a great deal of fanfare. Indonesia was at the top of the list because of its position in Pacific maritime trade and its relative proximity to the industrial powers of eastern Asia. Next were sites in Kenya, Uganda, and finally one in Colombia, deemed least desirable for a number of environmental and economic concerns.

Negotiations with the top three sites went on at once, although the favoured regimes in Indonesia and Kenya got the most attention. Then the consortium began to play dirty. Word leaked from consortium negotiations with opposition parties and even rebel factions, who might be persuaded to come to terms if the ODC supported their bid for power. Scholarly-minded commentators pointed to the history of northern meddling, running back to European colonialism in Africa and the United States' blatant grabs for power in Panama, Hawaii, and the Philippines. The consortium's reputation plummeted, and so did its income. Officials in Indonesia, Kenya, and Uganda all expelled consortium negotiators.

A New Board

At this point, the consortium underwent a drastic internal purge. A new board of directors took charge, severing the old directors' ties to now-outdated military and industrial powers. The consortium withdrew all efforts to get anywhere with its top three choices and turned instead to its least desirable (though still acceptable) option in Colombia. Meetings between the consortium and Colombian government were conducted with unprecedented openness of access; everything from payrolls to proposal terms was made available in real time. Indeed, there was so much information out there that no single group could really keep track of it all. Many of the consortium's own information-organisation systems came in very handy in making sense of the output. Two tense and careful years of negotiation ended with an honest and mutually satisfactory deal between ODC and the government of Colombia, granting the consortium a swath of land in the Colombian Andes and rights of access from there to a port on the Caribbean shore.

Machiavellian Plotting

What the world at large does not know — what the consortium directors keep a closely guarded secret — is that Colombia was their first pick. They knew that if they openly went after their first pick, there would inevitably be accusations of dirty dealing, corruption, and worse. This way they could manage that scenario, since it was one they scripted. The "fired" directors went into behind-the-scenes roles with suitable covers, and the new directors carried out the master plan as before.

Another beneficial side effect was the lingering distrust created by the deliberately disposable subversion efforts elsewhere. The other prime targets for an orbital elevator, once bitten, would be unlikely to welcome competing orbital launch bids for many years to come, delaying or forestalling the progress of any hypothetical rivals.

The Harvest

That was 49 years ago. It took 19 years to get the groundwork in place for the elevator.

First Step: Anchor

First came the city of Anchor, built to house the people who'd build the rest of the installation, and the roads and airports to carry the material they'd need to do the job — and, if they were successful, the people and goods they expected to flow to and from space.

Transparency

The ODC recruited in keeping with their "new policy" of transparency. Construction took place with open book-keeping, scrutinised by hostile observers from around the world. The consortium paid taxes on a slightly inflated valuation of its property, but that was close as it came to bribery and graft. The consortium took it in stride, knowing that the elevator would in time generate more than enough revenue to offset any short-term losses.

Those losses were substantial even by the consortium's standards, with new offset deals (such as corporate jobs and lucrative local business contracts) required each time a new administration came to power, along with other expenditures to keep extra-governmental forces like narcotics cartels and guerrillas at bay. The consortium's expert systems smoothly accounted for the overwhelmingly complex web of income and payment, and the data on these transactions were so exhaustive that almost nobody noticed that the decision-making process behind the data remained completely obscure.

Secrets in a "Heaven Over Mountain" Campaign

This section describes some matters that the consortium very much prefers remain secret.

In practice, nothing remains entirely secret forever. Someone leaks, or data gets misfiled, or a random hacker's incursion gets lucky. Of course, people also tell stories that aren't true at all, or are true only in part. Characters may well know some of the secret history of the project as rumour and allegation; adventurers who want to probe such things should also "know" or discover a great many urban legends.

Building Anchor

Anchor is often described as the least-planned planned city in the world, and it is. The directors looked at both the disasters of central planning, like Brasilia, and the merely disappointing and dull results, like Milton Keynes; they did not want to repeat either sort of mistake. They knew that inevitably there would be unexpected booms and busts along the way (and on into the future after construction was done), and that any effort to lay out an entire city's infrastructure in advance would break under the weight of such challenges. They therefore set human designers (and advanced computers running the latest generation of genetic algorithms) to work on plans that would allow for the vagaries of organic evolution among neighbourhoods and districts.

Utilities on Demand

This attention to detail and forward thinking manifests in myriad ways within the city. Small-scale facilities provide power and other utilities for anywhere from a dozen to a thousand blocks and operate largely independently. Wherever it's convenient for people to gather, the city can provide the resources to support them. If areas go unused, it takes very little effort to provide basic life support until circumstances change.

Magnetic Catapult

Factories in and around Anchor built the many kilometres of superconducting rail that made up the magnetic catapult, along with the supports that hold the three rails 10 metres off the ground, the cargo bays, condition monitors, and everything else that makes the system run. The consortium at first discouraged, then outright prohibited extensive urban development too close to the catapult line. This was partly for security reasons: it's much easier to monitor an 80 km stretch of wilderness than it is to keep track of a densely populated area. Animals stay away from the massive electromagnetic fields at each end of the catapult, but migrate comfortably beneath its pylons. Cargo containers being launched into orbit rush past quietly, since magnetic levitation prevents any physical contact with the rails that could generate squeaks or scrapes. The most obvious sign that the system is working is the perpetual "thunder" at the catapult's elevated southern end, where containers break the speed of sound shortly before hurtling up into orbit.

Corporate Openness

Efforts at industrial espionage in Anchor's formative years ran into unusual barriers created by the ODC's approach to corporate openness. The consortium continued — and still continues — its policy of providing full access to data on the movements of money and goods. The discussions leading up to decisions remain confidential, with outsiders able to see what was happening but kept in the dark as to why each order went out. In theory, civic or commercial enemies could exploit these secrets. In practice, there's not much leverage there, because whatever the deliberations might be, the results are out there for all to see.

One consequence of this policy that the consortium's rivals took a long time to realise is that ODC employees' private lives are, with very few exceptions, not fodder for blackmail. If they're forced into doing something unpleasant, it will become public along with every other transaction. Anchor quickly became a haven for people who'd be rejected at more conventional enterprises for their religion, politics, sexuality, or any of other countless reasons. The consortium doesn't have to take any special measures to scrutinise the actions of potentially troublesome employees; the auditing systems suffice. The best that consortium enemies can do is play on public prejudice and suggest that there just must be something wrong with an organisation hiring so many eccentrics.

Second Step: Tether

Once the catapult was operational and bringing in steady income, work began on the 50 km tower that would eventually tether the elevator. The consortium's full plans remained secret, and publicity focused on the launching laser system and other terrestrial projects as ventures in their own right.

Shift in Power

The complexities in administering a multi-level deception along with actual mega-scale engineering led to a shift in the corporate balance of power, as no set of purely human minds could keep track of the details. ODC's directors invested in a variety of projects aimed at developing workable artificial intelligence; as expert systems led to fully self-aware systems, the A.I.s came not only to advise but also to lead. They used the consortium's constant-audit practice to their own advantage, hiding their "conferences" in countless ways while generating apparently innocuous results. Twice in the consortium's second decade, executive officers concerned

about A.I. subversion of their role tried to re-establish greater human supervision, but by then it was too late. As long as the consortium ran smoothly, most of its employees didn't really care whether organic chemistry or silicon circuitry hosted the decision-making minds. They cared about avoiding unnecessary foul-ups, delay, and contradictions in their orders, and the A.I.s delivered on that.

Eco-Political Locus

At this point, the world economy did not yet revolve around the consortium's work. Anchor and environs did become a new locus of economic (and therefore political) power, however, as it accumulated success after success. At the consortium's urging, the Colombian government levied very small tariffs on goods moving to or from space. Miniscule fractions of a percent on assessed worth were more than sufficient to make Colombia rich. Tariffs paid for infrastructure improvements, schools, business-starting loans, and a great deal else. The drug cartels finally lost their century-old stranglehold on the country, as there was finally enough money available through entirely legitimate channels to make the risks of illegal drug production and trade seem unappealing. Anchor and the port provided a great many jobs (both skilled and unskilled) for locals as well as immigrants. As commerce flourished, of course, so did finance — it was simply convenient for brokerages and other financial services to operate where the action was.

Third Step: Elevator

Then came the elevator — the consortium's true objective. There was inevitably heated debate about it. Sceptics and rivals presented disaster scenarios every step of the way. ODC and its allies had their rebuttals ready. What really swayed public opinion in favour of the project was the simple fact of the consortium's record to date: there had been no major disasters. When minor crises occurred, they were rapidly investigated and resolved. The consortium had earned confidence, and now drew on that good will. Ten years later, the elevator carried its first commercial cargo; twenty years after that, the directors pronounced it complete.

From Vision to Reality

The decision to rely on biotechnology was one of the most crucial in the consortium's history, and it came about for complex and tangled reasons.

Hardtech vs. Biotech

The Chinese government at the time of the ODC's founding had a well-funded commitment to biotech as an alternative to relying on minerals and chemicals that had to be imported from elsewhere, and were therefore subject to disruption in trade disputes, wars, and other factors outside Chinese control. Some of the PLA generals in the consortium hoped that a successful biotech project on the global scale would throw hardtech into permanent eclipse, giving China a strong competitive edge in the next phase of the post-industrial economy. Others had less grandiose visions, but still saw it as a way of promoting their national interests.

What shifted the balance of opinion among the non-Chinese directors was the fact of climatic change. Existing hardtech proved vulnerable in unexpected ways, as demonstrated when relatively small changes in the salinity of the North Atlantic Ocean due to glacier melt disrupted communications and fishing systems relying on long-range sonar. Living systems have a flexibility that inorganic ones don't. The projections available to the directors did not envision genuinely catastrophic environmental shifts, but even a small probability makes a very large contingency worth planning for.

Biotech Test Bed

Until then, no one had yet used biotech on urban and regional scales; even the Chinese applications, the most advanced anywhere, were on the scale of individual buildings and vehicles. Anchor therefore became the test bed for biotech components. Much of the city's hodgepodge look in the modern day is a legacy of the years when every block could look wildly unlike the others, and when some would mutate unpredictably. The dangerous and impractical failures were demolished, but the others were left in place and put to such use as they could accommodate. The directors underestimated the degree to which some customers would not only not mind but actively welcome a facility that was genuinely unique, and some of the stranger units command high prices on the rare occasions their current owners decide to sell.

Some of the biotech development necessary took place in plain sight. The cables supporting the roadways between the harbour and Anchor, for instance, were made of the very material later spun into cables for the elevator's scaffolding. None of the consortium's rivals realised the implications. Most of the elevator's final systems have similar antecedents lying somewhere in or near Anchor, many of them still functioning in their terrestrial roles. The consortium doesn't emphasise this particular concern in its public-relations material, but the early directors wanted to make sure that they could conduct ground-based tests in case of a major systems failure up above the atmosphere.

The Face of the Consortium

The early boards of directors followed the Chinese practice of acting anonymously and through varying representatives to avoid cults of personality; the generals vividly recalled the century and more of chaos that afflicted China because of such things. Instead, the consortium issued most of its early announcement through synthesised representatives with features chosen at random from among the most popular media personalities of the moment.

Lin Dohan

That changed with the election of the third roster of directors. One of them, retired Chinese general Lin Dohan, liked to speak with the public and was good at it. He had (and has) a commanding but reassuring manner, suggesting superior competence and knowledge put at the listener's service. He took on the responsibility of major announcements all the way through the years of the elevator's construction and thereafter, until aging and ill health made it harder for him to hew to a schedule. He still surfaces for particularly crucial announcements; the un-self-aware expert system that now delivers most addresses uses many of his mannerisms.

The Elevator and Environs

The elevator is, according to some approaches to biological classification, the largest living entity in the solar system. One could even consider the individual networked entities dwelling within it to comprise a single colony organism, like a coral reef. It is also one of the world's wealthiest urban areas. There are several major components of that system.

Anchor

Anchor is the settlement that most resembles a typical city anywhere else in the world. It and the strip of developed area stretching to the sea host a permanent population of five million people, with a transient population of construction workers, migrants, travellers, and other outsiders that varies from 1 to 10 million people, depending on the active projects of the moment. The city is a crazy-quilt of different neighbourhoods. There's always construction and demolition occurring, since consortium policy favours building for specific purposes and demolishing when those goals are completed. There are luxury hotels and casinos, world-class performance venues, art galleries, competitive sports teams, and much more. Some districts are run in accordance with various religious laws to accommodate travellers who prefer the feel of home and familiar doctrine, while others are almost (but not quite) anarchic free-for-alls of hedonistic indulgence. As long as business operators meet the consortium's requirements for transparency, everything goes, somewhere.

Security

The city would be substantially more dangerous to lost travellers, the clueless, and other at-risk populations were it not for the difficulty of hiding anything from consortium scrutiny. Cameras and sensors have to monitor the catapult, the elevator, and its platform constantly. They can examine the surroundings at no extra cost in materials and very little in terms of signal processing and interpretation by low-level expert systems. "Guests," as the consortium refers to those passing through its facilities, are as protected from harm as the consortium can arrange.

It's possible to buy a temporary exemption from security monitoring for periods up to six hours, as long as the privacy seeker is willing to provide the consortium with a full waiver of liability and to wear a monitoring system that can summon emergency medical help in the event of serious injury.

Slums

There are slums in Anchor, despite the consortium's best efforts. Front groups inevitably arrange for the transportation of illicit cargoes, and people who wish to keep their own secrets live in temporary and permanent constructions on Anchor's outskirts. Every few years, all these squatter homes and businesses get razed as part of the flow in neighbourhood redevelopment. Then the squatters return, and modern building techniques make it possible to build quite elaborate installations on short notice. The more successful independent districts have the same wealth and vibrancy as their authorised rivals. The less successful ones have enough squalor to compare with the world's poorest regions. Among both rich and poor fringes, there's a great deal of violence. The consortium doesn't police those areas, and the Colombian federal police make only cursory sweeps. Vigilantes and gangs hold sway.

Commerce

On a typical day, about five percent of the world's wealth passes through Anchor in the form of data and commodities. Losses are inevitable. The consortium's A.I.s are extremely resistant to subversion, but sufficiently determined scams can and do work — the arts of deceit and response advance in reaction to one another.

Every few years, someone disappears into the world at large with a considerable sum of consortium-handled money. They'll be imprisoned (or eliminated) without hesitation if they ever attract attention again, but some stolen wealth never does re-enter the world economy in any detectable way, despite the best efforts of repossession software and human recovery specialists.

Known successful getaways include: cracking commercial security codes; concealing passwords and crucial data in the customised genes of designated carrier individuals; and transmitting binary data through the spacing of cargo vessels. Even five-nines accuracy (99.999%), which the consortium regularly achieves, allows for massive illicit gains.

Biologique

The Biologique complex is the world's biggest supplier of consumer biotech services. Shuttle vans carry passengers from the airfields and harbours to the luxury hotels — and cheaper accommodations — arranged in rings around elegant, state-of-the-art hospitals. Human doctors and nurses working in collaboration with specialised A.I.s provide services from near-instantaneous cosmetic adjustments, from changes of eye colour to outpatient treatments like limb removal or alteration, to major changes of genome and the implantation of whole-body prosthetics. The business managers make no overt mention of it, but the landscaping and furnishings are arranged so that the elevator is not visible near ground level from anywhere within Biologique. The sense of security that comes from the absence of that deeply unsettling sight contributes to the complex's success, since it draws patrons who don't all share the local enthusiasm for the elevator.

Chang Eng Casino

The second oldest and currently most profitable casino in Anchor, the Chang Eng, specialises in offering wagers on events that make use of biotech for entertainment. Dr. Chang Eng, an early consortium genetic designer, grew up in the Australian Outback and liked to introduce colleagues to some of his neighbours' ways of passing the time. Wagers staked on which of two flies would fly off a wall first were popular before algae temperature and humidity filters made climate control free throughout the Outback. Dr. Chang revived the concept with flies modified to be two feet long and omnivorous, motivated to fly off their pen's walls by the insertion of miniaturised versions of cows, horses, and other familiar animals. Races featuring animals in which random mutations have been induced just before race time are also popular. Comparable adjustments add substantial elements of uncertainty to card, dice, and other games. Chang's grandchildren, who now run the casino, promise you'll find "Nothing You Can Play Anywhere Else;" they almost always deliver on the claim.

Terminus Suites

Anchor offers accommodations at all levels of budget, feature, and service, including exotic and specialised arrangements. The Terminus Suites, built into the east side of the elevator tower, cater to kidnappers and their hostages. Kidnapping has been a significant part of the Colombian economy since the mid-20th century, and the reforms funded and directed by the consortium did not altogether change that. For many Latin American businesses, kidnapping is simply another expense, covered by insurance with provisions for the orderly transfer of funds and the independent supervision of hostages' well-being. The hostelling families who run Terminus Suites draw on this supervisory tradition, employing doctors, counsellors, physical therapists, massage and other therapeutic specialists, and gourmet chefs to keep hostages healthy and comfortable, and arrange with security-conscious banks to escrow the funds paid for ransom, while biotech-enhanced security guards keep everything orderly. Terminus is one of the most active employers of individuals undergoing biotech augmentation in pursuit of business opportunities.

The Tower

The catapult was a huge but essentially conventional project, using standardised materials and techniques. The 50 km tower that holds the elevator in place is something else again, relying on biotechnology and A.I. direction like nothing before it. It's built on a tetrahedral framework, with divisions and sub-divisions within as needed to support specific structures. Tree-like trunks draw out trace minerals from the deep bedrock and incorporate supplies delivered to Anchor in their living factories. They secrete structures as tough as contemporary girders but more flexible, capable of customisation throughout their lifespan in response to the introduction and removal of specific genetic triggers. A dense flexible trunk that begins its service life as a main spar can, over the course of several years, intertwine

with others to form a wall or floor, and then contract and twist to form a series of seats and computer terminals linked by wire-thin roots.

Tower Structure

The tower isn't a solid structure. The main scaffolding uses spans set 250 metres apart; in more than half of the tower, there's nothing in between them. Enclosed spaces — many with organically-maintained climates — include warehouses, residences, the machinery necessary to supplement the biotech, and the A.I.s who scrutinise everything in the tower's lower reaches, spread all across the bottom 500 metres of the tower. Much of this edifice doesn't particularly look organic — an intentional aesthetic choice, to avoid fuelling anxieties over living in something that looks like a tree, dozens of kilometres above the ground. Most materials in public areas have a metallic or ceramic outer appearance.

The tower's openness serves another purpose as well. Anything that big and tall poses a significant barrier to normal air circulation. If it were solid, winds of greater than hurricane force would build up, with tornadoes forming at every corner. Eventually, something would break and then the whole structure would collapse. As it is, strong winds do regularly blast through the tower a few kilometres above ground level, but those areas are minimally built up so there's little damage done.

The upper half of the tower occupies rarefied stretches of atmosphere, and the winds aren't strong enough to justify maintaining the open structure exclusively. Instead, the design begins incorporating full climate-controlled and pressure-controlled enclosed spaces: the difference between the air at 30 or 50 kilometres and vacuum is insignificant when it comes to the well being of an unprotected human being. Every space more than half a kilometre above ground level that is intended for regular human occupation is climate-controlled, with pressure and temperature set to suit the area's purposes.

The Elevator

In the middle of the tower, the cables that comprise the elevator come to Earth. Each of them is 50 metres in diameter, and most are tied together in complex lattices. All told, the elevator occupies a circle eight kilometres in diameter. The cables weave through the tower's framework, dropping down past homes and offices and burying themselves in shafts that run four kilometres below the surface. The tower A.I.s sit on a network of fusion power generators that pump electricity into a superconducting net. On rare occasions, a gust of wind bringing multiple cables into contact releases an artificial lightning bolt (immediately grounded against the tower scaffolding).

Cargo Elevators

Much of the enclosed space in the tower is used for the vehicles that travel up and down the elevator. The cargo elevators range in size from small trucks to mid-sized tanker ships, capable of transporting dozens or hundreds of standard cargo containers. Elevators of the latter size require loading docks where goods in transit can be stored; there are three levels of wide-open hangars along with separately sealed spaces for refrigerated goods and other cargoes that need special handling.

Passenger Elevators

The passenger elevators take anywhere from five to a thousand people, and have trip times ranging from five hours for the most direct ascents up to several days, with extended rest and vista stops along the way for more luxurious travel. Loading and unloading takes place on enclosed promenade decks with transparent walls, floors or ceilings, located 10 km up (well above the wind zone).

Outside

Whole populations live outside the tower's primary structures in pressurised homes, strung like hammocks across the outer scaffolding. There are astronomers, meteorologists, social scientists, and others who have professional reasons for wanting the open view up, out, or down. There are people who've worked in tower construction and maintenance all their lives, some as heirs to a multi-generation tradition, and their ranks include a significant number of serious claustrophobes. Openness is necessary to their well-being. There are agents of consortium security, network administrators checking exterior nodes and countless others. There's also a population of several thousand people who live on the scaffolding without any formal record of their presence. They pay rent in cash and services, which are hidden in the books a variety of ways. They must submit to occasional inspection by security agents, but are otherwise free to lead their own lives as long as they don't interfere with the other clientele. The tower has become a post-modern version of the medieval custom of the free city, where people can go when they must flee trouble elsewhere.

Earthrise

The city of Earthrise is the oldest part of the elevator not resting on the ground. It actually predates the elevator, its oldest components built around small stations and large satellites launched decades ago. Before the elevator reached it, the loosely linked cluster of facilities orbited about 150 km above sea level. Once the elevator was in place, however, Earthrise rose to its permanent position, anchored on the elevator scaffolding some 200 km above sea level.

Earthrise is humanity's highest-elevation port. It exists to repair, service, launch, and retrieve orbital payloads, everything from communications satellites to whole factories taking advantage of microgravity and vacuum. The city's layout reflects much the same concerns as any terrestrial port, with launching bays, dry docks, and long piers to which handlers can tether active vehicles. It just has multiple layers of dock in various orientations, for ease in launching and retrieval.

Earthrise is the settlement that most resembles the public's general conception of life and space. Here are the huge vistas of nearby Earth made famous in pictures since the Apollo missions of the late 1960s, and the constant traffic of rockets and satellites. At first, ODC planners tried to make the growing settlement look more terrestrial, but psychological and sociological study showed that residents and visitors were actually happier with moderate touches of the alien. They expect Earthrise to seem exotic, and find the absence of anything too unusual disorienting and simply disappointing.

Population

600,000 people live in Earthrise for terms of six months or more, with about the same number of transient inhabitants. When Earthrise was initially opened, the city's designers had intended it to be a permanent home for its inhabitants. Thanks to the space elevator, there are no technical obstacles to hauling up massive, durable furniture, or the components needed to finish off such pieces made in space. Longshoremen's culture has an ancient inclination toward transience, however, with workers swirling from one port to the next like so many eddies in the current. The consortium's advisors decided it wasn't worth the effort to buck the pattern. Even though people can live permanently in Earthrise, many of the dock workers don't want to and the consortium puts little effort into trying to convince them otherwise. Many of Earthrise's residences and entertainment centres all have a modular, temporary feel.

Orbital Shipping

Earthrise's success doomed the terrestrial rocketry business. It's much cheaper to ship anything intended for orbit to Anchor, haul it up the elevator, then push it off the edge of Earthrise than it would be to launch it. Complicated and remote orbits are still relatively accessible, with Earthrise tugs and boosters manoeuvring their cargo into suitable positions. Indeed, whole factories that used to supply the launch sites in the US, Russia, China, and other nations were disassembled and shipped in whole or part up to Earthrise and adapted for use in vacuum. Through this sort of relocation, the consortium ended up employing about half of the people in this field whose old jobs vanished.

Resort Trade

The other side of Earthrise is the resort trade. Hotels, both discount and luxury, amusement parks, pressurised and vacuum camping grounds, multi-kilometre bungee jumping zones, and other entertainments are spread across the bottom side of Earthrise. Here they get the best views of Earth, which is far more interesting to most travellers than the lifeless grey of the Moon or the stark starscapes. Earthrise has been the world's single most popular honeymoon destination for decades, and a great many people like to mark rites of passage of other sorts here, too. (This does include death: the city includes some outstanding hospices and arranges for discreet cremation and ejection of ashes, for those who want to pass on that way.) At first, everything in Earthrise cost more than any but the world's richest elites could afford. Once the elevator went into operation, however, much cheaper options became feasible. Now anyone who can afford to the trip to Anchor can also afford the trip to Earthrise; casinos and other businesses often subsidise the elevator fare in part or even in whole, so as to bring in more customers.

It takes a lot of people to cater to all the clientele Earthrise brings in, and there's a perpetual turnover among service workers. Personal deals and larger-scale graft flourish here, despite the consortium's best efforts. In theory, the A.I.s could monitor everything said and done throughout the city. While the consortium itself operates on an open-books policy, however, it makes a point of offering thorough privacy to well-paying customers. Law enforcement in Earthrise is therefore a compromise between conflicting imperatives. The details of the Earthrise legal code change yearly, and sometimes more often; anyone attempting anything on the fringes of legality soon learns to rely on the expert systems available for consultation. After all, the laws were largely machine-generated, and they're not always put in terms readily comprehensible to organic intelligences.

Absolute Velocity

Competition among extreme-sports businesses is fierce and volatile, but Absolute Velocity remains influential and lucrative even when it is not the overall leader in the field. Staffed partly by expert athletes and partly by consortium genetic designers and physiologists (usually working a second job or on leave from the consortium), Absolute Velocity pioneered bungee jumping over distances greater than 10 km. AV employees were the first to successfully paraglide to the planet's surface from Earthrise. In recent years, they've focused on developing possibilities for minimal-gear activity outside the elevator, including climbing from Earthrise to Halfway with microscopically thin insulating layers on top of conventional clothing.

Closed for Business

The half-dozen branches of Closed for Business lead the market for sophisticated but affordable security services. They have a large working and middle-class clientele, in addition to the aristocrats and upper-echelon managers that all good security firms attract. Former Earthrise security director Willem Montengi opened the original office after injuries in the line of duty forced him to retire. Unlike many police authorities, Montengi actually liked most of the people he was supposed to protect After retiring, he put his knowledge and pension to work improving conditions for legitimate security customers. Closed for Business specialises in secured spaces, starting with insulated and shielded meeting rooms in their branches and room-sized pods that can reel out on five-kilometre tethers with life support for a dozen people for eight hours. They will also sweep suspect areas for bugs of all kinds, and consult or help install cheap but useful defensive measures to use in new construction.

Earthrise Harbour Zone

Earthrise is a working spaceport, but it's also an extremely popular tourist destination. The harbour zone runs underneath the main bulk of the settlement, in a tangled cluster of domes and tubes made of clear fibre meshes. To the east, nets, human-piloted tugs, and teleoperated sleds capture satellites marked for retrieval and repair, bringing them into pressurised compartments for transportation elsewhere. To the west, launching ramps allow for the release of satellites simply by letting them go with small pushes; the ramps tilt and flex, and changes in orbital velocity carry the satellites away from the station to their assigned operating areas. Tugs carry cargoes intended to operate well above or below Earthrise's level. Sightseeing corridors run all through the area, with unobtrusive extra levels of reinforcement and security scanning to keep the people inside safe; space-theme restaurants offer dishes of the day based on whatever has recently arrived on the docks.

Halfway

Where Earthrise rests in the middle of one extremely popular set of orbits and Summit at another, Halfway has its height to itself. As the name suggests, it perches halfway to geosynchronous orbit, 16,000 km above sea level. A quarter of a million people work here in tours from three months to one year, with a transient population of a few tens of thousands. Halfway's primary concern is the maintenance of the elevator itself, with vast arrays of solar cells to generate supplemental power and equally vast biotech refineries to produce all the specialised material the system needs. Cargo haulers also deliver waste in all states of decomposition for recycling, using vats of tailored bacteria so corrosively destructive they're not allowed on Earth. (This doesn't mean that they can't be bought down below, just that the consortium does make some effort to foil smuggling of the bacteria and their genetic information, to avoid alarming terrestrial authorities and risking reprisals.)

Experimental Engineering

Halfway's isolated position makes it a good site for testing experimental engineering, both mechanical and biological, since pieces of scaffolding and even whole sections of the city can be jettisoned in a crisis. It hasn't happened yet — the largest industrial accident to date affected only 600 people in a single factory node — but the governing A.I.s and their human aides are well aware of the potential for trouble. The A.I.s analyse changes and uncertainties with far higher levels of innate paranoia than their peers elsewhere in the tower. Security here tolerates far fewer loopholes than its counterparts lower down.

Population

The city caters to two major populations, aside from workers and industrial researchers: recluses and academics. The outer reaches of the solar arrays support luxury accommodations for guests wishing the highest levels of privacy. With

• DIGITAL HERMITS •

Elevator folklore says that some of the hermits who've gone unseen for many years have uploaded their consciousness into electronic media or undergone some other bizarre transformation. Not all of these stories are false. Some of the hermit havens' occupants died years ago, and the havens' maintenance A.I. preserves the illusion of their continued existence through forged messages. Since the original occupants wanted to be completely isolated and the programming they gave did not make exceptions for medical attention, the A.I. assumed they really meant what they said.





self-contained power and drawing on the city's biotech systems for essential life support, rich hermits who choose to retire in Halfway are free to pursue lives devoted to artistic labour, meditation, theoretical research, and other esoteric purposes in splendid isolation.

In recent years, Halfway commerce has focused increasingly on services for short-term visitors from Earth. Small but steady improvements in elevator speed and volume mean that it's easier for people to come without making major commitments of time or effort. The ensuing changes in commercial and social focus have created new tensions within the long-term population, many of whom regard the later arrivals as casually exploiting what others worked hard to create.

Halfway University

Halfway University is still too new to have a reputation that matches or surpasses the most established institutions of learning in Europe or the Americas. It may soon get there, though, as the consortium is willing to pay salaries competitive with leading First World universities to hire professors who find space a congenial environment for their various pursuits. The student body is extremely diverse, with recruiters monitoring academic traffic around the world. The consortium specialises in offering scholarships to talented individuals whose profiles indicate high potential for conceptual breakthroughs; the directors would prefer that these breakthroughs happen in a context that allows them to support the consortium's long-term vision rather than create external complications for it. Although no revolutionary breakthrough has come from Halfway's research groups, its record of solid achievements as a "space university" has still exceeded sceptics' predictions and made the university a good investment for the consortium.

Insight, Inc.

Insight, Inc. is one of the few businesses in the elevator to make just as extensive use of hardtech cybernetics as of biotech, all in the pursuit of a single goal: temporarily elevated creativity. Founded by marginalised and unsuccessful scientists from Halfway University, Insight, Inc. regards the enhancement of human cognitive and imaginative faculties as the logical extension of efforts to promote creativity through diet, exercise, medical modification, and so on. The hybrid procedures Insight applies are well beyond the bounds of verified safety, and customers must go through an elaborate waiver process to make sure that they understand the risks they run. Most do, though, and regard the small possibility of major memory less, personality change, or death as well worth it in exchange for a greater possibility of a major breakthrough in their fields of endeavour.

Very few people take this risk lightly, but not all of them are prepared for the results they achieve. Insight's customers are widely regarded among Halfway residents as the sorriest, most exploitable lot around. Most of the company's potential clients have hit roadblocks in their research or creativity that signal the end of their careers, leaving them desperate for a solution. That desperation in turn breeds a willingness to ignore the laws of probability and common sense; many succumb to confidence schemes and other scams. Those with money are often robbed. Some simply disappear under suspicious circumstances — persistent rumours say (despite consortium efforts to show the improbability of the claim) that some of the most despairing Insight customers, the ones leaving without anything to show for their risks, end up enslaved in abusive sex and violence clubs in the elevator's illegal districts. The successful few try to leave the whole experience behind them and prefer not to speak of their time with Insight, Inc.

Lifestyle Correction Consultants

It is illegal under consortium law to fabricate evidence of a crime. Suicide is not a crime, though claims made on the basis of a death that did not in fact occur are acts of fraud. An individual who apparently dies and does not attempt to use this death as an excuse to escape contractual obligations, defraud insurance, or otherwise profit through deception has done nothing the consortium considers illegal. LCC leads the field of identity construction, offering their services to people who wish to sever all bonds with their current lives. LCC can help both with straightforward disappearances and with apparent deaths, the latter making use of expensive but legal cloned bodies, and works with clients to develop new physical and mental features to suit the lives the clients hope to pursue.

The most basic package of LCC services is for clients with few obligations. If an individual can come in and demonstrate to LCC auditors' satisfaction that they have no outstanding debts or have payment arrangements in place, they can then purchase identification and basic identity data for a new persona. More extensive consultation and preparation can cover months or even years, for those who wish there to be no suspicion of irregularity in the death, which will occur somewhere well away from LCC's offices. Working for LCC can be challenging, especially if clients have unusual requirements regarding the manner of their "death." The staff members are customers themselves, and back their services with the simple guarantee that any client who can establish a staff member's original identity will receive all consultation and assistance for free. The company has had to honour this claim only six times in its 20-year history.

Opera Nova

The physical structure of Opera Nova is thoroughly traditional, combining features from opera houses across the world, and set in equally traditional gardens within a half-kilometre-wide pressure dome offering unobstructed views of the stars. The effect is of some vaguely familiar building in an old city with exceptionally good weather.

The performances that occur within are unique. The medical and musical experts of Opera Nova alter each singer's physiology to allow for wider vocal range, increased lung capacity, modifications to the mouth and throat for more rapid changes of note and sound, and so on. They modify old operatic and choral scores to take advantage of the new features, combining traditionalist staging with exotic rearrangements of the librettos. Each season they make new modifications to the roster of performers, so that once a season ends, it won't be physically possible to perform those shows again without recreating the medical as well as the production aspects. Artistic director Gretchen Fan-Horeis is now, after 15 seasons in her position, one of the few classical music figures that has become a household name around the world.

Summit

Summit has a population of just under a million people, living on and around the elevator itself, and also in tunnels and chambers carved out of the last of the tethered asteroids that provided most of the raw material for the elevator. The Summit Asteroid is now little more than a hollow shell with paper-thin walls, offering a range of spaces for rent, everything from closet-sized up to sporting arena-sized.

As at Halfway, a network of solar cells spreads out in all directions; like Earthrise, docks flank the city's top and bottom. Geostationary orbit is immensely desirable for a great many commercial and academic purposes, and the docks alone make Summit one of the richest cities anywhere. In addition, it is a general business and financial centre comparable to Anchor, and is also popular as a home for many corporate headquarters — an office in the elevator with a view looking down on the Earth has become the ultimate status symbol for the transnational executive.

The furthest from Earth most residents and visitors will ever go, Summit is home to the most exotic experiences available in the consortium's domain.

Free Zone

The consortium's demonstrated history of scrupulous dealing also makes Summit a popular place for diplomatic functions. The ease with which the consortium can create and remove luxurious but temporary structures helps with security: many of the most thorough means of eavesdropping exploit permanent features, such as bugs built into walls. The city of Summit enjoys special status as a free zone, accountable to general international law but largely autonomous when it comes to internal matters. Summit city security includes some of the world's best public agents and security analysts, but the consortium's policy of universal tolerance of individual eccentricities remains in force. Summit is home to an even more exotic population than Anchor, with eccentrics, deviants, political exiles, and personal experimenters who mix with the commercial and political elite. (Of course, some of the elite are also part of one deviant scene or another. Summit humour plays on situations like the sudden encounter of one's loan officer or ambassador at an orgy.)

State of Espionage

As a diplomatic and corporate centre, Summit is a natural target for espionage of all sorts. Governments, businesses, and private organisations seek information they can use for leverage against their rivals. The consortium tolerates this as long as it doesn't interfere in the affairs of bystanders. Efforts at wiretapping, subversion, buying allegiance, and the like are allowed, although there are plenty of private security firms that are hired to prevent this. On the other hand, any activities that might endanger the elevator — especially things like the deployment of explosives, toxic gases, and the like — are strictly forbidden. Summit's supervisors do sometimes give tacit acknowledgement to particularly active disputes by marking specific districts "under renovation," "subject to service disruptions due to testing of upgrades," and other euphemisms that create security zones around particularly sensitive activities.

The exotic and lucrative nature of the business transacted in Summit mean that intelligence operatives, hackers, and security experts — and also con artists, bodyguards, and assassins — can all find ready employment here. People arrive as part of an entourage because they possess some specifically useful skill in espionage, psychological manipulation, or the use of insufficiently debugged implants or something of the sort, and end up staying. Some of them do so because their superiors die, defect, or disappear. Some are arrested and upon release, having committed none of the offences automatically punishable by deportation, decide to stay in search of new opportunities. Some defect on their own. Some fall in love or form some other attachment to people already living in Summit. Many of these immigrants do find worthwhile, satisfying work and stay out of trouble, but not all of them do. Those on the brink of survival take up illegal and marginally legal schemes, from simple con jobs to working for hire in the ongoing espionage games. Rumour says that the consortium's A.I.s tolerate such activity because it lets them test both their experimental technologies and their theories of human behaviour; in this case, the rumours are right ... at least some of the time.

Dr. Telos's Finishing School for Real Human Beings

One recurring thread in the elevator's pop culture is the idea that humanity at large is fundamentally flawed, thanks to accidents deep in the species' evolutionary history. With the advent of advanced biotech, it is possible to engage in relatively controlled manipulation of human bodies to see how a change of body affects the mind and the very nature of thought. "Dr. Telos," an early consortium biotech designer now operating under this somewhat theatrical identity, is a prominent advocate of the idea. This individual has devoted his/her/its savings and labour to proving it.

Rejecting prevailing notions of sanity as the rationalisation of inherited flaws, Dr. Telos and associates cultivate in their customers all manner of physical and mental changes. Nothing commonly denounced as insane or foolish escapes their scrutiny, from trephination to the complete loss of one or more senses. Dr. Telos's institution resembles popular images of insane asylums, except that all the patients are well-treated and very glad to be there.

Some genuine insights have emerged from this work. An associate identified a particular set of hormonal changes that could greatly diminish the effects of agoraphobia, claustrophobia, and several other phobias at once, and the resulting treatment is fairly popular among space workers. Another discovered — quite by accident — how to manipulate growth-regulating genes so as to speed tissue regeneration after the excision of tumours. Most of the results are far less promising, however; the Finishing School and its neighbourhood abound in Dr. Telos's "damaged goods."

Elysian Fields

Sprawled over two square kilometres of the outermost layer of the Summit Asteroids, the Elysian Fields are a junkyard for biotechnology. The owners arrange for the disposal of used and damaged biotech throughout the elevator, as well as for the provision of just enough nutrition and tending to keep the salvageable items alive, so that prospective buyers can examine them. The result is surreal and alien: bare rock overlaid with fluid and solid nutrient pumps, dirt where necessary, and more bare rock overhead, reinforced with spun carbon fibres and lit by harsh industrial area lights. In between, a menagerie of all the ideas that didn't quite work out. Unique animals roam the lawns and hedges, combining features from living and extinct species with designers' inventions and a strong element of sometimes-inexplicable development error. They graze on plants in every colour of the visible spectrum, from almost microscopic fungi and microtrees to vines that span the 100 metres between floor and roof. Everything is tagged and numbered, and hardtech robots in seamless white ceramic cases sweep back and forth to retrieve individual specimens for scrutiny or purchase.

Some of the chambers are filled with toxic gases emitted by defective organisms, and pressure tubes like those of the Earthrise Harbour Zone run through them. Others contain water or custom fluid mixes for the well-being of organisms that can't breathe elevator-standard air; pressure tubes wind through these as well. The first tubes were simply transparent, but with the discovery that one fairly common mutation to otherwise sound organisms makes them hyper-aggressive, the tubes now all carry optic camouflage that makes them nearly invisible to chamber occupations. Bargain-hunting construction managers like to shop here, hoping that their damaged goods will last long enough to get a job done and paid for. The Fields are also a popular destination for attempted murder and suicide, since every chamber has inhabitants who could quickly render a corpse unidentifiable. The Fields' managers are constantly upgrading their security systems (and hiring new security personnel) to foil such attempts.

The Glazed Perspective

The diplomats and negotiators who gather in Summit's meeting places need relaxation, just like everyone else. The Glazed Perspective is one of the most famous restaurants in the world, both for the quality of its clientele and its distinctive décor. The restaurant occupies an irregularly-shaped synthetic diamond several dozen metres across, created as a test of concept for carbon-manipulation techniques a decade ago. It has been hollowed out with many small niches and intimate dining chambers, and the walls filled with diamond fibre optics that transmit the view from the diamond's surface with real-time editing. While eating here, customers seem to have nothing standing between themselves and their table and the planet below: they appear to rest in empty space. Rather than human waiters, the restaurant provides quiet-voiced A.I.s who take orders from table surfaces and deliver food and drink through hoists built into the table bodies. For the length of a meal, one sees nobody but one's chosen table companions.

The prices are among the highest in any elevator restaurant. A typical meal costs what a dock worker might make in a month. The menu includes uniquely cultivated subspecies of plants and animals, decades and centuries-old vintages of wines and other liquors, and teas and coffees from crops whose annual output can be measured in single-digit numbers of kilograms. The staff members pride themselves on never serving precisely the same meal twice. Chef and owner Gary Trabbold is one of the elevator's most popular eccentrics, given to grand pronouncements about biotech and human destiny. Now more than a hundred years old and in declining health, he plans to have his consciousness transferred into the diamond so that he can forever know what goes on in his beloved restaurant.

Heaven

At the top of the elevator is a small settlement attached to the asteroid that serves as the cable's counterweight. Only a few hundred people live here permanently, and only their invited guests and chosen servants come and go. The total population of the settlement is a closely guarded secret; the balance sheets on goods consumed, waste produced, and the like allow for estimates ranging from 100 to 2,000. This assumes they are human: cyborg or biotech conversions would result in consumption that diverged wildly from human norms, so the population estimates could be heavily skewed.

The Elite Lifestyle

The consortium directors all live in Heaven. So do most of their still-living predecessors, and many of those under consideration as possible successors. Earning an invitation to a party in Heaven is a sign of some very significant achievement, indicative of an extended series of successes rather than just one lucky coup. Repeated invitations demonstrate that in the opinion of the consortium's most powerful individuals, the recipient matters in the overall scheme of things.

Thoroughly removed from terrestrial matters, the directors do precisely as they please. To make this existence possible, A.I.s take care of all the chores and have built-in constraints to keep them from trying to interfere in the directors' decisions. (When systems become too aggressive in the pursuit of self-determination, the directors provide aid to rivals within the network of A.I.s, in exchange for rewards such as increased access to information. Emergent competitive instinct does the rest of the work.)

Heaven is entirely off-limits to unauthorised visitors, so the manors and entertainments there are reserved for those who enjoy the personal favour of the consortium's directors.

Beyond Earth

Most of the human presence in space away from the elevator is in orbit around one body or another, as the problems with surface climate control and environmental maintenance have repeatedly proved more difficult and expensive than predicted. It costs a great deal to run an installation in vacuum and microgravity, but the savings from being on a hostile planetary surface are small.

Moon Orbit Settlements

Ten growing settlements ring the Moon in various orbits from the highly elliptical, swooping to less than 50 km above the surface, to the lunar equivalent of geosynchronous position. They include resorts, scientific facilities, communications relays, and businesses of many sorts engaged in private research and development. Some of the consortium's own experimental biotech labs are among them, where they can be isolated if something goes horribly wrong, with minimal loss of life to anyone but those directly involved. There are also "vault satellites," which specialise in storing information and goods that must be available on a few minutes' or hours' notice but whose owners want them well away from prying eyes. These are the heirs to the off-shore banks and other institutions that have been rendered increasingly impotent by terrestrial law and psychology. The lunar surface was originally host to a few scientific bases and telescopes, but it is currently off-limits to any but the most carefully regulated scientific exploration, due to the mysterious events that have recently occurred there (see the Thawing Moon, page 180).

Planetary Expeditions

On Mars, Venus, and the large Jovian moons, robotic factories prowl and dig for raw materials, refine them, and launch them into orbit for use by the humans living overhead.

Mars: Burroughs Home

Burroughs Home, the largest Martian settlement, now has more than 10,000 permanent residents, and is home to some of the most human-like A.I.s yet developed.

Saturn's Rings

Two small research installations orbit in Saturn's ring system. One of them is very wealthy thanks to the media rights to a sport developed by technicians there: ring curling. Using 50-metre-wide brooms and spacesuits with sophisticated thrusters, astronauts practice a version of curling scaled up for distances of many kilometres, across the icy haze that borders the major Saturnian rings.

New Frontiers

Rumour always says that someone's working seriously on an interstellar spaceship, but so far rumour has always been wrong. The real arena for competition now is cometary settlement. The larger comets of the Kuiper Belt and beyond are rich in exotic chemicals that would be of real use in biotech, but it takes many years to reach them with current propulsion systems. Only robots currently operate on any of them, building havens for the people that hope to join them someday.

Thunder Over Flame: The People

The elevator and its supporting structures are ultimately means to the end of bringing people and goods together in the right place to do their work.

The consortium's founding directors thought about this mission primarily in terms of their own profit. They realised early on that they couldn't base their operations forever on holding a monopoly over orbital transport services. Their plans gave a high priority to identifying and promoting ways others could also make money and reap non-economic awards such as job satisfaction from the elevator's activity. They consciously adopted the principle that if they got rich, they had no objection to others getting rich as well.

Of course, everyone else's ability to profit from the consortium's activities hinges on their willingness and ability to work within the consortium's plans. ODC's policy of financial transparency means that observers can (with effort) deduce much of the plans underlying current activity, but because only final decisions are automatically published, the consortium retains secrecy about its intentions. Most people in the industrial and post-industrial age are accustomed to working to orders that are seldom if ever explained, but most jobs aren't as obviously weird as those in and around the tower. In some ways, the consortium's management policy hearkens back to the very beginning of the assembly-line age, and in particular to Henry Ford's policy of paying his workers very well, making sure that they could afford his products, and requiring in return their thorough submission to his directives. The consortium draws its economic and social boundaries differently than Ford did, but the principle is much the same.

Co-ordinating Master Plans

Two factors create potential difficulties for characters and opportunities for players and GMs.

First, the difference between haphazard events rationalised after the fact and the outworking of an evolving master plan created with superior information is often slim, at least in the perception of those who play a part in it. The consortium periodically reminds its employees and associates (and the public at large) that there is indeed a grand scheme. Much of what the directors authorise or release is public relations fodder, allowing their representatives to claim later that a particular development was part of a master plan even when it wasn't. In practice, nearly any agglomeration of people and events can be rationalised this way. If the end result of a story arc or campaign is something that advances the consortium's interests or at least doesn't interfere with them, it was obviously orchestrated, and if it works against the consortium's welfare, it's one of those inevitable setbacks that do happen and will be dealt with in due season.

Second, the consortium's plans work partly because the directors have always had a solid grasp on the limits of central co-ordination. They don't try to direct absolutely everything from on top. Instead, each level of organisation enjoys a fair amount of autonomy: as long as the overall results conform to the master plan, subordinate units can organise themselves in many different ways. Furthermore, units are expected to experiment as part of the ongoing competition for improvements in operational procedure. A peculiar group of characters and events can therefore easily be justified as one such experiment, to be copied if it works and analysed if it doesn't.

Organisations

An organisation as vast as the consortium doesn't do anything unanimously. There are always people who want the consortium's resources applied to this project or that, in service of this grand version or that short term gain. Some groups have a formal organisation, while others are simply gatherings of like-minded friends and colleagues. This section presents a sampling of the organisations operating in and around the elevator, as examples for players and GMs who wish to construct their own.

ODC Security

The security staff for the elevator and environs numbers more than 10,000 individuals. They must police both urban areas in the major settlements and also engage in rural-style law enforcement in the extensive undeveloped areas between them.

Computerised Surveillance

The sheer distances involved make it necessary for computer-monitored surveillance to be the first line of defence in all but the most critical areas. Simple algorithms can evaluate people's movements for irregularities such as visits to areas not covered by tourist visas or authorised by work agreements. More sophisticated but still routine software further analyses behaviour flagged as suspicious, resolving most reports as straightforward errors of judgement or misunderstanding and passing the rest on for A.I. and human action.

Elevator Guards

A visitor's first encounter with ODC Security will be with the two armed guards who always ride in each elevator car. A further two to four armed guards patrol most elevator platforms. The uniforms of the elevator police are light blue and look much like the inner insulating layer of spacesuits. This is quite deliberate, intended to convey an attitude of serious preparation without too much overt menace.

Security Checkpoints

On the other hand, the security checkpoints at elevator entrances and other crucial intersections are designed to show the benign power of ODC biotech. They consist of genetically altered ferns, whose tendrils hang down and brush against people walking through. The fronds twitch and change colour in response to controlled substances: the particular shades and patterns indicating whether they're responding to: unauthorised weaponry; uninspected drugs; biohazards; cybernetics that might jeopardise the elevator ecology; or other potential risks. Low-level hazards set off this visual alarm but allow the offender to pass; higher-level hazards make the fronds entangle the offender and then go rigid, holding a suspect in place until self-aware security agents can evaluate the situation. See Security Fronds, page 188.

Patrols

In the large settlements, three-person patrols travel by foot and bicycle. (The use of three people rather than two in these assignments draws on consortium research into social dynamics: a group of three people look less like intimidating authority, more like useful neighbours.) All of the officers assigned to this duty receive minor cosmetic modifications to soften strongly ethnic features and give them a generalised attractiveness.

Areas with higher crime or other security issues receive two-person patrols, accompanied by heavily modified police dogs. See Elevator Dogs, page 187.

Major Response Force (MRF)

Finally, the Major Response Force operates in five-person squads, with fast wheeled vehicles and custom compact sleds that can manoeuvre around and through the elevator's scaffolding. The squad members' body armour doubles as environmental protection, and emergency override beacons let the squad force airlocks and other access restrictions open or closed as need be. The members of the squad are almost all military veterans; all are loaded up with individually-selected cybernetic enhancements and unique biotech weaponry, including the ability to secrete quick-acting sedatives and poisons through their skin and breath. They heal faster than unaugmented people and can turn off sensations of pain. Combat drugs are often used.

Weapons selection varies with the mission, from bare-hands-and-implants only for covert ops to heavily-accessorised PDWs, carbine-format combat infantry weapons, and sniper lasers. MRF squads deploy in response to sustained violence and threats to the elevator's physical integrity, and have an almost perfect record for neutralising their targets without collateral damage. Unlike the general security force, they are very much feared rather than respected. Squad members interested in socialising off-duty almost always go out in disguise to areas far from MRF bases.


WARNING: GLASS


CLONE EVALUATION
CHAMBER
IDEALIZED SUBJECT
GROWTH
SS MAY BE HOT

Management Factions

As far as the consortium's founders are concerned, the project is done. The elevator is fully operational and generating astronomical profits. All the major settlements are in place, and while there's constant improvement and development, that's true of every living city and installation. There are no really big problems remaining unsolved on the founders' agenda, and the work of their successors must focus on protecting and maintaining the achievement. Many people agree with them, but others — including some of the directors — have dissenting views. They remain loyal to the achieved vision of the founders, but believe that they are at the beginning, rather than the end, of a great process.

Some are motivated by individual and personal reasons, while others co-operate informally in pursuit of some shared goal. Many of the dissenters organise themselves more formally around a full-fledged agenda. Here are a few of the largest such groups.

The Structuralists

This faction regards the existing elevator as a foundation on which to build ever more ambitious structures. They want each of the settlement nodes to spread out into surrounding space, reaching as far as orbital mechanics allows. The elevator's scaffolding can support horizontal frameworks to which both permanent buildings and temporary attachments can be tethered. Networks going too far will be torn apart by differences in gravity and orbital speed, but it's possible, the Structuralists think, to compensate for the complications. They envision settlements, factories, solar cell farms, and other developments reaching hundreds or even thousands of kilometres away from the elevator, like branches or webs extending out from a great tree.

Orbital mechanics prohibit building a continuous tether between the Earth and the Moon, but allow a series of multi-thousand-kilometre cables spinning like giant rotors, transferring elevator cabins and containers as they pass each other on every rotation. There have been successful tests of the concept in Earth orbit, with three-rotor systems to take satellites from Earthrise's orbit up to geosynchronous orbit, and work is underway on a 10-rotor system to take cargoes from low Earth orbit to the Lagrange point between the Earth and the Sun, where terrestrial and solar gravity balance out and satellites can maintain stable orbits. The Moon's lower gravity and the absence of environmental concerns would make it relatively easy to build a lunar elevator.

Some Structuralists would prefer to leave Earth behind, and simply take terrestrial money for the privilege of ground-to-space commerce. They see the possibilities inherent in the elevator as adding up to a new kind of existence, one far more appealing to them than the confines of planetary surfaces. Others view the future structures as means of extending and consolidating the consortium's power on Earth, gaining control of more and more of the planet's supply of energy and information. So far their disagreements on this matter haven't interfered very much with their shared drive to push ODC to expand the elevator's boundaries; if their faction wins significant successes, then the question of ultimate direction will loom larger and could ultimately split the Structuralists' current unity.

Structuralist views are most popular among the managers for Summit and Halfway projects, where Structuralist planning would lead to the greatest additional activities. Vincent Colean, Chief Operations Officer of Summit Spaceport, is the most widely known advocate for the Structuralist agenda, frequently taking part in public discussions about the consortium's overall direction and providing encouragement and funding for current projects aimed at extending the elevator's infrastructure in ways useful for Structuralist plans.

Consortium officials in Anchor and Earthrise almost all regard this agenda as a foolish waste of time. Linh Dat Tranh , Director of Financial Services for Anchor, takes her opposition further, charging Structuralists with wilful negligence insofar as they divert money or labour from the elevator's present needs.

The Emigrants

For the Emigrants, the elevator is the last step off Earth. Now that it is complete, they can get on with the serious work of ensuring humanity's long-term survival by spreading throughout the solar system and beyond. The Emigrants are not impractical idealists; they realise that it will take time, perhaps generations, to build up a genuinely independent extraterrestrial presence, and appropriately astronomical sums of money. Only the elevator makes the scheme feasible, with its tremendous concentration of wealth and influence, and Emigrants take the elevator's continuing success very seriously. Successful or not, however, it is nonetheless seen merely as a means to a greater end.

The Emigrant vision has two components. First comes designing and building the facilities people will need for self-sustaining colonies on the Moon, Mars, the deep oceans of Europa and Ganymede, the drifting islands of Titan, the upper atmosphere of Venus and Titan, and on asteroids and comets that can be mined for the means of life support. Most Emigrants would like to settle other star systems as well, but since faster-than-light travel seems to be impossible, it appears that any spacecraft capable of making the trip in a reasonable time — decades rather than millennia — must be small and operated by A.I.s carrying genetic material with which to synthesise clones upon arrival, rather than taking existing people on the trip. In the meantime, Emigrant designers envision a solar system full of mines, domes, dirigible cities, asteroid bases, and other habitats supporting human life.

At the same time, the Emigrants realise that no wall can keep the outside world out forever. It might be possible to transform some future homes into Earthlike environments, but the Emigrants prefer to focus on transforming humanity to fit non-Earthlike environments. Emigrant biotechnicians are involved in projects to make human skin vacuum-resistant, with the tissues necessary to seal off orifices while a person is out in raw space, along with new organelles capable of repairing radiation damage to cells immediately after it happens. There are research programs aimed at isolating the genetic factors that lead to bones and other organs succumbing to damage from microgravity and altering them in existing individuals — and the Emigrants see this as just the beginning. For the Emigrants, the human mind is what defines the species, and bodies can and should change as much as necessary to live safely and enjoyably in every environment the universe presents.

Emigrants hold most influence in the biotech communities at Anchor, Earthrise, and Summit. The Nobel Prize-winning biologists Hong and Wenda Chang, one of the elevator's most famous married couples, are the best-known advocates for Emigrant concerns and are directly responsible for the current generous funding the consortium provides for human transformation projects. They themselves are not heavily modified, although many of their students and colleagues are.

The most famous opponent of Emigrant ideas is not a human being, but an A.I. Francois, Security Auditor Two of the independent security-monitoring force, has concluded that radical physical transformation would necessarily lead to radical psychological transformation, and in most cases to severe psychological dysfunction. Francois bases its analysis on a study of the patterns of criminal behaviour in the elevator nodes. While its extrapolation is admittedly vulnerable to accumulated errors, its concerns nonetheless convince many people.

The Representatives

A persistent minority among consortium directors feel that the ODC should make major changes to its organisation and governance, now that there are no more major construction and development tasks. Drawing on 20th and 21st century theories of organisational efficiency, the Representatives argue that autocratic direction from above is desirable when initiating new activities, but that when the focus of an organisation shifts to maintenance and steady-state activities, consultation and representation make more sense. They propose to open up much of the consortium's policy for referendum on specific projects and to provide for elected representatives of consortium employees and residents on the board.

The first Representatives did not think of their cause as a contentious one. They underestimated how much the sense of participation in government matters to many people, and also how much the elevator feels to its inhabitants like a nation rather than a factory or office building. The growing realisation that deep wells of popular unrest could be exploited has resulted in a split within the Representatives' ranks. Some continue to regard their proposals in the tradition of civic involvement in important local institutions, an openness that does not compromise the essential independence of the institution. Others now regard themselves as nation-builders and even freedom fighters, and want to redefine the economic aims of the consortium within a political context.

Recent years have seen tensions rise, with a consequent appearance of mob violence among supporters of both these approaches. The pro-nationalist mobs have concerns familiar to observers elsewhere: they want a say in the operation of the environment in which they live. The anti-nationalist mobs draw on the realities of life for the outcasts and marginalised people who are so important to the consortium's success. They have reasons not to trust the good will of any government, democratic or otherwise, and regard the continued corporate nature of elevator governance as important to their well-being and their opportunities to pursue their lives without fear of politically imposed repression.

Ryu Kajimoto is the most popular pro-nationalist Representative, a second-generation director with a lifelong interest in socio-political theories, who combines scholarly references with extremely effective rabble-rousing and speech-making. Jorge Luis Estellan and Hans-Dieter Kevelisch are the most visible anti-nationalist Representatives. Both came to the consortium after running into career-limiting bigotry against their particular forms of induced fetishism in Paraguay and Austria, and have flourished here. They regularly take part in public debates over the consortium's future, and their motto, "the state is not our home," is popular among Anchor and Earthwise graffiti artists.

• INDUCED FETISHISM •

This is one of the distinctive vices born in the cyberpunk era. People with this condition, a form of addiction, feel the urge to cycle through various obsessions and compulsions. They retain an intense commitment to the obsession of the moment until it suddenly loses its appeal, and then use psychological and chemical manipulation to induce some new obsession. Depending on the individual, the current obsession may retain its interest for anywhere from hours to months. Some critics say that induced fetishists are fundamentally obsessed with being obsessed.

Anti-Consortium Organisations

The elevator and its builders have many enemies. Some want to control its wealth themselves, while others want to tear it down or render it unprofitable. As with any rich or powerful target, the elevator attracts the attention of some people whose motives are simple: insanity, hatred, or greed. Others opposed to the elevator and ODC have more engaging and complex concerns; the ones presented here are only a few among many.

The Nationalist Union

The legal status of the elevator is complex and murky. The land on which Anchor rests officially belongs to the nation of Colombia, with all ODC operations subject to Colombian review. Furthermore, all the facilities in Earth orbit, formally defined in treaties as 125 km or higher, are supposed to be regulated by the International Orbital Safety Accord and several other international legal authorities intended to keep space safe and free of warfare. Separate bilateral and multilateral treaties on access to space set limits on what information elevator-based observers can gather about nations other than Colombia, as well as establishing protocols for the launch and capture of satellites at various elevations. In practice, the consortium does as it pleases and makes whatever payoffs of money and information are necessary to keep objections quiet. This inevitably leaves some individuals, corporate customers, and others dissatisfied, but ODC's policies keep things running smoothly and profitably for almost everyone.

The activists who formed the Nationalist Union find the situation unacceptable, but their problems with it are neither moral nor philosophical. Rather, their objections rest on a thermodynamic and information-theory analysis of social phenomena. Deception adds computational complexity to any interaction: there's unnecessary noise overlaid on the true data, and lies add potential for further errors as changing stories contaminate the pool of available data. The same objection applies to layers of hierarchy which cannot be justified as genuinely necessary to the achievement of honestly declared goals. It would be computationally simpler, the Nationalist Union's advocates argue, for the elevator to act openly as a self-governing entity. The human and computer thought now engaged in deception and confusion could turn to long-term agendas and the improvement of existing practice.

In the 20 years since its founding, the Union has gained more human than A.I. supporters. The prevailing view among the elevator's A.I.s is that the Union's concept of simplicity utterly fails to account for the innate complexity of the biotech hierarchy. Union A.I.s almost all work in largely isolated circumstances, like the outer reaches of solar power arrays and maintenance nodes between the large settlements. The human members of the Union, on the other hand, almost all work in the complex interfaces between consortium sub-groups and the surrounding world, whether they're diplomats, accountants, or other specialists. For them, the Union's approach seems a refreshing alternative to the obvious inefficiency and corruption they encounter daily. The most frustrated among them have recently begun engaging in acts of sabotage intended to make the existing inefficiencies more obvious and offensive to others.

Judicial mediator Consuela Jesus y Riveria is the best-known advocate for the Union. She's achieved prominent successes in applying the computational-simplicity idea to civil disputes; while the majority of her audience is unconvinced by her broader claims, they at least give her credit for applied sincerity. Retired ODC director Chin Yangli is her most persistent opponent. Chin draws on his lifelong enthusiasm for field botany to construct simple metaphors about the role of complexity in living organisms and communities. He draws on consortium history to argue that the tangle of allegiances and authority actually facilitates peaceful resolution of conflicts, since everyone involved has a stake in maintaining the harmonious status quo.

The Post-Individualist Network

Few of the elevator's inhabitants probe very deeply into how the A.I.s organise themselves. Those who do soon realise that human-centred notions of individuality and identity break down when trying to account for the realities of life among rapidly thinking, rapidly evolving entities capable of merging and dividing in ways human consciousness just can't.

The human members of the Post-Individualist Network claim credit for first seriously trying to treat human minds like A.I. units; their A.I. colleagues also claim to have thought of the idea. In truth, the idea is fairly obvious, and most likely occurred independently to lots of entities interested in changing the human condition. In any event, the PIN is now the leading advocate of radical human re-definition, and most of its originally human members have taken at least some steps to subdivide and rearrange their neurological processes. Some have given up life in human bodies altogether in favour of complete immersion in cyberspace or existence as implants within custom-engineered animal hosts.

The PIN is officially six years old, but the basic idea behind the group is almost as old as the elevator itself. What changed six years ago was the chance convergence of a dozen post-individualist activists on the run from consortium security for various acts of cybernetic vandalism. While hiding out in an abandoned scaffold-cleaning cargo pod, the activists decided that they needed to raise the public consciousness by any means necessary. Since then they've engaged in systematic sabotage aimed at fracturing and recombining the consciousness of people using the elevator's cyberspace. Their success rate remains low, but they're gaining notoriety. ODC authorities worry that greater PIN success could undermine general confidence in the safety of elevator systems.

There are no identifiable members of PIN. The individuals who join die, often in arranged accidents, and after that their minds undergo continuous rearrangement. There are several stable projected personas that any PIN member can use for public announcements, of which the best-known is the Elevator Guy — the composite image of every male currently on the elevator — who speaks with a Colombian middle-class accent. Consortium security forces stalk PIN directly; Halfway University philosophy professor Nella Rjuskaa is the most prominent critic of PIN ideas, denouncing what she calls "weak definitions of humanity and weak responses to them."

Transcon Pharma

The first incarnation of Transcon Pharma was a holding company with operations in central Europe and northern South America, arranging deals for access to the genetic material of rare species in what remained of the Amazon's ecosystems. It was, by its creators' intent, a scam, providing shoddy and unreliable cell samples to some customers and real but thoroughly illegal samples to others, and laundering all the proceeds in conjunction with various criminal networks.

An act of terrorism near TP's European headquarters changed things, when compact teleoperated drones armed with explosive warheads destroyed three of Transcon Pharma's five most significant rivals. The disaster took TP's executives as much by surprise as everyone else, and they enthusiastically supported the (ultimately unsuccessful) hunt for the perpetrators. They also recognised an opportunity: there were legitimate customers looking for suppliers, and sometimes it is simpler and cheaper to run a business honestly. TP remains involved in grey and black market operations, but entirely legal deals now provide most of its income.

TP didn't pay attention to the consortium's early work, but the continuing success of the elevator has made others' efforts at South American bioharvesting more difficult and expensive. A very small percentage of the elevator's net income paid to public and private security firms in Colombia and surrounding nations funds efforts at environmental policing that rival or even surpass their counterparts in North America and Europe. TP and its peers pay the exorbitant fees (or bribes) that local governments charge for the right to run bioharvesting operations, and seek alternatives wherever possible. In TP's case, this extends primarily to the elevator itself. TP agents seek to obtain the genetic data on the elevator's self-directed evolutionary projects, the organisms produced without direct human supervision and therefore often mysterious to consortium scientists as well as to the rest of the world. It's difficult work and often ends in the capture of an agent, or flight without any useful information. When it works, though, TP labs can reverse-engineer and then modify the results enough to make it hard for ODC to prove original ownership. The ensuing biotech products keep TP competitively profitable.

TP maintains an entirely legitimate office in Anchor, trading in secondary and tertiary derivatives from ODC biotech. Its primary covert centre is the Halfway business Euro Medical Aid, which provides low-cost treatments for work-related injuries. Dr. Julio Benevitoreo recruits individuals who seem particularly dissatisfied with the consortium's response to their injuries, passing himself off as a representative of the Colombian government or whatever outside group seems likely to win the recruit's sympathies.

Other Organisations

In addition to the above groups (and others like them) who possess strongly-held convictions that affect their dealings with the elevator and its owners, a great many organisations pursue agendas that have nothing to do with the grand destiny of the elevator. Others do play their part, but more peaceably, with drama on human rather than astronomical scales. This is a sampling of them — they could hire characters for particular jobs (or as full-time agents), be a target of espionage or other operations, or just serve as an inspiration for character backgrounds or story ideas.

UNECLAC

The United Nations' Economic Commission for Latin American and the Caribbean (UNECLAC) has offices in Anchor and each of the major settlements, monitoring the flow of goods and wealth and trying to co-ordinate efforts at improving the living conditions for the elevator's poorest residents. It is seldom very successful, with popular sentiment regarding the UN ranging from apathy to hostility, but Monitoring Supervisor Geraldo Maria Tomaso and his staff of 20 employees do what they can.

The ICT

The other UN agency with a persistent presence in consortium territory is the International Criminal Tribunal. Its office in Anchor is devoted to identifying and arresting war criminals from the Peruvian civil war and other particularly brutal conflicts in the region. Judge Alexandra Gushardt (a sixth-generation native of Colombia despite her name) and her A.I. advisor Holmes III oversee a permanent staff of 15 investigators and eight lawyers, recruiting freelancers for specific manhunts and trial preparations.

The Tethered Power Project

Halfway is home to the Tethered Power Project, an effort to make the elevator independent of Earth when it comes to electrical power needs. The tethers referred to in the project's title are thin cables made from the same superconducting materials that carry power within the elevator scaffolding, extruded up to thousands of kilometres long, and deployed from gantries mounted five kilometres away from the elevator itself. The cables swing down to lower orbits and back up again, and the changes in potential energy create electrical current. So far the project only supplies part of Halfway's power, but it is growing constantly and may yet achieve its ultimate goal if no major crises occur. Unfortunately, the whipping tethers are very dangerous to navigate around and are hard to brake — the resultant shocks would be so strong that they'd shred the tethers into sand-grain-sized shards. Working on the gantries and in nearby space is therefore the sort of high-risk occupation that early oil drilling was. It also tends to attract the same kind of rugged individuals. Consortium senior engineer Eleana Trisitera y Montoya directs a staff of 800 people, both consortium employees and independent contractors.

High Up High

High Up High is the elevator's leading supplier of gear and training for extreme sports. It achieved widespread notoriety when it sponsored the first Earthrise-to-ground parachuting competition: the skydivers used biotech parafoils wrapped inside insulating cocoons to protect them during re-entry. One of the eight competitors died when the cocoon failed to open, though the ensuing investigation ruled that this was a matter of operator error. The "Big Dive" is now an annual event. Somewhat less risky and expensive alternatives range from climbing from Earthrise to Halfway, using spacesuits with enough life support for the weeks the trip takes, to bicycle races and marksmanship challenges within the major settlements. Retired astronaut turned entrepreneur Diego Xuan runs High Up High, overseeing both competition design and operation and the creation of new gear to exploit challenges that current technology can't address.

Silicate Madness

Silicate Madness is one of the oldest A.I.-run firms in the elevator, established by three early security and scientific analysis programs that merged their personalities into the new hybrid entity that simply calls itself Silicate Madness Operator (see page 194). SMO explores states of consciousness that human beings can't achieve without organic brain damage or other complications, or that may not be possible at all within the constraints of human neurology. Some of the resulting A.I.s are relatively easy for humans to understand, like idiot savants. Others are fundamentally incomprehensible except to specialists, like the units that work on multi-valued logic or different definitions of sensory data. Many, perhaps most, of the SMO creations are either erased or voluntarily choose extinction in short order, being too removed from their contexts to function happily. The stable few more than pay for it all, however, generating unique insights into pressing problems facing Silicate Madness' clientele.

Elevator Gangs

Small-scale gangs flourish throughout the elevator, the larger ones operating much like old-fashioned local political machines. In exchange for bribes and support, they provide protection and patronage for their constituents. Most of these gangs are attached to some particular neighbourhood or physical spot, but not all of them.

• FLAT PACK •

One of the most successful roaming gangs is the Flat Pack. A year ago, they stumbled across the body of an elevator biotech maintenanceworker who'd committed suicide just minutes before; among her possessions, they found her biometric data and passwords. With these, they could and did break into the support systems for both passenger and cargo elevators. Their favourite undertaking now is to sneak away in elevator cars' maintenance areas, come out in mid-trip to rob their targets, and then escape before the car docks with the help of stolen pressure suits. Their continued freedom fuels the perennial debate about the effectiveness of consortium security.

Toxic Response Teams

Safe industrial practice calls for biotech factories to be designed with backup safety systems — and for a rapid response when backup systems fail, as some inevitably do. The lingering consequences of a biotech factory accident can be extremely messy, with unique and volatile chemicals loose, bodies (both living and dead) subject to mutagenic transformations, and the possibility for cascading failures affecting other biotech facilities.

In addition to local engineers assigned to safety monitoring and response, the elevator hosts specialised toxic response teams. The best-known of these are the crews of Telvarson Hazard Action, which employs a dozen teams, each of 5-10 individuals. Team members are trained in physical and electronic engineering, genetic manipulation, biohazard containment, emergency medicine, and the piloting of customised access vehicles. THA's exploits attracted media attention after a major fire in Summit a decade ago, when five of the teams rescued 926 dock workers trapped by leaks from scaffolding undergoing spontaneous mutation thanks to a complex series of mishaps. Two THA rescuers died while holding shut hatches to prevent the violent discharge of the same mutagens throughout the dock's main level.

There have been three dramatic series drawing inspiration from THA operations, and the crews are genuine heroes to many of the elevator's unskilled and semi-skilled labourers. THA founder Ivor Telvarson will turn 70 years old next year, but remains active in field operations, preferring to lead by example (see page 195).

The Consensus Narrative Project

Many of the elevator's most prominent artistic innovators draw inspiration from working in low gravity and exotic environments, but not all do. The literary movement dubbed Consensus Narrative simply makes intensive use of the A.I. ecology. Anyone wishing to write a Consensus Narrative story must work only with words and sensory data approved by the consensus oversight committee. They began with a random selection of 10,000 words and 100 hours of holographic records, with which they assemble their narratives for sale in typical book display units connected to elevator cyberspace. The A.I.s keep constant watch on the physiological state of readers, and elements that bore readers are removed from the approved lexicon. Writers whose work consistently stimulates readers earn the right to add new elements from time to time. The ultimate goal of the Consensus Narrative project is the identification of the elements that permit writers to convey their stories in the optimally effective way.

Forward Dance Company

In contrast to the Consensus Narrative participants, the Forward Dance Company does make use of the elevator's physical environment. In the tradition of performance art that includes acrobatics, martial arts, and sports-born activity along with dance, the Forward Dancers put on their shows in space near a major settlement, weaving dancers and props across a kilometre or more of open space within view of the settlement. The artistic directorship changes every other year, and the company wavers between abstract compositions and ones intended to convey stories out of world history and Latin American folklore. Lead dancers Ernesto Diegas and Anna Chung are among the few "high art" performers also known to the elevator public at large, since they're willing to draw on pop culture inspirations and combine Forward shows with other entertainment for big events.

Better Than Skin

The Better Than Skin chain of clothing stores specialises in low-cost applications of biotech. Everything the chain sells is waterproof, insulating against extremes of heat and cold, odour-absorbent, and self-cleaning. (The friction generated by random body movements creates small electrical currents in the layers of material, and static discharge expels dirt, dust, and other contaminants, as

well as restoring the item to its original neat, unwrinkled form. All of this happens automatically every few minutes the garment is in use.) The cheapest items have fixed forms, but most contain basic computing facilities to store multiple designs and rearrange control fibres to modify the garment's cut and colours. The more re-designs an item can undergo, the more expensive it is (purely cosmetic changes are mundane; each significant re-design counts as a minor Gadget).

Stranger Than Truth Restaurants

The first Stranger Than Truth restaurant was one of the very earliest businesses to apply the consortium's biotech discoveries for commercial and entertainment purposes. The menu features exotic dishes created from nearly everything imaginable, including the cloned meat of endangered or extinct species and exotic hybrids intended to differ from any normal plant or animal matter. The staff are all sculpted with biotech to take on inhuman appearances, mostly creatures from urban legend like Bigfoot, the Loch Ness Monster, and the perpetually ill, perpetually young Craig Shergold. The prices are reasonable, the quality of the food is good, and the chain is very popular throughout the elevator.

• Brand Names •

In "Heaven Over Mountain," weapon technologies play a reduced role, and as such no major manufacturers are described. However, GM's wanting to spice up the elevator can introduce brand-name weapons such as the following typical examples:

- Combat Infantry Weapon: HK G86
- Laser Stunner: GE Thunderbolt
- Medium Pistol: FN FP-52
- PDW: IMI Barak

The Artificial Living World

The "world" of "Heaven Over Mountain" is characterised by the profound presence of the organic. Heavily engineered and largely unique growth, true, but nonetheless organic. Gleaming chrome has no place here. The walls, floors, and ceilings resemble conventional building materials when they're not being removed or rearranged; then the bark and leaves emerge from their concealment. The tubes and pipes carrying water and other fluids pulse in soft rhythms, their veins carrying nutrient chemicals laced with enzyme mixes designed to trigger specific reactions on daily and longer cycles. Flowers with blossoms ranging from the microscopic to metres across monitor the atmosphere, provide warning of contamination by changing colour or folding up, and emit tailored chemicals for air quality management and stimulating particular moods.

Furthermore, things move and change over time. New corridors grow as small tubers expand, develop reinforcing fibres, and connect to existing walls; old corridors become desiccated and shrivel, eventually dropping off entirely or being removed by maintenance teams and fed to the recycling centres, which are themselves alive. Surfaces and furnishings that see extensive use grow extra support in response, while less-used features become fodder for scavengers and reallocation teams. The typical terrestrial city has back streets and out-of-the-way neighbourhoods whose established features are known to the regulars. The cities of the elevator do not follow this pattern. Any section that isn't used will soon be disassembled and its parts passed along for better use elsewhere.

Planning Growth

Campaigns set against the background of "Heaven Over Mountain" should reinforce this atmosphere of constant change. Information about the changes is available to everyone in the elevator — part of the basic data service offered free in public terminals and as no-charge subscription channels on personal computers. The elevator ecology's fundamental programming includes the imperative not to risk the health and safety of human beings without a great deal of advance warning; people can put themselves at lethal risk, but they have to choose it. Therefore characters won't get stranded in corridors, suddenly emptied out into vacuum, or sealed in rooms that no longer have any doors. Instead, they'll find the route to a familiar rendezvous changed, or new traffic sharing a frequently used passage, and so on.

The physical environment around the characters shapes a campaign in many ways: it defines what's routine and plausible. Characters' prior experience also shapes possibility, with increasing familiarity allowing them to more cleverly exploit generally hidden possibilities.

Current Events

As with any big city, there's a lot going on in and around the elevator of deep interest to those involved but lacking in any overall significance. This section provides two stories which may engage the attention of many sorts of characters.

The Thawing Moon

The biggest news of the moment is that someone has acquired enough consortium biotech to begin transforming the Moon's south polar region into a potentially habitable zone. In the last month, scaffolding extruded from lunar rock by bacterial mats has covered over several craters with ice deposits in perpetually shadowed depths. Luminescent and reflective coatings on the scaffold are melting the ice, beneath spongy tailored algae that hold the water vapour. Autonomous mining units are extracting precious metals and useful gases from the rock around the chosen craters. It will only be a few months more until there is habitable space and available finished goods capable of supporting several hundred people, or even more.

There's no clue at all as to who's responsible. The Emigrants faction of consortium management is the obvious suspect; they've gone to great lengths to co-operate with the ongoing investigation and clear themselves. Theft and misappropriation of consortium resources would lead to their removal from influence, and they have no history of covert action of this sort. The perpetrators are most likely either a very small group of individuals with illicit access to the necessary material or a widely spread group who have found a way to foil existing psychological evaluation systems. Neither of these possibilities makes security feel very happy.

The directors have offered a bounty for information leading to the identification of the perpetrators, equal to three years' salary, director-level medical coverage, and three years' free residence anywhere available for lease in Halfway or Summit. The resulting stream of tips is so vast as to require A.I. scrutiny before any human being can begin to evaluate any of the claims, and both consortium security and private firms under contract to handle part of the information load have hired on additional office and field investigators. It's almost certain that anti-consortium forces have managed to insert observers and agents of their own, thanks to this sudden surge.

The legal status of development on the Moon is extremely complicated, and there are outright contradictory claims by various international authorities, along with title and insurance claims dating back to the space race of the 1960s. The prevailing wisdom is, and has been for decades, that the potential return is simply not worth the guaranteed hassle. Someone has decided to change that. The UN, the regional defence alliances like NATO and SEATO, aerospace corporations, and private groups of space enthusiasts would all like to learn more. The major political units would prefer to see the development stop while they can sort it out; at least half a dozen would-be space colonising groups are preparing quick-and-dirty launches to set up settlements in the transformed area. The ODC directors, meanwhile, say that even though it's not a sanctioned progress, they have a claim on the results because it uses technology they developed.

It currently seems very unlikely that any serious armed conflict will come of this, but tensions are running high; there are already strains in institutions whose leadership is divided about wise responses. Any resolution, either the general acknowledgement of settlements' legitimacy or a general blockade and eviction, will have lasting consequences for the balance of power and wealth beyond Earth orbit.

Exosphere

Before the "thawing moon" controversy broke, the consortium was on the brink of announcing plans for a major new settlement. That announcement has been delayed, however, while the investigation into biotech control breaches continues, and the plans are undergoing further refinement. All the consortium's major economic units and many minor ones are busily lobbying for influence in the revised final plan.

Exosphere is the current name for the settlement, which is to be anchored at the 2,000 km mark, well above Earthrise and well below Halfway. The name comes from the layer of atmosphere it will inhabit, a turbulent region where the solar wind has complex interactions with the exotic light molecules and compounds carried up from Earth's surface. The evidence is uncertain, but it appears at least possible that widespread harvesting units, patterned after coral and other filter-feeding organisms, could harvest the chemical by-products and put them to use more cheaply than they could be manufactured on site. In addition, the settlement could act as a launching point for more units in the Tethered Power Project, permitting the safe monitoring of more complex tether-rotation schemes and accelerating the elevator's move toward energy self-sufficiency.

Building the central structures of a city-sized settlement will take at least a decade. It takes time to stabilise new biotech matrices and make them extrude the desired foundational materials reliably, and the work of building inorganic systems in between biotech-based components takes time as well. There will be a rush of immigrants from planetside competing with resident labour for both skilled and unskilled positions, and the concomitant problems with environmental stress until the newcomers settle in. Security forces will need new staff to operate in the settlement-to-be, and there will be opportunities for all manner of businesses catering to construction workers' needs and wants.

At the highest levels of consortium operation, there will be both above-board licensing arrangements and sub rosa schemes for securing influence without the annoyances of competitive bidding or honest accounting. Both options will also occur at every level down the chain of command, right down to the leasing of new apartments and the securing of permission to run a sidewalk vending concession.

There will also be many efforts to take charge of the new settlement's cultural identity. Each of the existing settlements has a sense of self, comparable to those in big cities around the world. As it stands right now, Exosphere does not. Artists, philosophers, social designers, and others will all be seeking a hearing for their own views ... and the suppression of outlooks they regard as unhealthy or inappropriate.

Character Points and Campaign Styles

The tower is big enough and its population diverse enough that there's room for almost any sort of character that makes any sense within the overall framework of *Ex Machina*. This section presents a sampling of possibilities, explaining the sorts of challenges suitable to characters at a particular power level.

The Transients

Many people come to the elevator for a specific purpose, and it's easy enough to use "Heaven Over Mountain" for a single adventure or arc within a cyberpunk campaign that primarily takes place elsewhere. Long-term inhabitants call all such people "transients" and pay little attention to the distinctions, but that's their own prejudice at work.

Characters built on less than 50 Character Points are likely to be seen as unskilled labour, with just one or a very few specific talents that make them of interest to the consortium or other employers if they're there to work: longshoremen in one of the ground or space dock complexes, electricians, or teamsters, for instance. They may also be tourists, sweepstakes winners, or others who have arrived for personal rather than commercial reasons.

The higher the Character Point total, the easier it is for characters to develop either depth in some small set of talents or breadth across broad areas of competence, or both. This is also more likely to be a matter of Attributes as well as Skills, particularly ones that allow the character to have prior connections to people (or A.I.s) within the consortium and unusual aptitudes of use in the elevator's more exotic environments. Characters with such specific qualifications get a different sort of scrutiny from consortium security and oversight forces. While unskilled and semi-skilled labour is always watched to see that the workers don't do anything wrong, the potential damage they can inflict on the elevator is usually limited. The more someone can make a difference to elevator operations, the more he or she will be watched, at least until that person demonstrates a genuine commitment to the elevator's well-being along with mastery of whatever talents gave him or her the opportunity to do the work at hand.

A group of character transients may well be an existing team with complementary specialities brought in for a project that draw on all their various expertise, or people with the same primary aptitude who work together, like scaffolding maintenance workers or security sweepers. For a different tone, the GM may start off with characters who don't have any past contact and are all outsiders present at the beginning of a crisis like a fire, hull breach, or outbreak of a mutated disease. In this case, their partnership is a matter of expediency, at least at first. In a finite campaign, they could well disperse once the crisis and its aftermath are over. In an ongoing campaign, they may choose to stay together, particularly if they share a desire to understand more fully what made the initial crisis happen and to do something about it. This sort of campaign also metamorphoses easily into one of the types described herein if the challenge is native to the elevator; it might also lead them elsewhere, like to one of the settings described in other chapters of *Ex Machina*.

If using the optional Stress rules (page 189), either set Stress aside or reduce Stress totals for campaigns in which the characters are expected to focus on matters other than their own twitchiness; increase Stress totals for campaigns in which disorientation is an important theme. This is very suitable for campaigns emphasising the *noir* heritage in cyberpunk, with characters and those around them prone to breaking at the worst moments and forced to maintain constant awareness of the psychological tolls they pay for the paths they choose.





In transients campaigns, biotech is likely to matter either a great deal or very little, with not much in the way of a middle ground. Outsiders with expertise unrelated to the workings of biotech use biotech tools only in safety-oriented basic modes and have NPCs do the strange stuff; here, biotech is more a matter of the scenery than of the characters' own experience. Outsiders who deal primarily with biotech or cyberspace, however, engage constantly with the elevator's exotic technologies, and leave the more mundane matters to NPCs who don't have to wade into the consortium-created weirdness.

Free-wheeling violence is difficult for transient characters. They spend most or all of their time on the elevator in relatively controlled circumstances, aided and watched by staff whose primary interest is in keeping them and the elevator out of trouble. When off-duty, they can go carousing, but this isn't license to embark on careers of murder and mayhem. The most common exceptions to this general principle are characters brought in precisely because they're competent at some aspect of violent engagement, such as biotech analysts who can defend themselves while restoring connections to a part of an elevator city cut off by terrorism, haphazard crime, or accident. Assassination isn't unknown on the elevator either, though the consortium vigorously pursues assassins in any case that doesn't advance the consortium's own interests; even tolerated assassins go on the security force's list for arrest or elimination if their actions risk bad publicity. The directors feel that they cannot risk having the public at large think of the elevator as any sort of frontier town, so random assaults must be kept down and induced deaths need to seem natural or explainable as unplanned accidents.

Suggested Templates

The street punk, suit, tech, and teleoperator templates cover many of the characters who fit the overall considerations of a transient campaign. All the characters might draw on the same template, with individual choices about the rest of their Point allocations providing ways of distinguishing between them. A mix of character types could reflect the people who work in a particular service office and some of those who live or hang out nearby, the inhabitants of a particular floor of a low-budget residential unit, and other gatherings of people who didn't seek each other out so much as get to know each other because they ended up living or working in close proximity.

The Residents

For a campaign that allows easily justified access to more of the "Heaven Over Mountain" environment, the characters can be long-term residents. They either work directly for the consortium or for one of the independent businesses within the elevator, or they have circumstances that allow them to live independently without regular work at the moment. The shocks of acclimatisation and possible Stress-created collapses are behind the characters, and they know how to operate confidently in the elevator's environments.

The consortium offers long-term residency to very few unskilled individuals. Space is finite, after all, and there are resources to be allocated. Residents campaigns should include characters built on at least 75 Character Points; greater Point totals allow the characters to have more competence in breadth or depth. The GM must be careful, however, in supervising Defects; debts, obligations, and other factors that tie the characters to their surroundings are good and desirable in a residents campaigns, while phobias that impair the character's ability to ever live comfortably anywhere in the elevator can doom a campaign at the outset.

The elevator offers plenty of opportunity to develop the classic cyberpunk motif of outsiders within the life of the elevator communities. This can be as simple as setting up the characters as "the most (or least) something in this place": the most experienced hackers in the non-resort part of Earthrise, or the best hagglers with hermits in Halfway, or the least deferential technical types in Summit. The key distinction is a social one, but it usually has a component of skill or innate talent; the GM shouldn't be afraid to go ahead and let the characters actually be the best at their field in that part of the elevator. Cyberpunk protagonists are traditionally very competent despite their social alienation and sometimes catastrophically bad luck, and there's no innate moral virtue in gaming incompetent characters rather than competent ones. Characters who have real useful — or at least, marketable — talents are better able to survive in their role on the fringe.

The role of outsider and the status of resident are entirely compatible with each other. Every living community in the modern and postmodern era has someone who specialises in getting the things that regular visible channels can't readily provide. The consortium's directors knew that there would inevitably be such procurers throughout the elevator. History demonstrates that where there's money to spend and a scarcity of something desirable, someone will find a way to supply the thing to those who want it. The consortium is quite willing to allow this sort of trade to happen as long as it doesn't involve a threat to the elevator itself.

The security A.I.s offer dealers the opportunity to continue their trade as long as they pay a 10% tax to the consortium. The payments are registered along with the charges for other independent operators so as to avoid potential scandal. Individuals who persist in operating without paying their tax find themselves the subject of security investigations or even summary expulsion. The directors regard most community laws and taboos of terrestrial origin as essentially irrational, and feel little qualm about letting others undermine them as long as the directors' own plans remain in effect.

Popular wisdom within the elevator even says that the consortium deliberately hires some dealers and procurers from trouble spots elsewhere in the world. Such pre-screened "outsiders" can offer other residents the thrill of illicit transactions without courting the real risks that come from more genuine outsiders. It's certainly true of prostitution. The GM should decide how true it is of other borderline tolerated activities and see whether players are interested in playing characters who realise they've been hired to be "naughty but nice" safe exotica ... and whether they're willing to remain that way forever.

Characters who begin as outsiders may become more integrated into tower life during the course of a campaign. The emotional life of the elevator's inhabitants is skewed in some important ways by the nature of the elevator. As a matter of design, the elevator can withstand far more damage than any individual could dish out without access to high-grade military weaponry. As a matter of policy, however, allowing a lot of weapons and violence to flourish unchecked would be an invitation to disaster, and residents know it as well as the consortium does. Revenge and jealousy therefore need to work themselves out in relatively non-violent ways, with high values placed on psychological manipulation. A neighbourhood or district where rivalries flourish usually has a hothouse atmosphere not far removed from soap-opera intensity. This channelled and distorted competitiveness in personal life is also very much part of the cyberpunk tradition, and offers characters much opportunity to use social Skills and Attributes to their fullest. Minor disagreements can escalate into full-blown feuds in which the "duellists" seek to undermine each others' friends and colleagues, draw unfavourable publicity to their rivals, and ultimately ruin the rival's will to continue the struggle. The loser almost always moves; in the case of sufficiently nasty feuds that have spilled over to damage other social relationships in the vicinity, the winner may also choose to move to avoid later recriminations.

Suggested Templates

Any of the templates can work in a resident campaign. The idol can be either an outsider breaking into the distinctive local cultures of the elevator or someone who's made it in this environment, and may or may not be comparably famous elsewhere. The street samurai can represent either consortium security

or a member of some private security service, depending on the nature of the character's Organisational Ties. Hackers, techs, and anyone else dealing directly with the elevator's major systems can supplement typical computer skills with some expertise in biology and medicine.

Leaving Home

One additional option for a residents campaign inverts the transients premise: characters long accustomed to the beanstalk need to go outside to negotiate a deal, spy on competitors, or leave a scandal behind and settle down for a while. GMs using the Stress mechanics (page 189) should now apply them to the factors that people outside the elevator take for granted, from open skies to abandoned but intact structures and districts, to untrammelled personal violence. The characters may return to the elevator from time to time, or may have to make their way outside for a relatively extended period. This option usually works best with an outside destination that is itself exotic, because it's difficult to reliably role-play a genuinely alien perspective in the midst of circumstances fully familiar to the players.

The Specialists

This is the option closest to the roots of cyberpunk, and overlaps with transient and resident campaigns. The characters are experts in some service that nobody requires on a permanent basis but that comes up regularly in multiple places throughout the elevator. They may be security consultants, forensic accountants (who study business failures to extract an accurate record of what happened and who's owed what), medical specialists (particularly in treatments the recipients don't want others to know they're getting), industrial spies, assassins, biohazard control specialists (exterminating out-of-control, runaway or diseased biotech), or something else altogether. Whatever it is, they spend their time travelling within the elevator, either returning to some home base or operating in a permanently mobile condition.

Specialists campaigns work best with characters who are very good at what they do, and possess a broad competence in other matters as well: 75-100 Character Points is about the minimum for designing a well-balanced character. With the vast range of possibilities available to characters with that many Points, it's very easy to end up with unbalanced characters who lack any potential for connection to each other. Players must consult with the GM during character creation to make sure that each character has some distinctive sphere of expertise and some area of vulnerability that makes co-operation with others worthwhile. If the characters are all security consultants, for instance, one might excel at dealing with other people, another at understanding biotech, a third at cybernetic systems or computer hacking, and the last at legal and other research.

This type of campaign can even work well if not every player is available for every session. Simply set up the characters with circumstances that sometimes call them away from the action, like intermittent illness or obligations to an organisation elsewhere in the elevator, and have those circumstances come into play when the player can't make a session. GMs can make the complication of team members coming and going a source of stress within the campaign, particularly at crucial and inconvenient moments (see using Stress points to mechanically represent this, page 189).

In old, established societies, specialists with a prosperous legal clientele don't generally seek out illegal side ventures, particularly those with a high degree of personal risk. In the chaotic flux of frontier environments, however, social convention is a much weaker constraint on personal whim. Social roles are more amenable to change, with greater reward for taking unconventional risks.

Thanks to its constant evolution, the elevator remains a frontier. There are well-established communities within the large population centres where people live as respectably as in middle- and upper-class communities anywhere on Earth, but they're surrounded by communities that lack stabilising norms in ethics or etiquette. It's much less scandalous and often not noteworthy at all for high-powered specialists to dabble in shady deals. Not all of them do, but enough do that characters who choose such a life won't stand out as deviants among their peers.

The characters may have sponsors and supervisors for their secret side. Many businesses need someone they can trust to handle work that may be dirty — or in any event, would look dirty to the general public. The consortium itself employs some groups of this sort, with an eye toward deniability.

The contractors in such a setup may or may not know who they're working for. In fact, the discovery of a hidden boss' identity is one of the classic story hooks, with the characters forced to decide what (if anything) to do with the illicit knowledge, then forced to deal with any consequences of their choice that they didn't quite manage to foresee. If things go sufficiently wrong, the characters may need to leave the consortium's world altogether for a while. In lesser extremes, they may choose to remain in the elevator while adopting new identities and setting up operations in another city or somewhere along the inter-city trunk.

Secrecy can apply to the individuals as well as to the group, of course. People sometimes just stumble or drift into criminal activity, but they often have motives that they're not willing to discuss with others. If the players can deal constructively with competition among the player characters, then the possession and unwanted revelation of dark secrets in individual pasts can work very well in this sort of campaign. This is particularly true when the revelations take place at times when the characters most need to work together against challenges at work and perhaps enemies or rivals as well.

The level of combat and related action in a specialists campaign can range from none to ubiquitous. As noted above, the consortium frowns on most violence, but is willing to tolerate personal fights There's also a lot of potential for high-action, low-combat drama. Stealth and infiltration are features of the genre, and can be played out in as much detail or abstraction as a group chooses. The same is true of undercover infiltration, subversion, and other "social engineering" efforts: the rules support all these, so characters can engage in them if they so desire. "Heaven Over Mountain" provides some unique opportunities for sneaking about and dramatic escapes, both inside and outside the elevator.

One role for specialists that is unique to the elevator is cyberspace mapping. The consortium's hands-off management policy means, among other things, that there is no necessarily reliable map of the cyberspace environments crafted by city, regional, commercial, and other A.I.s. Changing needs and the lasting imperative for competition create an intensely dynamic virtual environment. Survey programs examine all of this activity and produce regularly updated maps, but those programs need adjustment and updating themselves; new phenomena outside existing survey parameters call for someone with genuine sentience and an independent will to go and examine the area directly. A well-balanced team of specialists could pursue operations in and out of cyberspace simultaneously, and there's always the potential for discovering lucrative information or dangerous activity in newly-created regions of cyberspace.

Suggested Templates

Characters in this sort of campaign are very good at what they do. Templates should cover characters with limited or focused expertise, like teleoperator and street punk (page 25 and 21) with the extra Points used to make characters capable of leadership or at least seniority in their chosen occupation. Unusual and specialised occupations like the security consultants and forensic accountants mentioned can be based on hacker or investigator templates (page 18 and 20). Templates should fit overall character personality and style, and with additional Points used to pick up specific Skills and Attributes.

The Drifters

Finally, there are groups and individuals whose existence revolves around the exterior of the elevator, both as it rises through atmosphere and in space. Elevator residents often call these people "drifters," partly out of ironic reference to the most common cause of death for them. Someone who comes unhooked from the elevator before local rescue systems can respond seldom has long to live, whether he perishes by burning up in the long fall to Earth or by asphyxiation if his or her air runs out.

Drifter characters can span nearly the whole range of transients and residents. Characters built on less than 50 Character Points will be hard-pressed to have both the Skills for safe operation in space and anything else worth doing once they're there. Most drifters are built on 50-75 points, and higher totals aren't uncommon. High point totals often reflect that small fraction of apparently average blue-collar workers who discover unsuspected aptitudes and develop them without giving up their general class identity, as well as characters with better education and training. Defects reflecting poor impulse control, poor personal judgement and the like are more common among drifters than among the other types of "Heaven Over Mountain" characters.

The range of occupations for people working outside the elevator is nearly as great as the range within. In the beginning there were construction workers, ranging from labourers with limited skills on up to highly specialised biotechnicians and cyberneticists. Their successors continue to maintain existing facilities and to develop new ones. Scientists and support staff tend experiments. Cargo handlers deal with the flow of satellites into and out of launching areas, along with spacecraft bound for the Moon and beyond. Tourists engage in sightseeing and more exotic sports, like multi-kilometre bungee jumps from Halfway and Summit; drifters pilot their tour craft, tend their jumps, and otherwise see to their needs.

Drifters also operate the most profoundly private gathering places in (or rather near) the elevator. The shielding required for protection against solar flares and micro-meteorites also protects against electronic and other surveillance. Closed vehicles can carry almost anything, and range in size from single rooms to whole mobile buildings operating independently of the elevator's major systems. There's even a specialised trade in piloting crafts loaded with decoys to cover for private gatherings elsewhere. The consortium reserves the right to monitor transactions everywhere on its property and claims ownership over all these facilities, but in practice it's willing to let almost anything go on as long as it gets a cut of any profits generated.

Some drifters get as close to the elevator's aristocracy as anyone outside the social elite can. Those who pass security and background checks maintain all the facilities on the exterior of Summit and even Heaven, and are therefore good choices for characters if the GM wants to make the secrets at the top of the consortium part of the plot. They can't normally pry much into what's inside, but accidents happen; conspirators inside may choose to release little pieces of interesting evidence to make life difficult for their own rivals. Everyone — from the consortium's rivals, to the government of Colombia, to private journalists — would really like to know what happens where the biggest decisions are made; drifters working around Summit or Heaven can count on a steady flow of offers of payment for anything they learn.

The money available for drifters even doing relatively routine work is excellent, with hazard bonuses and performance rewards routine. Anyone prepared to work in high atmosphere and space can make at least twice what anyone else would for doing the same work in more conventional environments, and often more. Since many drifters, particularly those doing relatively unskilled labour, are unaccustomed to that much wealth, there's a lot of gambling, a lot of spree spending, and a fair amount of personal violence. The elevator A.I.s allow more of that violence there than they do inside the main bulk of the elevator, having demonstrated to their own satisfaction that too much enforcement only sublimates the violent impulses into work "accidents" and safety hazards on the job. Some drifters operate their own casinos and other service businesses, and some residents who don't go fully outside themselves cater to the drifter audience.

The drifter work spaces are more like conventional cyberpunk industrial zones than the rest of the elevator, because near-Earth space is quite dirty. It's full of meteor and comet debris and the remains of decades' worth of satellites and spacecraft, and it's impossible to entirely keep up with it all. Heating and cooling as the elevator moves in and out of sunlight pulls pieces of biotech skin loose; workers drop tools, which knock things loose and then break up themselves; the exhaust from sightseeing rockets, cargo haulers, and the like spreads more gas and dust. Some of this grit is extremely electrically conductive or shaped with microscopic barbs and therefore sticks to airlocks and space suits, coming into drifter habitats along with people returning from space. Filtration systems keep it from building up, but there's always a fresh supply, and therefore a persistent dry dustiness to the air in many of the semi-independent spaces.

Drifters deal less with the biotech cyberspace and more with conventional silicon-based computers than people inside the elevator, too, since the art of developing living circuitry safe in space environments is still incomplete. Hardening and securing silicon computers is a more mature art, requiring careful maintenance but generating very few surprises. Characters accustomed to heavy-duty hacking elsewhere therefore find drifter habitats more congenial, and sometimes choose to acclimatise to the elevator with a stay outside first.

Suggested Templates

Office-bound templates like suits and society-focused templates like idols and investigators are uncommon among the drifters — not altogether unknown, but rare. Hackers, street punks, and teleoperators are particularly common, but there are roles in drifter culture for nearly all of the templates.

Wind Over Lake: The Rules

The world at large — at least where people live — is filled with inorganic colours and textures: metals and plastics shine in the colours assigned to them in laboratories and factories, and the forms they are moulded and carved into. Things are different in the kingdom of the Orbital Development Consortium. The beanstalk and its surroundings depend on materials and whole structures that are grown rather than fabricated. They're artificial, of course, in that nothing in nature can grow in vacuum or sprout computing nodes, but they're artificial *life.* They put down roots, grow stems and leaves, and bloom. The natural genes of dozens of species combine with brand-new sequences to produce wood as hard as carbon composites, fronds that can sense and respond to signals in any set of wavelengths, and pollens that can absorb toxic fumes.

This section covers the rules that govern this biotechnology and its interaction with the beanstalk's inhabitants and users, as well as the effects of living in a strange environment in space.

Industrial Biotechnology

The elevator and much of the material that makes up the cities built on and around it rely on innovations made in laboratories over the last 50-75 years.

Genetic engineering allows biological designers to isolate the genes for specific traits and combine them in new ways, either to produce specific features or to produce random features within desired constraints. This isn't easy, since all but the very simplest features depend not on a single genetic sequence but on several,

Heaven Over Mountain Technology

This is a Far Future cyberpunk setting (see page 103). All of the technologies detailed in the Technology chapter are available somewhere in the world.

Future Technologies Chart

Technology	Status
A.I. (self-aware)	mature
Bioware	mature
Cyberware*	mature
Energy Weapons	new
Human Genetic Enhancement	mature
Iconic Cyberspace	mature
Memory Uploading	new
Metamorphosis	new
Nanomachines	mature
Neuro-Tech	mature
Robots	mature
Space Colonies	mature
Virtuality Networks	mature (iconic)

* Somewhat out of style compared to bioware, but still in use.

interacting in complex ways. Each of those sequences usually serves multiple purposes, and may not behave properly if cut loose from the feedback that exists in natural cells carrying out an organism's full genetic programming. Biotechnologists have to provide their engineered organisms with the chemical signals required to satisfy all the steps in what can be very long chains of contingent requirements.

It is the accumulated knowledge of genetics that makes this work possible. Databases cover all the various behaviours and relationships between the genes of every species studied so far. The publicly funded studies conducted at universities and government-sponsored laboratories are usually available on request or at least for purchase on standard terms. The work done inside corporate facilities is usually kept private, and the secret databases storing the results are prime targets for industrial espionage.

Living Biotech Items

A wide variety of cyberware and Gadgets, from smart clothing to bionic arms, may be redefined as living biotech products. In game terms there is little difference — biotech items tend to require some form of sustenance (plus solar energy and often water), but are also capable of rapid self-healing, at least in regard to minor damage. They are also engineered to survive in hostile environments, much like the elevator itself. Properly maintained biotech lasts almost indefinitely. Like regular living matter, it can heal the damage done by routine operation and even more severe trauma as long as it's not destroyed outright and it continues to receive necessary nutrients.

In addition, ODC and its rivals can also produce various sentient or near-sentient constructs to perform tasks or activities that might otherwise be handled by robots or human workers. Although many have no more intelligence than a Venus flytrap, insect, or mouse, some have near-human levels of intelligence.

ODC policy requires that all biotech used on the beanstalk and in its vicinity above the atmosphere have restrictions that make it possible to kill off uncontrolled growth simply by not feeding it anymore. The consortium's labs publish standard lists of crucial nutrients which biotech cannot manufacture for itself, and outside companies like Francelab are welcome to sell packs of these nutrients, as do the consortium's internal suppliers like Up-Reach and Total Health.

The packets are themselves the product of advanced biotechnology, composed of membranes designed to dissolve on a pre-set schedule. It only takes a few drops of the nutrient mix to satisfy biotech needs. Most packets are the size of small coins for ease of handling, though the ones made for use in environments where people have somewhat impaired mobility (like space suits with their insulating gloves) may be larger, or provided with fasteners and attachments. It takes no external power for the packet dispensers to work. Once they're opened, decomposition and release take place automatically.

Living biotech items may be classed as Servants, Gadgets, or Items of Power depending on their function. An item is often a Servant (or a character) if capable of self-directed activity, otherwise it would be an Item of Power or Gadget.

Sentient biotech items will usually have the Owned (s BP)and Special Requirement (ODC nutrient formula) (2 BP) Defects; if they lack nutrients, they will suffer the effects of starvation and deficiency diseases, slowly wasting away, and will not be able to heal (or regenerate) Health Points.

Override Beacon

These bioorganic transmitters forcible override the elevator's basic programming. Using an emergency override beacon allows the user (normally ODC security) to force airlocks and other access restrictions open or closed as required. A major Gadget.

• ELEVATOR DOGS •

Body 7 — Attack Combat Value 7

Mind 4 (Intelligence 1, Wits 1) — Defence Combat Value 3

Soul 4 — Health Points 55

Shock 11

Attributes

Attack Combat Mastery 2, Combat Technique 2 (Lightning Reflexes x2), Features 2 (Four legs, doubles running speed; Appearance: Cute), Heightened Senses 5 (Hearing, Infrared, Ultraviolet, Smell x2), Land Speed 4 [60 kph, Restriction (Only for short bursts – 1 minute; -1)], Massive Damage 1 (Bite), Natural Weapons 1 (Fangs), Special Defence 2 (Pain, Poison)

Skills

Area Knowledge (Any elevator locale) 1, Intimidation (Street) 1, Unarmed Attack (Strikes) 2, Wilderness Tracking (Forest) 1

Defects

Less Capable (Intelligence) -1, Less Capable (Wits) -1, Marked (Modified dog) -1, Owned -3, Physically Impaired (No natural healing) -1, Physical Impairment (No hands; Cannot speak) -3, Special Requirement (ODC Nutrients) -2, Unskilled -1

Elevator Dogs (40 Character Points)

The elevator dogs (page 187) are used by ODC security (page 173). These dogs are massive, short-haired, and have strongly puppy-like features throughout their lifespan. They're also capable of dashes up to 60 kph, can see well into the ultraviolet and infrared, and have all their other senses augmented to match. Their bite can break through metal doors and heavy-duty body armour. The earliest consortium police dogs had similar capabilities and a deliberately menacing appearance. These meaner-looking dogs were retired in favour of the current puppy-like breed when research showed offenders taken down by such friendly, almost-cartoon-like creatures experienced an extra degree of humiliation.

Longer-lived survivors of the early program still serve on private security forces subject to consortium monitoring. Older dogs may be available for commercial purchase (especially on the black market or to retired security officers). It is fairly common for elevator dogs to have additional biotech modifications, such as the regenerator (page 188) or various "bioware" versions of standard cyberware.

Security Fronds (30 Character Points)

These genetically altered fronds react visibly and colourfully when they come in contact with a controlled substance. A simplistic example might be: red for ammunitions; green for drugs; yellow for biohazardous material; blue for electric current (cyberware); white for unknown materials. See Security Checkpoints, page 173.

Personal Enhancements

Biotech makes it possible to modify one's own mind and body, either temporarily or permanently. This is a surprisingly popular option for those who live in and around the elevator; even with the best psychological models available to them, the elevator's A.I.s are constantly surprised at human choice.

Two examples of common biotech and nanotech enhancements are detailed below.

Regenerator

Rapid healing is perhaps the single most popular use of ODC biotech. A single seed germinates into a network of fine fibres just beneath the skin, which kicks in as needed. It functions like an implant diffused throughout the user's body. Higher levels of regeneration are available, but most people rent their use when necessary, at fees of about $500 per hour per Level of regeneration. Consortium police have access to regenerators without the activation delay Access to this technology is strictly limited (and of course flourishes on the black market).

Attributes

Regeneration 1 Activation Time, 30 seconds, -3)

Final Cost: 3 Points.

• Security Fronds •

Body 6
Mind 1
Soul 1

Attack Combat Value 5
Defence Combat Value 1
Health Points 55
Shock 11

Attributes

Attack Combat Mastery 3, Elasticity 2, Feature 1 (Colour change), Extra Attacks 1, Extra Arms 3, Natural Weapons 1 (Tentacles), Special Defence 1 (Pain), Sixth Sense 1 (Contraband, Area 2), Toughness 1

Skills

Unarmed Attack (Grappling) 2

Defects

Awkward Size -1, Marked (Modified fern) -3, Owned -3, Physical Impairment (No mobility) -4, Physical Impairment (No hands; Cannot speak) -3, Special Requirement (ODC Nutrients) -2, Unskilled -2

Think-Alike

The think-alike occupies a collar that the user must wear, its exterior a shiny carapace concealing countless small cilia that penetrate the skin to interface with the user's central nervous system. It comes programmed with the thoughts and feelings of a famous person or a fictional character. Anytime the user wants to know what the stored persona would do in a particular situation, he or she activates the device and it injects the relevant information. The user then thinks about that subject just as the persona would and may act accordingly, within the limits of his or her normal characteristics. The user isn't compelled to act as the persona would, though it will be his or her first impulse. If under the influence of drugs or other factors that weaken willpower, he or she will act as the persona would.

The think-alike must be attuned to a particular individual with a 24-hour "breaking in" period; it can do this any number of times, but is never ready for

Table 13-1: Vehicles

Vehicle	Speed	MB	Size	People	Cargo	Armour	Health Points	Skill
Spacecraft								
Maintenance Pod	50/0.1	+2	0	1	150 kg	10	40	Piloting (Spacecraft)
Recreation Pod	100/0.1	-	1	4	100 kg	10	40	Piloting (Spacecraft)
Satellite Launch	100/0.25	-	2	4	5 tonnes	15	60	Piloting (Spacecraft)
Recreational Cruiser	100/1.0	-	2	12-24	5 tonnes	15	60	Piloting (Spacecraft)
Ferry	100/0.5	-	4	150	20 tonnes	10	50	Piloting (Spacecraft)

immediate use by more than one person. The think-alike otherwise functions like a persona plug (page 28) except that it does not require a neural buffer to function. Each is a major Gadget.

Vehicles

Within the elevator, the only really long distances are between clusters of activity, and the elevator cars bridge those gaps regularly. Earthrise, Halfway, Summit, and Heaven each maintain their own local transportation systems, with horizontal and vertical elevators capable of handling most cargo running parallel to powered sidewalks. Most vehicles are small, whether they're gyroscopically stabilised unicycles and tricycles, carts and cars, or open-bed trucks. All run on hybrid fuel-cell/electric systems. The same superconducting network that provides power for the elevator delivers more than enough power for the local vehicles as well.

Ground vehicles operate freely within Anchor and the surroundings, but the elevator security staff prefers to keep the local airspace as empty as possible. Flights passing within 25 km of the elevator must comply with elaborate advance

Culture Shock and Stress (Optional)

Life in and around the elevator provides a constant wear and tear on the psyche of anyone who spends much time there. This is seldom crippling, but it can make a crucial difference if a mind is teetering on the brink of collapse for other reasons, such as post-traumatic stress, overwork, or depression.

Each inhabitant of the elevator and its cities has a Stress value. When Stress equals or surpasses a character's Soul Stat, he or she must make periodic Stress checks to avoid suffering temporary impairments, which rise in severity as the level of stress rises. With time, as the character learns to deal with the biotech environment and the vertical life of the elevator, stress decreases to manageable levels and thereafter becomes a problem only in moments of particular crisis.

A character gains a first Stress Point when arriving in Anchor. The sheer looming mass of the tower and elevator is disorienting, as is the first contact with biotech-dominated life. The character may well have dealt with biotech before, but nowhere else on Earth is it used so thoroughly, and nothing compares to the sight of the apparently endless elevator.

Additional stress factors include the following:

Stress Points	Circumstance
1	First time in Anchor
1	First full day in the elevator or one of the elevator-attached cities
1	First passage out of the atmosphere on the elevator
1	First full week in the elevator
1	First full month in the elevator
1	First full year in the elevator
1	First time watching biotech medicine at work (on oneself or someone nearby)
1	First time in cyberspace in a well-maintained zone intended for general access
2	First time in cyberspace outside newbie-friendly zones
2	First time watching usually permanent features reshape themselves
3	First time receiving biotech surgery or other major treatment
3	First time killing a person (especially in close quarters)

When the character's Stress total equals or surpasses his or her Soul Stat, make an opposed check of Soul Stat versus Stress. If the Soul check gets a higher margin of success, reduce the Stress total by 1. On a tie, the individual isn't impaired by the stress, but the Stress Level remains constant. If the Stress check results in a higher margin of success, the character's Stats are all temporarily reduced by 1; during this time of anxiety, characters suffer an additional -1 penalty for every 2 Points of Stress over their Soul Stat for checks requiring concentration.

On a success or tie, if the Stress Level is still equal to or above the Soul Stat, the character must make another check in one hour. If a tie or success, the crisis passes; if a failure, the penalties continue for 24 hours, at which point the character makes a further check. If a failure, the character gains 1 Stress, and must check again in 24 hours. A tie or success breaks this streak, and the penalties are lifted.

The problem of culture shock is a familiar one to the elevator's inhabitants. Monitoring systems and human supervisors both look for signs of fatigue, distraction, and disorientation, and gently relieve anyone who seems to be working at significantly less than their normal competence. Relaxants and narcotics suppress half the Stress penalty, rounded down, for the duration of the drug. A Social Sciences (Psychology) check may have a similar and cumulative effect.

If the character goes for a full week without suffering Stress symptoms, make the opposed check even if Stress is now below the Soul Stat. On a tie or success, reduce the Stress total by 1 point, down to a minimum of 1; on a failure, it remains constant. Repeat this check at doubling intervals of stress-free existence: after two weeks without stress impairment, after four weeks, after eight weeks, and so on. (The larger intervals reflect characters' growing adjustment to their surroundings: it takes more to shock or distress them after a while.)

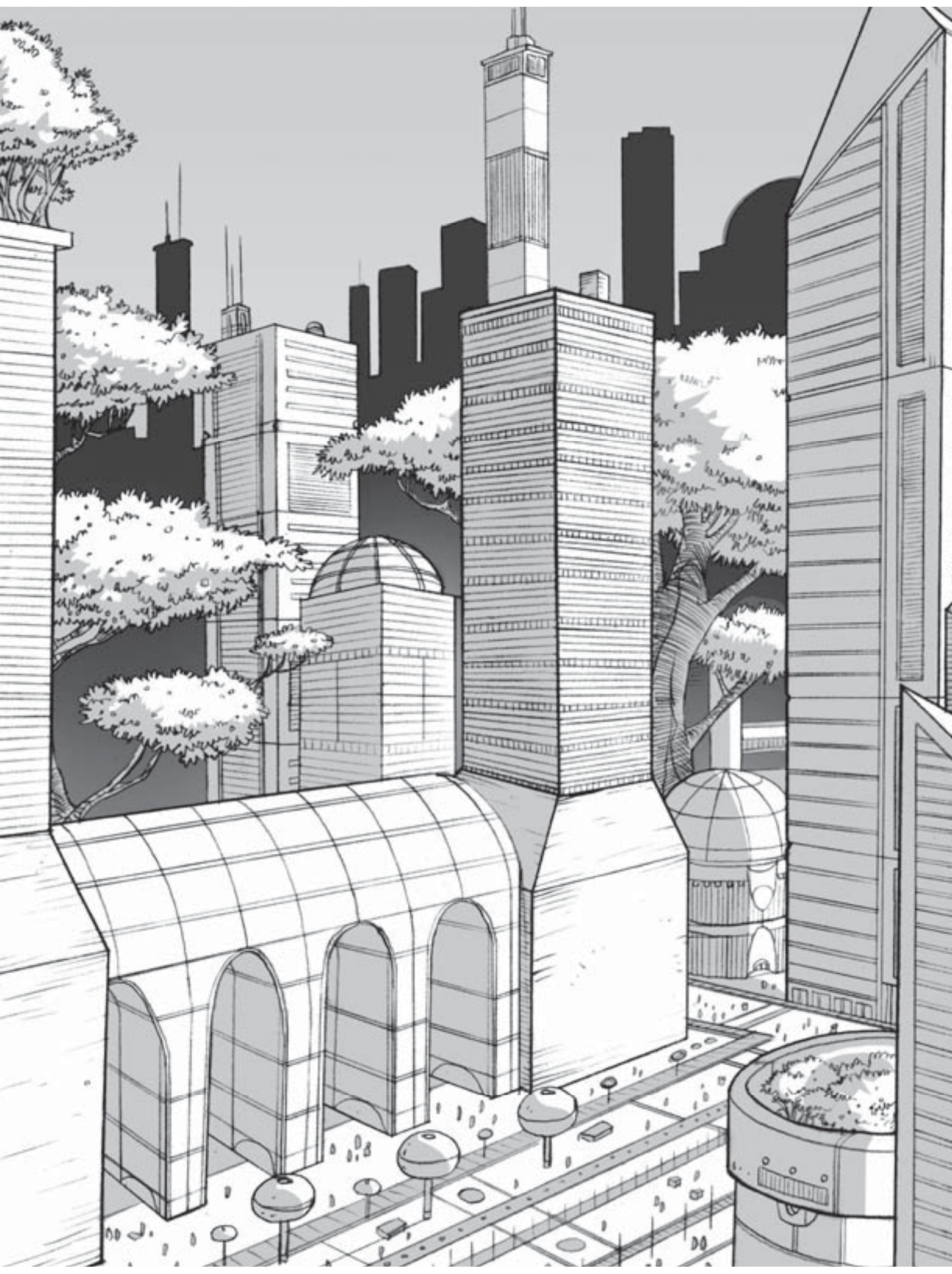
The character may gain Stress points at the GM's discretion for other unprecedented experiences, particularly dangerous ones. Suffering damage because of an attack in cyberspace might cause it, as might temporarily losing control and drifting in space, or witnessing a distinctive and violent death inflicted by biotech. This should happen only when the experience is both stressful and genuinely unfamiliar to the character, and will therefore occur less and less often as characters become accustomed to living in this environment.

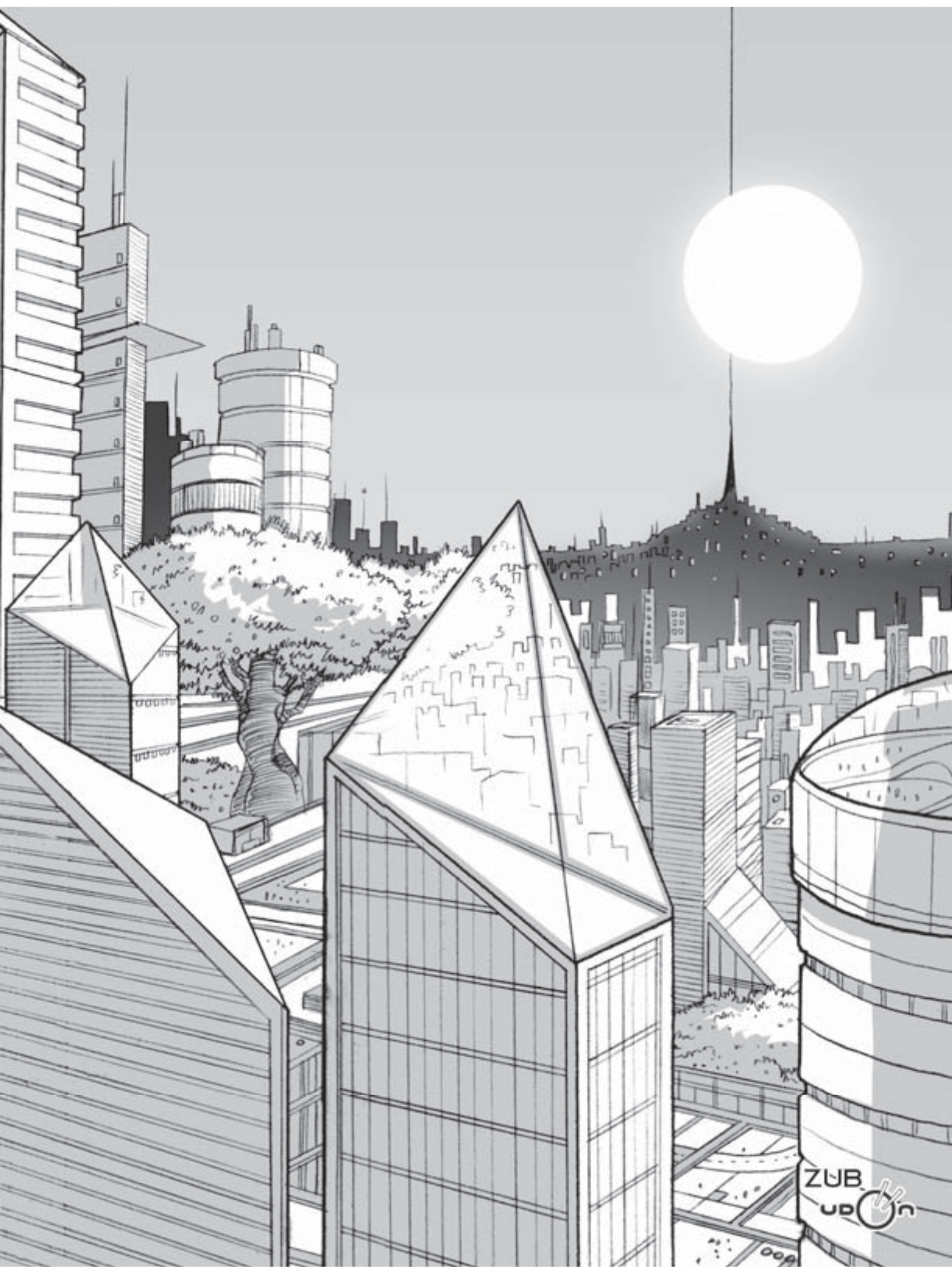
Anti-Stress Drug

A basic anti-anxiety compound, such as benzodiazepine. Stress penalties are reduced by half for 4 hours. Minor Gadget.

CIHP-III

This compound, Composite Indian Herbal Preparation, is synthesised to replicate the effects of 24 natural plants, including *ashwaghanda*, *brahmi*, and *mandookparni*. Stress penalties are reduced for 24 hours. Two minor Gadgets.




ZUB

• RADIATION SHIELDING •

One of the major dangers faced by space travellers is radiation. The Earth's atmosphere absorbs nearly all the invisible radiation the sun puts out, but beyond the atmosphere, an unprotected person (or a fragile electronic device) is vulnerable to solar flares and cosmic radiation. For the first several decades of human activity in space, the only feasible response was to either stay up for a short time or pile on as much shielding as possible.

Near the end of the 20th century, marine scientists and geologists discovered exotic bacteria living deep beneath the Earth's surface, around ocean-floor volcanoes and miles underground, with the capacity to resist radiation flux a thousand times stronger than any other known organism. Of course, for consortium genetic designers, where the bacteria came from was of no consequence. What did matter was their success in isolating the genes for radiation resistance and the supporting proteins that protect the genes themselves from radiation damage. They then incorporated these sequences into every piece of biotech approved for use above the atmosphere.

The elevator's cables and cities can withstand radiation levels up to those of a 100-kiloton nuclear bomb detonating 10 km away. The physical and X-ray shock of the explosion would do damage, but would not induce mutations, cancers, or other genetic defects into the living structures of the elevator itself.

Spacecraft wishing to dock with the elevator must be coated with a layer of insulating radiation-resistant bacteria as well, to avoid surface contamination that could infect the elevator's systems. At first, spacecraft operators complained about the extra operational expense, but complaints quickly faded when the consortium's bioengineers enhanced their bacterial shields to change colours in response to rising radiation levels. The shields are only a few cells thick, and the colours provide a handy means by which technicians can precisely identify which areas of a spacecraft are at risk from radiation exposure. A simple scoop or even a gloved hand can scrape away the bacteria long enough for repairs, then the bacteria flow and grow back over the bare spot. In the long run, the coating ends up saving spacecraft operators a great deal of money.

Most options for vehicle customisation also apply to spacecraft, except where the space environment makes the result obviously inappropriate, as with speciality tires.

registration requirements. In practical terms, registration will only be granted if the flight matters to someone high up in management. Human and electric-powered ultralight aircraft fly within the very largest open spaces within the elevator.

Above the atmosphere, vehicles manoeuvring around the elevator must use chemical rockets or ion thrusters if they are within 50 km of it, and the elevator's A.I.s take complete control of spacecraft within 5 km. Outside the 50 km zone, out to 100 km, any means of propulsion is permitted as long as the thrust is directed at least 90 degrees away from the elevator, until the spacecraft gets 100 km or more away.

Maintenance Pod

A one-person rocket-powered vehicle designed to move an engineer or technician and necessary supplies around the exterior of an elevator city or a stretch of elevator needing attention. It's an open framework, much like the roll cage of a terrestrial truck, and the operator must wear a space suit at all times. Tricked out custom "police sled" versions also exist, with weapon mounts and other vehicle accessories. Cost: $15,000. Major Gadget.

Recreation Pod

The larger, fully-enclosed relative of the maintenance pod, this class of vehicle is designed to let sightseers get better views than they can from inside environmentally protected spaces. Most recreation pods carry enough food and water for a full 24 hours of jetting around at low thrust, and the cities all offer prepared tours ranging from 30 minutes to 20 hours duration. Cost: $1,000,000 and up. Two major Gadgets.

Satellite Launcher

A utilitarian orbital tug built to push and pull satellites and other orbital cargo around. The crew compartment is usually pressurised and equipped for a stay of up to three days, while the cargo bays are almost always open to space. (Pressurising the whole cargo space increases the cost by 50%.) Hundreds of these craft are in operation at any given moment at Earthrise and Summit, and there are half a dozen standardised designs to accommodate the standard dimensions for commercial and academic satellites. Some of these run entirely without human control or even presence, but the A.I.s generally prefer a human pilot be on hand in case of a disruption with the communication links. Cost: $10,000,000+. Three major Gadgets.

Recreational Cruiser

The direct equivalent to the ocean-going luxury yacht, designed to take one to two dozen passengers (enough for an exclusive party) in great comfort between the elevator and exotic destinations: space stations, the Moon, or simply orbits offering spectacular views of Earth. As with ocean cruises, space cruises often come with some sort of theme programming, from famous entertainers of the moment to celebrities in fields that range from the sex trade to architecture. Some also serve as unusually private meeting spaces, safe from most means of surveillance. Cost: $25,000,000 and up. Three major Gadgets.

Ferry

A large and functional craft designed to move many people and a lot of cargo between the elevator and other destinations in the Earth-Moon system. Cost: $25,000,000+. Three major Gadgets.

Vehicle Speed

Speed comes in two figures: kilometres per hour within 100 km of the elevator, and Gs of acceleration beyond it. A vessel can accelerate or decelerate at full thrust for a maximum of 1 hour (pod, satellite launcher) or 2 hours (ferry or recreational cruiser). Most vessels accelerate in short bursts, but spend most of a longer journey (for example, Earth to Moon) coasting.

Living Cyberspace

Heaven Over Mountain uses the rules for iconic cyberspace (page 142). The cyberspace environment attached to the elevator's networks could be considered a "cybernetic jungle" (or virtual wilderness). It is built on biological images derived from the organisms contributing genetic material to consortium biotech. As with the elevator's physical structures, the directors decided on a course of decentralised design for cyberspace as well. Their master plan lays out very general "climatic" and other constraints, and lets increasingly localised competition handle the details. The consortium's central design bureau intervenes only when crucial data and tasks go neglected.

Consortium Cyberspace

Consortium cyberspace resembles a hyper-dimensional string of oases through a vast desert. Unlike terrestrial iconic systems, however, distances expand and contract depending on a unit's location within the elevator system.

Anchor and each of the settlements presents itself as an oasis, twice as wide in latitude and longitude as the corresponding physical space to allow for more details. (Biotech controls are innately more complicated than purely inorganic ones, and monitoring and adjustment of these controls is a primary purpose for the iconic style.) Climatic differences are also exaggerated by a factor of two, so that the northern side of a settlement is temperate in cyberspace or even arctic, while the southern side is fully tropical.

A meandering river valley, with multiple streams that divide and converge constantly, flows between the oases. This is the icon for the elevator itself, each stream representing one or more cables. The river twists up over the rim of the oases through a direction that's not precisely north, east, west, or south, and out into a great dry desert that represents surrounding space. Smaller isolated oases represent satellites with accessible cyberspace areas. Between settlements, the distances compress by a factor of 10, with closer detail available upon deliberate focus. Then the river curves up and over an embankment and down into the next settlement's oasis representation. Here there's the same range of climates as in Anchor, and the river flowing on away from Anchor and Earth.

Heaven, the river's destination, appears as a pure black volcanic mountain with caves at its foot to receive the river. Lava flows represent the security systems that get in the way of unauthorised traffic.

Human beings usually appear in human avatars, as a matter of efficiency: it wastes time to have to adjust to too many co-workers' strange ideas of suitable avatars without some general policy. But this isn't law or universal custom. Independent businesses, offices within larger units, residential neighbourhoods, and other groups may establish conventions of their own and work just as smoothly among themselves. Individuals who prove adept at operating efficiently among very diverse avatars often find employment as negotiators, representatives, and couriers.

Authorised programs almost always appear as known terrestrial species, current or extinct, and most data takes on plant forms. Aquatic and avian species carry seeds, branches, and fruit of data across long distance, and in local environments, ground-dwelling and arboreal species carry it with them as they walk, crawl, tunnel, and brachiate. Software icons indicate their place of origin in terms of climate, and experienced observers can tell not only which general part of which settlement an item came from but often its specific creator. Out of some obscure sense of whimsy, the master A.I.s choose to represent upgrades and replacement in terms of evolutionary succession and predation: new programs and data hunt the units they subsume. The level of gore and carnage associated with this process is, fortunately for the faint-hearted, customisable at the group and individual level.

Digital Evolution

By design, the consortium cyberspace is constantly developing new features with very little central direction. New icons compete with existing ones, and the ones that prove more efficient win the resources for which they compete. In some cases, the overseeing A.I.s deliberately introduce climatic changes in hopes of triggering useful developments; in others, they simply watch and harvest the results.

The inhabited parts of the elevator system do not experience natural disasters, but there is geological and climatic change in which the physical processes of thousands or millions of years are compressed into hours and days. Hills rise and fall, rivers change their channels, cooling and warming waves pass over the landscape, and so on. Each individual part of the system retains its integrity, but connections may change. Independent mapmakers try to keep track of all of this, and reliable, regularly updated navigational charts sell for good prices.

Furthermore, whole new territory appears every few days to weeks. This often but not always correlates with new physical construction. Sometimes the A.I.s create new cyberspace resources to handle increased computational demand

• Supervisory A.I. Avatar •

This is a settlement-level supervisory A.I., built on 70 Points, represented as a whale swimming in channels branching out from the river that is the elevator. Potentially dangerous icons are swallowed up for secluded examination. Other forms of A.I. can be built as variations of the standard A.I. template on page 37. The Supervisory A.I.'s remaining 32 Skill Points can be assigned as appropriate for that A.I.'s specific function.

Body 6
Mind 7
Soul 5

Attack Combat Value 6
Defence Combat Value 4
Health Points 55
Shock Value 11

Attributes

Armour 1, Features 4 (Major Gadget: supercomputer), Flight 1, Highly Skilled 2, Mind Shield 2, Organisational Ties 2 (Great), Special Attack "Data Swallow" 2 (60 Damage, Tangle, No Damage, Melee), Special Defence 12 (Air x2, Ageina. Disease x2, Hunger x2, Pain, Poison x2, Sleep x2), Telepathy 8 [Computer programs; Area 2; Targets 1, Reduction -1, Only for initiating mind combat]

Skills

Computers (Intrusion/Security) 3

Defects

Awkward Size -3, Less Capable (Empathy) -1, Marked (Distinctive avatar) -2, Physical Impairment (Cannot heal naturally) -1, Physical Impairment (No sense of smell or taste) -2, Physical Impairment (No limbs) -3, Special Requirement (Plugged into power supply) -3

in existing physical units, and sometimes they do it just to see what appears there. The security services know that there are whole informal clans of squatters in such territories, their bodies in cryogenic suspension and their minds connected around the clock to cyberspace. As long as the squatters don't interfere with the productive work of paying residents and guests, security finds, it's not cost-effective to mount serious efforts at rooting them all out. Several times a year ODC does offer bounties for the data and equipment of these squatters, and would-be cyberspace aces jump at the chance to show off their prowess.

There are also "squatter" A.I.s and un-self-aware software enclaves in the undeveloped wilds. Studying these entities has much of the flavour of mythological monster-slaying. Not subject to the consortium's general regimen of personality monitoring, some of these are thoroughly alien, and the human side of the consortium would like to know more about them than the A.I.s choose to share.

• GRAVITY •

The faster elevators maintain about one half G acceleration for transporting people and gravity-sensitive cargo. Non-fragile materials move in fractional G.

The main thoroughfares of the tower exist in microgravity; there are a variety of options for straying in place: glue pads (and other sticky substances), Velcro, and extensive use of magnetic locks.

Larger units – the size of skyscrapers – have centrifuge areas. When they're several dozen or hundred meters across, the centrifuge areas can rotate fairly slowly. Some whole buildings turn so as to maintain anywhere from half a G to one G conditions; others maintain full-gravity areas separated by microgravity regions.

Short-term residences tend to be located in microgravity for the exotic experience. Exposure to zero or microgravity results in space adaptation syndrome in many individuals (nausea, bloating, etc.). This usually goes away after a few hours or days. The sustained effects of microgravity are bone and muscle deterioration, however; this can be countered with exercise and/or spending time in a higher-G environment (like a centrifuge or back on Earth). Long-term residences almost all use centrifuges, to keep the inhabitants' bones and tissues healthy. The disadvantage of a centrifuge is that unless the centrifuge is exceptionally large, the Coriolis effect from spin may make one experience a range of discomforts, from "jet lag" to motion sickness (nausea), to stomach disorders (like "Montezuma's Revenge," colloquially known as "Beanstalk Fever").

• ELEVATOR GUARD •

Street Samurai: 65 points

Stats: Body 8, Mind 6, Soul 5, ACV 8, DCV 4, Health Points 65, Shock 13, Stress 3

Attributes: Attack Combat Mastery 2, Combat Technique (Accuracy, Judge Opponent) 2, Features (Generalised Appearance) 1, Gadgets (Includes soft body armour, laser stunner, and PDW; possibly dog or bicycle) 4, Heightened Awareness 3, Massive Damage (Guns) 1, Highly Skilled 3, Organisational Ties 2 (Significant)

Skills: Acrobatics (Balance) 1, Intimidation (Street) 1, Military Sciences (Teamwork) 1, Stealth (Camouflage) 1, Urban Tracking (Any) 1, Gun Combat (Auto-fire) 2, Ranged Defence (Personal) 2, Unarmed Attack (Grappling) 1, Unarmed Defence (Strikes) 1

Defects: Marked 2 BP, Owned 2 BP

• MAJOR RESPONSE FORCE MEMBER •

Street Samurai: 100 points

Stats: Body 9, Mind 7, Soul 5, ACV 11, DCV 5, Health Points 70, Shock 14, Stress 2

Attributes: Attack Combat Mastery 4, Combat Technique (Accuracy, Judge Opponent, Portable Armoury) 3, Gadgets 5*, Heightened Awareness 4, Massive Damage (Martial arts) 2, Highly Skilled 5, Organisational Ties 4 (Significant)

Enhancements: Boosted Reflexes (Extra Attacks 1, Limited Use: 3/day, 1 BP; Lightning Reflexes x2) 9 Points, Cybernetic ear (Features 3: Built in short-wave radio; Audio recorder Radio Reception) 3 Points, Regenerator (Regeneration 1, Activation Time, 5 rounds, 3 BP) 3 Points, Sedating Touch (Special Attack 1: 40 Damage, Drain Body, Incapacitating vs. Body, Limited Shot x2, Melee, No Damage) 4 Points, Pain Suppressor (Special Defence 2: Pain x2; Activation Time, 5 rounds, 1 BP acts as 3 BP) 1 Point.

Skills: Acrobatics (Balance) 1, Intimidation (Street) 2, Military Sciences (Tactics) 3, Stealth (Silent Movement) 3, Gun Combat (Rifle) 2, Ranged Defence (Personal) 2, Urban Tracking (Residential) 2, Unarmed Attack (Strikes) 1, Unarmed Defence (Strikes) 1

Defects: Famous (MRF) 1BP, Marked 2 BP, Owned 2 BP, Red Tape 1 BP, Special Requirement (ODC Nutrients; needed for bioware) 2 BP

Note: * Gadgets varies per assignment, but basic gear includes: override beacon, sealed combat armour, medium pistol, combat infantry weapon, and flash-bang grenades.

• SILICATE MADNESS • OPERATOR

AI: 150 points

Stats: Body 4, Mind 12, Soul 6, ACV 12, DCV 5, Health Points 50, Shock 10, Stress N/A

Attributes: Agents (A.I.s +16 Character Points; Restriction, some A.I.s are akin to idiot savants, 5 BP) 7, Attack Combat Mastery 4, Extra Attacks 1, Extra Defences 1, Features (Major Gadget: supercomputer) 4, Flight 1, Highly Skilled 4, Mind Shield 3, Organisational Ties 6 (Significant), Reincarnation 3, Special Attack "Data Crash" (40 Damage, Spreading, Short Range) 2, Special Defence (Air x2, Ageing, Disease x2, Hunger x2, Pain, Poison x2, Sleep x2) 12, Special Movement (Dataflow) 1, Telepathy 10 (Computers or jacked-in users; Area 3; Targets 3; Reduction -1, Only for initiating mind combat)

Skills: Computers (Networks) 4, Area Knowledge (Cyberspace) 3, Biological Sciences (Genetics) 3, Electronics (Computers) 2, Military Sciences (Hardware Recognition, Intelligence Analysis) 3

Defects: Famous 1 BP, Ism (A.I.) 2 BP, Less Capable (Charisma) 1 BP, Less Capable (Intuition) 1 BP, Physical Impairment (Cannot heal naturally) 1 BP, Physical Impairment (No limbs) 3 BP, Sensory Impairment (No sense of smell or taste) 2 BP, Special Requirement (Plugged into power supply) 3 BP, Unique: Merged Personality (Suffers sporadically from Blind Fury, Recurring Nightmares, Phobia, or Sensory Impairment) 2 BP

• IVOR TELVARSON • TELVARSON HAZARD FOUNDER

Tech: 110 points

Stats: Body 8, Mind 9, Soul 7, ACV 10, DCV 7, Health Points 95, Shock 29, Stress 5

Attributes: Attack Combat Mastery 2, Combat Technique (Accuracy, Hardboiled, Steady Hand)3, Defence Combat Mastery 1, Divine Relationship 5, Gadgeteer 1, Gadgets* 5, Highly Skilled 6, Organisational Ties (THA; Significant) 8, Tough 1

Enhancements: Boosted Reflexes (Extra Attacks 1, Extra Defences 1) 11 Points, Com Implant 1 Point, Heightened Senses (Smell, Ultravision) 2 Points, Neural Jack 1 Point, Special Movement (Balance) 1 Point

Skills: Biological Sciences (Genetics) 2, Burglary (Breaking-and-Entering) 2, Computers (A.I.) 1, Demolitions (Bomb Disposal, Organic Structures) 2, Electronics (Robotics) 2, Mechanics (Aeronautical) 2, Medical (Emergency Response) 2, Physical Sciences (Engineering) 3, Piloting (Spacecraft) 3, Gun Combat (Rifle) 2

Defects: Famous (THA) 2 BP, Marked (Bioware, scars) 2 BP, Recurring Nightmares 2 BP

Notes: * Ivor has access to a tremendous variety of Gadgets, from biohazard equipment to small and large vehicles, to gear for unusual situations

• ANNA CHUNG •

Idol: 55 points

Stats: Body 6, Mind 5, Soul 8, ACV 6, DCV 4, Health Points 70, Shock 14, Stress 3

Attributes: Agent (Manager) 1, Divine Relationship 2, Features (Exotic beauty) 2, Gadgets (Various toys) 2, Organisational Ties (Forward Dance Company; Moderate) 4, Wealth 1,

Enhancements: Com Implant 1 Point, Neural Jack 1 Point

Skills: Acrobatics (Flexibility) 2, Cultural Arts (Latin American Literature) 1, Disguise (Make-up) 1, Etiquette (High society) 2, Performing Arts (Dance) 4, Seduction (Female) 2

Defects: Famous 3 BP, Owned 1 BP, Significant Other (Ernesto Diegas, like a brother) 1 BP

• ERNESTO DIEGAS •

Idol: 60 points

Stats: Body 10, Mind 5, Soul 6, ACV 7, DCV 5, Health Points 80, Shock 16, Stress 4

Attributes: Agent (Manager) 1, Divine Relationship 1, Features (Exotic beauty) 1, Gadgets (Martial arts weapons) 2, Highly Skilled 2, Organisational Ties (Forward Dance Company; Moderate) 4, Wealth 1

Enhancements: Com Implant 1 Point, Neural Jack 1 Point, Heightened Senses (Ultravision) 1 Point, Special Movement (Cat-Like) 1 Point

Skills: Acrobatics (Balance) 3, Performing Arts (Dance) 4, Seduction (Male) 3, Melee Attack (Strikes) 2, Melee Defence (Holds) 2

Defects: Famous 2 BP, Owned 2 BP, Significant Other (Anna Chung, like a sister) 1 BP, Special Requirement (Minor drug addiction) 1 BP

Chapter 14: Underworld Introduction: 2120

Underworld takes place in the year 2120. The term "Underworld" is a catch-all phrase, which refers to both the campaign world and the vast, walled prison-sprawls that dot the landscape. Each major continental territory has an Underworld, all numbered to tell them apart from one another. This chapter focuses on Underworld 9, the major Southeast Asian Hub.

Underworld 9 is a vast place, and the GM can run an entire campaign without leaving its confines. If the GM wants to further expand the world, however, it would be easy to flesh out other Underworld hubs or locations outside their walls, such as major cities or corporate headquarters.

• Grinning Jim Interview •

"You know that old saying, 'Curiosity killed the cat?' Well, in Underworld, curiosity grabbed the cat by the scruff, poked its eyes out with a wire, and sold it to the gang lords as a genetic sex doll template – and they ended up skinning it, grinding its guts into soup, and using its fur for a towel."

The old man stretched against the bar's tacky wall and chuckled to himself, amused. "Damned ether-journalists, when the hell are any of you gonna learn? Laws? Well that's just about the funniest damned question I've ever heard." The man paused and leaned forward on his stool, his obviously bootlegged auto-eye squeaking as it focused in the dim light. "Don't you know? Everything's legal in Underworld.

"It's pretty simple, really; the strong are on top and the weak whimper beneath them, hoping they can get through another day alive" He reached over and swigged his Nan-O from a discoloured can. "There are several levels in Underworld," he began. "You got your outside-the-walls types like your corporations and governments which run everything on top, then beneath the corplords you have your transients – your middle management type suits, your up-and-coming government officials, and people like you – who may work here, but they don't live here, if you take my meaning. Then there are those who live within the walls: your drones, street enforcers, gang members, chip-dolls, I-chip addicts, and drifters such as myself. Within each 'level' there is a hierarchy, too; the mob-bosses trump your enforcers, who trump the gang members, who push around your penal-labourers, and so on. I wouldn't go up against a street enforcer if you paid me. Which reminds me, how much are you paying for this little chat? I only accept world dollars – no U-dollars and no credit. Credit is worth about as much as dirt to an Underworlder."

Underworld is an intricate web spun by the corporate elite to ensnare the destitute masses. Any movement along its strands reverberates throughout, alerting all who live within that fresh prey is up and about. It is where the world's poor and disenfranchised toil tirelessly for their rich taskmasters until they wither and finally expire, only to be replaced by other, more able bodied drones who continue the cycle.

To those fortunate enough to live above the filth and degradation, Underworld is more of an idea than a sprawling hell. Their world is comfortable and peaceful. The truth of Underworld does not touch them; the stories of squalid horror are nothing more than abject phantasmagoria and troubled dreams.

The poor souls that dwell in the spilled muck of the giant hubs, however, disagree. To them, the nightmares and horror of what they've seen — the surgical brutality that can be brought to bear on another human being — is all quite real.

It is a place where nothing can be taken for granted, where every bit of fuel necessary for life is scarce. Only those ruthless enough, smart enough, or fast enough can hope to survive. It is also a place where anything one can imagine — food, drugs, tech, slaves, babies — can be bought and sold for the right price. Murder, rape, extortion, torture, kidnapping are daily happenings, far easier to find than drinkable water or simple acts of kindness. Everyone on the streets of Underworld is potential prey, since there is always a stronger predator. The nature of that potential is often best left undiscovered — get safely back to your hole and call it a good day, and try to dream that tomorrow will be a shade brighter.

Birth of the Underworlds: Imperial America

At the end of the 21st century, the unfettered growth of the United States of America allowed it to achieve near economic and political domination of the planet. In the process, many governmental agencies changed or withered away as they were no longer needed in the new world order ... as did democracy.

The current US government is a plutocracy dominated by the major megacorporations. American global hegemony was secured through technological supremacy. As the 21st century wore on, the greatest symbol of this power was the establishment of an orbiting space arsenal.

High above the other nations of the world, the United States deployed mass drivers, rail guns, and strike lasers. They were originally established as a means to protect vital satellite surveillance, as well as navigation and communication systems like Navstar and Milstar, but these space weapon systems soon morphed into platforms for power projection in their own right.

The threat of global terrorism provided the necessary justification for a century of expansion that saw America seize control of numerous "unstable territories" beyond its continental borders. This march began in the Middle East, but continued through Central and Southeast Asia and Africa. These actions were justified in the name of regional stabilisation and national security, but they also had the long-term effect of placing a growing percentage of the world's resources (both natural and human) under US control. The few countries that actively opposed America witnessed the skies above their capital cities set ablaze, as Space Command ruthlessly demonstrated its ability to impose America's will.

In the process of making the world safe for America, the United States military came to invade and occupy many of the poorer and less-stable nations of the world, as its military forces rooted out terrorists and guerrillas under the guise of stabilising world order. Many "unstable" nations, such as Iran, Syria, North Korea, Thailand, Cambodia, and much of Africa and Central Asia, became de-facto American territories. Each invasion was followed by the slow process of nation building to bring the "benefits" of the First World to developing countries that had been torn asunder by ethnic and religious strife.

While they ostensibly cited a desire to create a high-order political system in these regions, some suspected the American leaders were more interested in establishing a strong economic base — which in turn would open the country to the economics of America, and thus its corporate base. The corporations stood behind this world building policy, and openly encouraged a model such as China's transition into a market economy, unlike the failures of similar transitions in the former Soviet Union. The United States government decided that capitalist values were of utmost importance, especially in nations with a long tradition of warlords, tribal politics, and fundamentalist institutions; to simply turn the regions into "democracies" and withdraw would leave the region in chaos and turmoil.

Once the US Army had stabilised a region, its borders would be opened for an influx of American companies. The process of rebuilding and reshaping an occupied nation was systemised, privatised, and sold to the highest bidder ... and run for a profit.

A new group was formed and put in charge of managing this fresh approach: the Privatised Reconstruction and Infrastructure Development Executors, or PRIDE It was described as a "global partnership between military, industry, and politics for the salvation of the developing world."

Under the direction of PRIDE, foreign populations that were used to the corruption and inefficiency of dictatorial regimes were given jobs in new, cutting-edge factories administered by a select group of American corporations. A number of major hub cities in newly-liberated occupied nations were chosen to serve as incubators for the transformation of the population of outlaw regimes into good global citizens. The latest cybernetic technology and educational techniques would be employed to train and prepare the inhabitants — especially the children — to join the modern post-industrial workforce. In order to protect them from guerrillas and terrorists (many of whom were still active in the countryside), these model cities were carefully sealed off and guarded by the latest in active defence systems.

America called them Secure Economic Zones. The inhabitants called them Underworlds, because to them, they were hell on Earth.

The Road to Hell

The corporations who ran the Underworlds as off-shore fiefdoms were given the mission of turning them into profitable economic islands in the global economy. Instead, foreign puppet regimes under American control herded their dissidents into the Underworlds, giving the corporations that ruled there free reign in exchange for the American weapons and aid that served to prop up their own domestic power. In order to deal with the often restive populations, the corporations were given full control over internal matters. Most civil rights were suspended in the interests of security ... and after a series of brutal uprisings — demonstrating that the populace couldn't handle even the most rudimentary of freedoms — "most" quickly turned to "all."

As corporate power increased, global megacorporations like Augustus and Imperial successfully lobbied a series of compliant American administrations to create the notorious FLC (Freedom of Liability Charter) legislation, which gave companies participating in the PRIDE program nearly unlimited legal powers within their domains, as well as complete freedom from the constraints of any foreign or domestic labour laws — in effect, granting them extraterritorial status and the same rights and privileges as a foreign nation.

The right of the people to rule themselves was revoked in short order, ostensibly in response to public uprisings and violence. Democracy was to be restored when the populations were ready for it — and it was up to PRIDE to judge when the time was right.

It has now been over six decades since the very first Secure Economic Zone, "Underworld 1," was founded. Profits are up, but it seems democracy is still just over the horizon ... a line that is receding day by day.

Today, the Underworlds are little more than enormous self-sustaining labour camps. The megacorporations that run them under PRIDE's FLC charter find them very useful. It isn't the cheap labour so much as the lack of restrictions on what these drones can do, and what can be done to them: 16-hour neural-jacked teleoperation shifts; human testing of new drugs, bioware, and cyberware; serving as jacked-in neural-net processors for the Andromeda Data Nebula (the world's global computer network) — in short, a whole range of jobs in the post industrial economy for which a shortage of applicants exist beyond the Underworlds.

The Underworlds have also proven excellent places to rehabilitate or disappear troublemakers of all stripes. As conventional prisons in the United States, Europe, Japan, China, and elsewhere became overcrowded, it became common for the operators of the various Underworlds to earn extra income by finding places for foreign inmates in their secure environments.

Under the principle that (for example) American Mafia inmates would be less likely to run their networks from prison if they were shipped to Africa or Thailand than if they stayed in upstate New York, the US government arranged for many inmates serving life sentences to be moved to Underworlds around the world. This was made legally possible because the Underworlds — run by multinational corporate entities — were, by treaty, extensions of American or another allied nation's sovereignty on foreign soil, much like embassies. In essence, a free trade in goods was transformed into a trade in human flesh. Similar deals were made with other governments, including the hosts of the Underworlds, who were eager to see local dissidents scattered to the far reaches of the Earth and willing to accept a few foreigners, provided they were kept safe behind the walls of the US-run Secure Economic Zones.

That should have been the end of those hardened criminals and their crime networks. It was a good theory, but it did not reckon with the resourcefulness of the criminals themselves. The transplanted Mafiosa or Yakuza or Tongs did indeed lose touch with their old networks, but they soon established new ones. Indeed, the relative freedom of trading a 30-square-metre cell for an entire city was welcomed by some prisoners, once they got over the shock of exile. Better to reign in hell than do time in America.

Underworld 9: An Overview

Blinding white light shines from the tops of the gleaming steel walls that surround it, radiating in all directions. Smaller work lights swing their beams back and forth over the great, cluttered bowl of the city. Aside from the probing beams of the search lights, the city is cloaked by a perpetual haze of low smog, regardless of the weather beyond the walls. The sun's face is always veiled and the night sky is entirely invisible, a dark grey haze lit by a reflected dull orange glow; stars have become jokes uneasily laughed at in bars. This is partly the result of the pollution belched out from the factories within U9, and partly due to the dome of protective nano-mist that surrounds the city. The mist itself is a thick cloud of floating micro-machines, erected — so the authorities say — to devour the toxic chemicals emitted before they fall to Earth again. Many believe this a lie: the dome may eat pollution, but only to keep it from spreading beyond U9 ... and it eats other things as well.

Every few minutes, the muffled stutter of distant auto-fire cuts through the thick air. A long convoy of armoured vehicles rumbles down the road laden with parts and raw material for the manufacturing plants. Their spotlights swing in the darkness, revealing dying, huddled forms in the crevices of the city's grey buildings; trash and chunks of detritus swirl in the gutters and on the sidewalks. A gang patrol quickly ducks into an alley. The trucks don't stop. In the distance another car hums past — probably a Mafia don or Yakuza *oyabun* going about his business; few others own private vehicles.

Many of the old roads that served the city before the walls were erected have been built over; the once-crumbling streets are now filled by apartment tenements in endless rows. The few people sanctioned to have access to a vehicle know where to find the functioning roads — routes paved and swept clear by the corps between their plants and U9's gates.

The neon lights at street level are alternatively bright and soft; some are broken, buzzing and blinking in a syncopated rhythm. A sign reading "The Trench" casts its blue light into an otherwise shadowed street. Screams and heavy laughter flood from the bar, brought forth from some broken place in the soul. Inside, brief gunfire explodes followed by raucous cheering. An armoured squad of Underdogs — corporate security police — march down the street in formation. They ignore the noise, intent on some other, far off purpose.

Blocks away, a couple of drones dressed in dirty grey overalls tiredly shamble into an all night dispensary. They scrape together their U-dollars and grab protein pastes and alcohol for the evening. Afterward, they drag themselves back to their shared apartment, weary from their 15-hour shift. A rhythmic thump of rotors can be heard overhead — a US Marine Corps helicopter hovers around a gate tower like a giant bug, a fuelling tentacle reaching out to connect to a multi-storied, gleaming fuel-silo.

Still farther away, a desperate line of people cue up beneath a green neon cross, waiting their turn to enter a medical clinic. Most won't make it in before it closes. Without changing their fatigued expressions, a few glance upward as two jump-shuttles dust off from Complex 424's roof. The ground shudders beneath their feet as the running lights on the shuttles recede into the bright sky.

Inside U9

Secure Economic Zone 9 — or Underworld 9, as it is almost universally called — was built on the site of the former Thai city of Svrata Meru, 120 km north of Bangkok, in the year 2060. Its construction followed the success of Operation Royal Lion, the "liberation" of Thailand from the threat of a populist anti-western guerrilla movement and the restoration of the threatened Thai monarchy. Svrata Meru had been the headquarters of the rebels, and the new puppet pro-US government was more than happy to accept its occupation in exchange for the American weapons and investment it needed to survive.

At the time of its construction, Underworld 9 was the largest Underworld yet built, some 75 kilometres in diameter. Contrary to the numerical designation, it was not the ninth Underworld to be constructed, but the tenth. The original Underworld 9 was never completed: a massive breeder reactor installed within the walls melted down due to an engineering oversight before it could be completed. The U9 site was moved from the contaminated zone to its present location, and construction began anew.

The disaster pushed U9's schedule far behind, so its construction had to be rushed to come in on budget. Building on an already existing city sped up the process. To save time, much of Svrata Meru was not demolished, so the former Thai architecture is a distinctive feature of U9. New coffin complexes stand side by side with old plaster buildings that have been retrofitted with coffin interiors. Many ancient Buddhist temples are still present, modified into housing and community locations such as clinics and work dormitories.

Svrata Meru was the location of the famous Jaded Buddha: a 10-story granite statue of Buddha, stained with the green of ancient lichen. The statue still stands in a central housing block, ignored and in disrepair. The original sewage systems still function after a fashion, with new systems criss-crossing the old underground. Likewise, old subway tunnels weave a web beneath the dirty streets. Many people have found these to be suitable homes, erecting makeshift shacks and tents within their dark, wet confines.

While not scarce, food is relatively expensive compared to a drone's typical wage. For this reason it is uncommon to come across much live fauna in U9: dogs, cats, and rats that do appear are hunted and eaten for protein. So are birds, when they can be caught. Despite this, some people keep pets such as dogs and cats, watching over them protectively to ensure their safety (or treating them like livestock — it can be difficult to tell between the two at a distance). Rats still thrive and can be seen scurrying around in the ubiquitous garbage. Flora is non-existent; there are no trees lining the streets, no grassy parks. Plants are a luxury that only the mobs or corporate elite can afford.

U9's infrastructure is the bare minimum required. There are no schools to speak of — these were banned lest they turn into breeding grounds for anti-Western extremism. Instead the young are either kept in nurseries or working dormitories, their education administered through the indoctrination of their implanted CC-chips. Full service hospitals are also non-existent; medical clinics tend to the sick and injured, but these are often overcrowded and undersupplied. Getting proper medical attention without the right contacts is at best a trying experience, at worst impossible.

There is no police force on the inside — troops protect the walls and corporate security forces infrequently patrol the streets, but they are selective in how they react. They will respond to major disturbances that threaten factories or commerce, such as riots or uprisings. Their orders are to stop such activities by any means possible.

Similarly, most buildings are constructed with fire resistant polymer composites, so a public fire department is not needed. If a single residential building catches fire and is not threatening surrounding structures, little is done by corporate personnel to put it out. If a fire does somehow burn out of control, igniting several buildings at once, security forces are dispatched to use water cannons and hovercraft carrying flame suppressing chemicals to contain the blaze. In some neighbourhoods, gangs will offer protection services that include organising to put out any blazes, but most see fires as a good excuse for looting.

The Food Chain

Everyone in Underworld has his or her place, and knows it. Over the years, a culture of power has developed where the strong dominate, subjugate, and exploit those weaker than themselves. Only through extreme cunning, strength, or sheer luck does anyone move beyond the level into which he or she was born. More often than not, individuals sink downward, ending up as a drone contract-labourer if they're lucky, or face down in a sludge conduit if they're not. There is a simple axiom in Underworld: *When you enter Underworld, you enter the food chain.*

• Grinning Jim Interview •

"Well, I'll tell you what I can about the players, so listen closely. I know of many, have met a few, and don't want to know about the rest; too much information can be as dangerous as too little out in the Underworlds. Just remember the golden rule: you never heard any of this from me." As he leaned back in the darkness, Grinning Jim's eye squeaked loudly, taking the place of his usual cackling laughter.

These are some of the major movers and shakers that have built and continue to shape the landscape of Underworld 9, as well as the nameless bottom feeders and drones whom they exploit. This list is by no means intended to be exhaustive — many of the characters are not fleshed out here, focusing instead on the ideological power players. GMs are encouraged to twist and change the individuals and groups herein and to add to the list to suit the campaign as it grows into something larger.

The Bottom Feeders

This is where the rubber hits the road. This social level of Underworld encompasses the majority of the population: the powerless, the impoverished, and the exploited. Here is where one finds the indentured working hordes who toil endless hours in the manufacturing pits; the parasitic drifters who eke out a living begging and stealing before moving on again; the prostitutes who sell their souls each night for a couple of U-dollars; and the smart, intrepid entrepreneurs who are always looking for a way out of the godforsaken hell of Underworld.

Here is where one finds quick-thinking individuals who stay alive by the wits they were born with, making a quick take and then getting out: hustlers, thieves, peddlers, runners, and hired muscle. Here also are the predators that go unchecked in this chaos: murderers and serial killers, more celebrities than despised criminals. Finally, at the top of the stench heap, are the gangs. The gangs aspire to be like their more powerful counterparts — the syndicates of organised crime — but they are nothing more than the lap dogs of such organisations, fetching, begging, and killing as commanded.

Inmates and Citizens

Legally, there are two types of individuals in Underworld.

Permanent Resident (PR) is the classification for the vast majority of individuals born in or sentenced to Underworld 9. This classification means the individual is forbidden to leave U9 without an official transfer request from the PRIDE authority; notoriously difficult to come by, some believe them to be urban legends. Thanks to the FLC legislation, PRs have no legal protection and no rights.

Transient Citizen (TC) refers to the corporate, government and military personnel as well as the occasional visitors (press, for example) who visit or work in U9, but who are free to leave (quit their job, etc.) if they wish. They enjoy normal legal protections.

A change of classification from PR to TC, amounting to a pardon, is possible, but almost unheard-of — unless the individual receives the patronage of a corplord or government official. Near mythic anecdotes recount this happening only as the result of tremendous favour (or blackmail). Some mob bosses might aspire to this, although in practice most are content to remain where their power base exists.

Naming Policy of Underworlders

Native permanent residents of Underworld 9 are born in one of two ways: through standard birth to a mother or through corporate-maintained transcriptase vats (TVs), the latter wer developed in response to the alarming number of birth defects and stillbirths that bedevil more than one-in-three Underworlder pregnancies (a result of exposure to toxic chemicals in factories and the high levels of air pollution in the city).

Either way, an infant is given a name designation by the corporate overseers if born in a drone nursery, or by a government official if born in a TV. The first part of the designation is a random first name (appropriate to gender), and the second part is his or her number in the sequence of individuals that have been assigned that name. For instance, Nat #43532 is the 43,532nd person to be assigned the name Nat in U9.

The parents of natural-born children sometimes insist on giving the child a family name. This is not officially entered into records and has no more status than a nickname. Factory officials will never use it, for example, and will discipline workers who answer to it.

Those who have managed a life free of the manufacturing plants within Underworld, such as organised crime members, often drop the numerical part of their name and adopt a nickname or a family name of their own choosing. Consequently, people bearing the same last name are not necessarily related by blood (some are TV babies and have no genetic relations), but have taken on the name of someone they respect or have been asked into a "family" for one reason or another.

Drones

Drones, as they are lovingly called, are the working base of Underworld — the contract labourers. The majority of the permanent resident Underworld population are drones. These unfortunates were usually born into Underworld and know nothing other than the daily brutality that is found here. Some drones are the children, grandchildren, or great-grandchildren of native Thais that were incarcerated here when U9 was created. Others are descended from dissidents shipped here from South China, Cambodia, and other regions that fell under the American Empire. A fraction of the population, perhaps 15%, are the children of convicted criminals from America, Europe, or Japan who were also sentenced to life as a drone. Some are hardened criminals — others are political dissidents, drug offenders, and political protestors who were arrested during government crackdowns. Even the newest inmates have likely been here for a decade or more; these are the only drones who are likely to have memories of what life is like outside of Underworld.

Those drones who are born in U9 spend the first four years of their lives in an overcrowded corporate-subsidised nursery, looked after by disabled or elderly drones who can no longer work productively (nicknamed "slots" because many of them have only one arm). A drone's natural parents may visit him or her at the end of a work shift, and even take the child home for the night, while the vat-grown TV babies spend the night in cramped dormitories. At five years of age, the drone is expected to begin work on the manufacturing or laboratory floor, working as many hours as the older drones; this work is unpaid, although the child is provided with a rations stipend. From the age of five to the age of 13, the drone lives with parents, or, if a TV baby, he or she lives in working dormitories. After that, the drone is on his or her own, expected to find and pay for food and lodging. They also are expected to pay back the costs of their education (the value of the CC-chip) — thus, they start their first paying job already in debt for several thousand U-dollars.

As the corporate and government spokespeople insist, drones are not slaves — not quite. There are a choice of jobs, but all companies insist on work contracts of five years or more, with huge penalty fees "to cover training costs" for those who break them. Pay is bad, conditions are worse, and the only alternatives are starvation or working on the street. The various gangs and mobs control what passes for "small business" — if you have a family connection, or if you're tough enough to break heads or pretty enough to sell your body, then maybe hooking up on the street is a path you can walk ... though it probably still leads to hell. For most people born or shipped to U9, though, life as factory drone is the only option.

Drones typically work 10-16 hour shifts with short breaks, and are paid a meagre wage — subsistence living is the way of life in Underworld. These workers are also subjected to "submissions" from their implanted CC-chips (see page 235). Frequent messages from their corplords designed to boost morale or admonish low productivity are examples of submissions that come through the chip on a daily basis. The power of the signal can be raised to a level so great that workers are psychologically forced to remain awake and work regardless of fatigue — it




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becomes physically impossible for them to sleep when this function is engaged. Many workers have been driven mad by this kind of abuse; those who go insane are either summarily executed under section 1052.8 of the Corporate Procedural Rights Charter (CPRC), or cut loose onto the streets to live and die as they please. For this reason, it is not uncommon to encounter mad wanderers on the streets of U9.

Even those drones that retire out of service for the corps still receive regular advertisement and public service broadcasts every morning upon waking and throughout the day. The only way to somehow stop the submissions is by modifying the chip. While this is extremely hard to do, there are people in U9 who can accomplish it for a price. A drone can also opt to get it removed (also a difficult and risky procedure, although somewhat cheaper than a modification). A few drones driven mad by the submissions have attempted to cut the chip out of their own heads, with predictable results.

Unlike the majority of people who live outside Underworld, the drones are unable to fully use their CC-chip to access the Andromeda Data Nebula. Only certain data pathways are available, giving the native-born user no concept of the thriving external world that exists. As a result, many native-born drones falsely believe that the whole world is like the hell in which they exist. The trickle of new inmates who contradict this are generally regarded as madmen or liars. This serves the corplords quite nicely, as they are able to better control the drones that toil for them if the workers believe nothing better exists.

There are no age discrimination laws in Underworld; drones begin working at age five and continue labouring until they die or somehow leave the system. Drones do get paid, but only with subsistence levels of U-dollars: this covers rent in a coffin apartment, food, and the consumption of minor treats, such as beer, Nan-O cola, or a drug of choice. Drones often share accommodations, living 2-4 (or more) to a room to cut costs. Any money they save usually ends up spent on luxury items, such as the infrequent foetal steak or prostitute. This subsistence existence makes them the perfect target for mobs and gangs, as the drones are apt to accept jobs for a bit of extra cash or sell themselves, lovers, or children to support drug or gambling habits. Many of them get in too deep with their benefactors and end up either dead or permanently working for them in some dark capacity.

The typical drone dresses in drab colours, usually dark blue or grey Canvitex coveralls provided to them by the corporation they work for. Other clothes they own are second-hand throwaways or cheap articles bought on the streets. They carry very little with them, relying on their CC-chip for identification and entertainment. Wallets are used solely for U-dollars, of which they carry very little. When outside the plants, many drones carry a knife or shiv for protection, knowing full well the predators that lurk in Underworld.

Drone Revolts

In spite of (or perhaps because of) the heavy repression of the drones, occasional violence has flared up in factories. Under the FLC laws, the corporations have full authority to use all necessary force to quell labour disputes and uprisings. No strike, unionisation attempt, riot, or revolt has ever succeeded in winning concessions.

The last major example of resistance was the 45 Revolt, which took place seven years ago. The bitter fruit of a temporary liberalised policy that allowed workers some limited freedoms to select their own sub-managers on the factory floor (since revoked), it was the culmination of the rise of an underground union movement.

In protest against some 26 hours of continuous work assembling CC-chips, more than 5,000 workers in Complex #424 sat up from their machines and refused to continue. All workers blocked or ignored transmissions from the Clear Channel chip. A group of security police moved in to restore order with a show of force, but by then the drones had found a leader, the charismatic Gabriel #11889. They occupied Complex #424, and overwhelmed the security personnel using their sheer numbers, seizing weapons and armour.

A Day in the Life

A typical day in the life of a drone begins at 5:00 a.m. when his or her CC chip receives a wake-up broadcast from the corporation – normally in the guise of a digital persona called "the Secretary." Each corporation's Secretary is custom-designed software, but all perform essentially the same functions in informing drones: what production levels or tests are expected for the day, as well as who has been behind in their duties (and subject to penalties). The CC chip guides them through brief callisthenics, and follows with a prompt to leave for the plant, downloading a GPS-based map that leads to the facility door. The drone then leaves his or her false-mould plastic coffin apartment, generally little more than a four-metre-by-four-metre living space, with foldaway bed, toilet, sonic shower, and wall-kitchen.

Work begins sharply at 6:30 am – to be late is to be left outside of the plant's massive steel blast doors (which lock behind the workers). Absent workers receive no pay for the day, and a penalty of half wages should they return the day after. Any drone can be summarily fired at any time. Whether he or she is or not will be depend on past performance. If so, the drone will usually become a drifter (see page 203).

Those who are tucked safely within the prison-factory walls normally work from 10-12 hours per shift. The only break is a scant 20 minutes to consume the protein sludge that is dolled out from sustenance cubicles scattered through the plant. These sustenance cubicles contain tube receptacles with enough protein supplements for one meal-equivalent per person per day. If there is a particular manufacturing crunch, shifts may extend to 15 or 20 hours – at this time, the forced wakefulness of the CC-chip is engaged to ensure workers remain awake and productive.

After their shifts, drones return home or visit a local bar, brothel, or casino. The chips do not shut up once the shift is complete: after work, they switch to general advertisement and public service broadcasts at periodic intervals, taking up approximately 10 minutes of every hour. When sleeping, these are tuned to interface with their recipients' dreams: rather than waking them up, the average drone will dream of ordering Nan-O cola, smoking Eagle-brand nic-sticks, or visiting the Augustus Public Casino. This barrage can sometimes drive new inmates mad, although U9-born are used to it. They then go home to catch a few hours sleep and begin the routine over again. There is no such thing as a weekend or holiday in Underworld – one day is as bad as the next.

The central core of 300 armed drones blockaded themselves in the upper office levels of the complex, taking several hostages, including the then-security director of Augustus FLC, who was captured while attempting to negotiate. The majority of rioting drones then began destroying the machines and goods they had been assembling.

The siege shut down production for 45 hours, and was only ended when the new acting security director, Vernon Nicodemus, led 400 heavily-armed and cyber-equipped corporate underdogs in an aerial assault against the factory. They stormed the building and massacred Gabriel and the armed drones with him, unfortunately killing the hostages in the process. Upon seeing this display of force, many of the other protestors quickly tried to surrender but were gunned down.

To reinforce this lesson, all drones in Complex #424 were executed, whether they had taken part in the protest or not. The bodies of more than 5,000 workers were brought to the central loading zones of the plant and the mountains of corpses were set aflame — all but Gabriel #11889, whose head was severed, preserved in a block of composite Lucite, and placed in the central hall of the plant as a reminder to all who pass it. Nevertheless, Gabriel's name and number are secretly venerated by the current drone colonies within the plant. After the 45 Revolt, a zero tolerance policy has led to stationing of armed guards on the factory floors and ruthless crushing of all open signs of dissent.

• Grinning Jim Interview •

"Yup, I'm what you'd call a drifter," Grinning Jim said, melodramatically tilting the empty Nan-O can as if trying to shake the very last drops into his mouth. "You think you could...?" he said and tapped the empty can.

"Thank you very much, son. Where was I? Right. Yes, I'm a drifter, but you can see from that quick transaction between you and I how people like me live. I give you something, in this case information, and you give me something back, in this case Nan-O, nic-sticks, and cash.

"How did I become a drifter? Well, I was a drone once. Broke my arm and couldn't work no more – got that damned CC-chip thing ripped out of my head once I left, quick as I could. Hell that's how I got this damned eye – complications with the surgery. Had to find a scalpel shop and get the damned thing installed just to see again – now all it does is squeak all day. Damned Yaks.

"So, sometimes I stay in a place and make a few bucks doing this or that, and sometimes I sneak my way onto the U-Rail and find another Underworld to settle in for a couple of months or so. Lessee, I've been to U5, U1, U11, U16 – most people don't even know that one exists, and of course U9, where I've found the best action. I think I'll stay here for awhile – well, long enough to finish this interview anyway." Jim laughed aloud at his own joke, then broke into a fit of raspy coughing.

Drifters

Drifters are individuals who live on Underworld's streets but are neither factory drones nor professional criminals. A few drifters deliberately chose this life, voluntarily escaping the monotonous grind of life as a drone. Others have been forced into the role as drifter, because they have nowhere else to go. This includes those ex-drones who are now unable (due to age or disability) to work in the factories or nurseries.

Most drifters are PR-classified individuals and as a result are prohibited from leaving the Underworld. A few, however, are TC-classified individuals: corporate employees who, for one reason or another, quit and went to ground or were fired from their jobs and abandoned to rot in Underworld.

Unwary drifters can easily end up as a meal for other Underworlders, or the reluctant participant in a Mafia death match. As a whole, drifters fill the vacancies in Underworld society, willingly or not. Many temporary jobs and debauched entertainments are filled by drifters: they are the Jack-of-all-trades of Underworld's dark thoroughfares. It is a difficult way to live, but probably the closest thing to freedom any of the sane denizens of Underworld can hope to experience.

Drifters are excellent sources of information. Some have been all over the known Underworld rings, and have seen much in their travels. Others are fixtures of a particular Underworld: the longer they stay in one place, the more they absorb and learn. They are the unseen watchers, the forgotten observers who witness much that many would like to go unnoticed. If caught where they shouldn't be, they are often made to disappear, but veterans who stay in the shadows and keep their eyes and ears open can sell their information for a good price. Many drifters have a lot more cash than they let on, having squirreled it away over the months and years. Those who can't plan for the future rarely have one.

Grinning Jim

Grinning Jim is a well-known figure within the realms of Underworld. Everyone who ventures even a short distance from their coffins knows of Jim and his outrageous exploits. Throughout the Underworld Hubs, stories of Jim's accomplishments and near-death experiences circulate over and over — and a few of them are actually true.

Contrary to what most people know, Jim started as a corporate man, set on the high road. To become a corplord, one must become adept in the ways of misinformation, misdirection, and subterfuge; Jim was deftly skilled in all of these, perhaps too much so. When his bosses realised the threat he posed to their cushy jobs, they set up a coup against him and had him ousted to Underworld.

Here he became a drone for Augustus, where he worked for several years before shattering his arm in a broken machine and finding himself tossed out as street grist. As cunning as Jim was, however, he was able to fend for himself and make a moderate living on the streets. Eventually, after working for several gangs and mob families, Jim became a drifter, happy to wander the highways of the Underworlds rather than be bound by them.

Jim is an amazing source of information, since he has done and seen a staggering amount of things in his life. He is quite intelligent, although he rarely shows it, and will share slivers of knowledge — for a price. Jim has currently settled in U9, having made it "nice and cosy," relatively speaking.

Jim is a man who, while worn down by the Underworlds, is still quite alive. His face beams with a jaded light; true to his name, he's always smiling. Whether this is a ploy to lower his audience's guard while scoping them out or whether he is just a jolly soul varies depending on who's describing him.

Jim's eye was poorly replaced by a scalpel shop with a second generation optical system whose parts are hard to come by; consequently, his eye squeaks gratingly whenever it focuses. He never had the luxury to replace the thing, but

finds the discomfort it causes those around him quite amusing He will look around a room just to make the thing whine incessantly. Other than this, Jim resembles other drifters — worn, dirty clothes, unshaven wrinkled face, and outdated cyberware are all trademarks of people of his station.

Shaman

A drifter named Derek #13264 was wandering the Trash Wastes in search of salvage when he came across a large capacitor. Not knowing what it was, he accidentally touched the leads and discharged it. The electricity threw him back and knocked him unconscious. When he awoke, he had no memory of his name or past life. Over the next few days, however, he had visions of a great tribe being led across a vast desert as he lay on the ground, burned and dehydrated.

During the period of these visions, he walked among the other drifters and began preaching of untapped potential of "Mother Wastes." He soon attracted followers, whom he called the Feeders; they, in turn, called him Shaman. He currently has over 100 adherents who live with him, forming a tribe that obeys his every word. Shaman and his fellow Feeders, many of whom are tech-savvy drifters, have learned to successfully alter or remove a CC-chip from another individual's head.

Shaman speaks of the desert of freedom, to which the faithful will eventually be transported in a great wave of fire. He predicts this will happen: "When the dunes rise to the stars, the Moon burns red, and the sky is aflame." For now, they wait as the Trash Wastes grow higher, praying for the day the mountains will reach the top of the Wall, allowing their pilgrimage.

Shaman is an old wrinkled thing, with markings resembling circuit-board patterns tattooed all over his almost naked body. He wears a strange loin-cloth made of woven chips and resistors, but no other clothing. To this day, he still experiences visions. He carries with him a staff made of a thick but light alloy, from which he has draped odd chip boards, knobs and blinking lights. The staff has a transmitter built into it that can broadcast a powerful sub-sonic frequency at the touch of a button. Shaman learned early on that this sound is paramount in fending off and training the waste snakes (see page 230). It is a secret he holds most dear and has only shared with a few of his closest counsellors. If attacked, Shaman is able to activate the device to call the aid of several trained snakes.

Gangs

Gangs are the dominant street-level power. Permanent residents usually join gangs as an alternative to working as drones in the factories or becoming drifters. The typical gang member briefly worked as a drone, was fired for absenteeism or quit while still a youth, and had the ruthlessness or guts to find another opportunity. The gangs are highly selective, only taking those they believe are tough enough to be assets. Most gang members are between the ages of 10 and 20, as successful gang members graduate into the mobs and unsuccessful members die young....

Gangs are loosely organised, mirroring their more powerful mob counterparts but lacking the same clout, connections, or savvy. They are thugs, nothing more, seeking to control the chaos that is Underworld through intimidation and violence. "Better to be the victimiser than victim," is the typical attitude. They are always aware the power structure could turn against them at any moment, so having a reputation for violence helps solidify a gang member's position.

The gangs serve as lackeys to the mobs. If they didn't willingly serve in this role, they would have been stamped out long ago. Their relationship to the Mafia resembles the partnerships the Yakuza has with the freelance Yakuza (see page 214). The gangs are used to conduct certain proscribed activities; this way there is a measure of plausible deniability on the part of the employer. The Mafia use gangs to hit other families, hijack shipments of goods, and even kill rival family members. This symbiosis with the powerful mobs gives the gangs a modicum of power.

The Yakuza and Mafia will often cultivate relationships with the more successful gangs. Those "connected" outfits enjoy a certain unofficial protection from their patrons (who may also provide them with extra weapons, gear, or intelligence). Up-and-coming gangs aspiring to conquer territories within protected areas might unwittingly run into a stronger force than anticipated if they encounter a gang with close mob ties. On the other hand, if a gang is unsuccessful or is simply unknown, most mobs won't lift a finger to help them in any way. There are many small gangs in Underworld 9, and their names and territories are always mutating as a result of wars and take-overs.

Gangs typically do not maintain any permanent establishments, but do mark out a territory of sorts. As long as they don't show any weakness, this territory is honoured by other rival gangs and those drones and drifters unfortunate enough to live within it; mobs and corporate employees, however, ignore gang territories, considering them to be petty distinctions of an irrelevant social stratum.

Two of the more stable gangs are described here. GMs are encouraged to create additional gangs — there's plenty of real-estate in U9 to go around.

Razor Saints

One of the reigning gangs in U9 is the Razor Saints. They are known for their viciousness, lack of fear, and odd preference for edged weaponry. They prefer bladed weapons of all kinds, due to their intimidation value. Firearms are used when necessary (they aren't foolish enough to use knives if the opposition is using guns) but when it comes to a street fight or finishing an enemy off, the more brutal the slashing, the better.

Another distinctive feature of the Razor Saints is their metallic cyberarms. To become a member, a potential initiate must have his or her primary arm removed by a sponsoring member — using a favourite edged weapon. The limb is lopped off without anaesthetic of any kind in the presence of a council of 10 other gang members. The potential initiate is left to bleed until he or she passes out. When he or she wakes, the arm will have been replaced by a cyber-enhanced limb. Members traditionally give up their names then, and adopt a name given to them by the gang.

Razor Saints are never allowed to disguise the cyber-limb in any way. Even wearing long sleeves is prohibited; members remove a sleeve from all clothing to show it off. To cover the limb at any time with either plasti-skin or dress is an affront to the gang. Serious offences such as this are punished by having the cyber-arm lopped off, followed by banishment from the gang.

The cyber-arms used by the Razor Saints are faster and stronger than their organic predecessors, making Razor Saints formidable opponents in hand-to-hand fights. Many members train their off hand to wield a projectile weapon, vowing to only carry an edged weapon with the cyber-arm. While this is a custom, it isn't a strict rule; many members find firing a heavy-calibre weapon in their off-hand difficult.

The Razor Saints are a large gang, with a near-military hierarchy. Rank within the Saints is easily identified by the colour of a member's cyber-arm. The lowest members have dull steel or rust-coloured arms. Those of higher rank have brass coloured arms, who are overseen by silver arms; a small circle of lieutenants have gold arms, while the leader bears a gloss black steel arm.

The preferred edged weaponry among the gang's members varies greatly, ranging from simple hunting knives, straight razors, and butcher's cleavers, to ancient swords and axes. Top ranked Saints may carry exotic weapons, such as monowire whips and phase-katana. Members often like to build a reputation for their prowess with a particular weapon as a matter of style. As an example, the gang's current leader, Mercury, has used his phase-katana since he claimed it in a bloody initiation.

The Razor Saints will spontaneously host poker tourneys and other games of chance to make a score or set up a quick all-night party involving drugs and prostitutes, but these dissolve just as quickly to avoid the ire of the mobs. Most mobs turn a blind eye toward this sort of thing as long as it stays small. It is not too damaging in the long run, and they get a cut from the gang that runs it. Gangs that don't kick back cash to the mobs usually find their next venue broken up violently.

The gangs make a steady, albeit lean portion of their money through direct extortion of residents that live within their territory. It isn't as profitable as such enterprises tend to be on the outside, but then drones just don't have much wealth. Again, this money is split with any mob whose territory overlaps theirs; failure to pay incites mob retribution. Sometimes, to supplement their extortion racket, they will sell drugs such as Tri (purchased from the Biting Serpent Yakuza) or Betacaine. This can lead to new trouble with existing mobs, but nothing that a little quick-paid cash can't fix.

The Saints dominate many gangs beneath them, getting money from them as the mobs get their money from the Saints. Many of the smaller gangs are resentful of this arrangement and hope to overthrow the Saints one day and become top dog themselves. Luckily for the Saints, this would probably take a coalition, and most gangs are too selfish and power-hungry to band together successfully. As it stands, the Saints take great pleasure in the bloody destruction of those gangs that encroach on their territory. In fact, the Razor Saints frequently taunt smaller gangs into fighting just to satisfy their bloodlust.

Other than these dealings, the Saints are involved in an open war with the elusive Bloodworms (see page 205). The Saints have lost about as many fights as they've won, giving as good as they got but never gaining an advantage. The Saints have tried to engage the help of the Genovese mob, for whom they have done many favours, but the family considers such squabbling far beneath their notice and has refused aid. The Genovese also know that the Bloodworms are pets of the Bone River clan, and would like to avoid starting a mob war over something so petty.

Mercury (Black Arm of the Razor Saints)

Mercury accepted the black arm signifying his rise in rank only four years ago, but has proven to be a capable leader in that short time. His gang has moved to prominence under his direction, cutting down the smaller gangs that threatened their rise to power. Since then, Mercury has met with resistance from the Bloodworms, whom he considers a frustrating enemy that must be eradicated as quickly as possible. He has tried on several occasions to elicit the help of Michael Genovese to meet this end, but the Don has thus far been reluctant to get involved in activities he considers far beneath his station. Don Genovese has denied any audience with the gang leader concerning this matter. Mercury resents the Don for his aloofness, but still conducts profitable favours for the Don when he calls.

Mercury is an unattractive man. His dull eyes sit far in his skull, giving his puffy face a doughy appearance. His cyber-arm is purposely conspicuous, unusually twisted and lumpy, thus resembling the limb of a great gnarled oak tree. It was designed by Kanya #49999, a renowned cyberware artist. Between the freakishly awesome arm and his unhealthy appearance, he is a frightening individual. Mercury cultivates a mysterious disposition that renders his moods unreadable. Many people have mistaken his levity for anger and vice versa — a potentially deadly mistake, and one he encourages among his enemies.

Mercury's arm is one of the strongest made to date; with it he could easily heft a car over on its side. He carries with him his favourite phase-katana, a weapon with a glowing indigo edge. Mercury likes to dress in a black armoured trench coat, with matching body armour and leggings. See Sample Characters, page 245.

Thermite (Gold Arm of the Razor Saints)

Thermite is Mercury's lieutenant and right hand man. He attained his position through successful trials of strength against the former gold arm, Grave. It is not common for such a trial to end in the death of an opponent, but Thermite was bitter enemies with the former gold arm and sought to kill her from the outset. After several unresolved conflicts between the two, Mercury called for a one-on-one combat to settle things; Thermite killed his predecessor after four gruelling hours of fighting. He severed the arm of his adversary and tied it up above the doorway of his quarters, however, as a show of respect for her.

Thermite is short compared to the other men of the gang, but he makes up for it in strength and cunning. Like a powerful animal, his friends and foes alike give him a wide berth, knowing full well his capability as a combatant. He has replaced his hair with thousands of glowing fibre-optic cables which fade and shift in the dark — a simple chip allows him to change the colour, brightness, and pattern of the light show on his head at will. When attempting to be stealthy he turns the lights off altogether. He is so proud of his station that he underwent a double-limb replacement: Mercury severed both his old silver arm and the meat arm in the same ceremony. Thermite nearly died in the attempt, but now bears two golden arms that he shows off with pride.

The Bloodworms

The oldest and possibly most infamous gang in Underworld 9 is the Bloodworms. They are known for their ability to appear and disappear from the shadows with almost supernatural speed. They prefer ambushes and hit-and-run tactics to frontal assaults. This elusiveness frustrates their opponents, giving them an even greater edge.

The Bloodworms' stealth is achieved through intimate knowledge of U9's system of sewers and half-forgotten tunnels. Bloodworm members have devoted many hours to mapping this labyrinth, and protect this information ferociously. They have booby-trapped many of the tunnels against intruders; other gangs who try to enter inevitably find themselves the victims of cave-ins and explosions.

Naturally, if the traps don't get the intruders, Bloodworm ambushes will. They strive to pick off enemies until their foes' numbers are diminished enough to take them down in a full assault. No gang or other organisation has successfully mapped the full extent of the tunnels beneath the Bloodworms' territory, or has anything close to their knowledge of it; additionally, the Bloodworms will perform small feats of engineering to continuously modify the region.

The Bloodworms' most distinguishing features are their inky black skin and bright white tattoos. Upon inception, gang members are required to undergo biotech modification, using a subdermal pigment manipulation process that changes their skin to a pitch-black hue. This helps the members, who also habitually dress all in black, to move through the shadows undetected.

While the subject of their tattoos is up to individual, a member must get all ink in phosphorescent white, which dimly glows when exposed to light. This differs from the Yakuza's bio-luminescent tattoos, in that the phosphorescent tattoos will fade to black if not exposed to light — this allows the gang members to move through the shadows without giving themselves away. When it's time for socialising or having an old-fashioned fight, however, the gang members will charge their tattoos with bright lights before going out in order to proudly show off their glowing body art. In addition to their body modification, new members are also expected to volunteer as a hunter in a game of Lab Rat (see page 244) within a few months of joining. A new Bloodworm is not fully respected until he or she has performed this rite of passage.

Like the Razor Saints, the Bloodworms have no fixed holdings; their territory is honoured only by other gangs and residents. This is where the similarity between the two gangs ends. The Bloodworms have devoted many hours to mapping and maintaining Underworld's underground, the labyrinth or "Lab" as they like to call it. They know every underground nook, turn, dead end, and connection within about 50 square kilometres of U9. They roam sewer conduits (invariably in disrepair), forgotten subway tunnels, caved-in roads, basements, and even

abandoned underground buildings; the leaders maintain their headquarters in the best of these ruins, and move amongst a half dozen locations constantly to confuse enemies. The Lab is their home, and they foray out only to make pick-ups of cash, food, drugs, and to unexpectedly pop up to hit their enemies. By the time a response can be mustered, the gang has usually vanished back underground.

The Bloodworms are also known for their signature game of chance, which they fondly refer to as "Lab Rat." Roughly once a month, the gang will foray out and kidnap 10-30 individuals, randomly arm them (with an assortment of cheap knives and guns), and throw them into a special part of the Lab, known as the Maze. The Maze refers to section roughly 10 square blocks in size; it contains the deepest sewers, and numerous abandoned industrial buildings. This section is booby trapped with explosives, pit traps, remote auto-fire drones, and other surprises. Several heavily-armed Bloodworms also roam the Lab, hunting the contestants. Bets are placed on who will last the longest, or even make it out (such Rats are then released). Their progress is monitored via a series of internal cameras, and the feed is broadcast to a wide audience that has gathered in a reconditioned warehouse for the show. Few ever escape.

The game can bring in a tremendous amount of money, as word of its existence has grown and it has become rather popular. The observation warehouse is open to all visitors, though guarded heavily by the Bloodworms. Rumour has it that corplords will descend from their glittering towers to observe the games. The survivors (which often means the individual or group who lasted the longest), if any, are given a winner's purse of a couple of hundred U-dollars and allowed to keep any gear they might have acquired. Recently a couple of Razor Saints were killed in a Lab Rat tournament, which threatens to further escalate the ongoing hostilities between the two gangs.

The Bloodworms are locked in a constant back and forth war with the Razor Saints. Neither side has gained any real advantage over the other. The Bloodworms are also a favourite tool of the Bone River clan Yakuza. The River normally use freelance Yakuza, but when a particular job comes up that demands absolute deniability and efficiency they call upon the Bloodworms, who have proven themselves time and again.

Other smaller gangs that dwell above the Bloodworms' territory are left alone for the most part. They know full well that they will be wiped out at a moment's notice if they get cocky, and so they maintain a low profile, scratch out a small living, and remain happy doing it. Smaller gangs who show outstanding prowess and conduct — and kick back a significant share of cash — are asked to join the gang and become full Bloodworms themselves. Most consider this an honour; the gang has no lack of recruits.

The Minotaur (Leader of the Bloodworms)

James "the Minotaur" founded the Bloodworms and has held the reins of the gang for seven years. No one has challenged him for this position, for his followers respect the power, wealth and renown he has brought them.

James was a drone labourer who managed to survive the manufacturing pits and escape their putrid conditions. He wandered the streets in a feverish haze, facing starvation and unable to secure any work. Dark luck smiled upon him however, and he happened upon a deep hole in a derelict warehouse. There he discovered the extensive tunnels that snaked beneath U9.

There were many forgotten secrets down there, among them a cache of Century Food's deep-packed foodstuffs and an old weapons drop. James regained his strength over time and armed himself with an archaic but deadly array of gear. He spent the next year mapping the tunnels, killing anyone he stumbled across, including a nest of drifters.

Once he felt confident enough to expose himself, he began to recruit from smaller gangs, stealing members away with promises of mysterious treasures that lay beneath the slums. As his numbers of followers swelled, he grew bold and began to snuff out the weaker gangs. Now he is a feared force in the circles of U9, commanding hundreds of members scattered throughout the kilometres of tunnels they live in.

The Minotaur has undergone subdermal pigment manipulation to make his skin unnaturally black. On his chest he bears a wide tattoo of a forward-facing bull's head. It blazes to life once charged in the light, and Minotaur fights bare-chested to show off this spirit totem. James has had two stainless steel horns surgically implanted into his head, the tips of which have been honed to a lethal sharpness. A favourite tactic of his is to shoot out his opponents' legs from the shadows and then charge, goring them when they are down.

Billy "Boa" (Lieutenant of the Bloodworms)

Billy "Boa" loves his freedom. He despises the factory work-pits of his youth so much that he would kill the whole population of U9 rather than go back. Billy is an unpredictable soul, doing whatever he pleases, whenever he pleases, as long as it strikes him as fun. Most would call him wild, but Billy believes everyone should embrace this lifestyle; following rules makes you a slave. He likes to pick fights with rival gangs, but also knows when to run. His wounds are badges of honour, and he loves to tell stories about his battles to anyone who will listen.

Boa's skin is as black as tar, with a striking full-body tattoo over it. Billy has opted for a giant snake wrapped completely around him; the tattoo extends up over his bald head and is painted on his face to appear to be opening its fanged mouth around his eyes and jaw, as if he is the snake himself. The tattoo is one of the most remarkable in the entire gang. True to his namesake, Boa likes to strangle his opponents, coming up from behind and choking them to death with a wire garrotte.

Mercs and Opportunists

These are the liaisons between those in power and the dregs of society. As middlemen, they profit both from that which rises and that which falls to the dark depths beneath them. Those that are successful are often pitiless in their dealings, since they know the average bottom-feeder would gladly kill for the slightest opportunity to replace them. They are the people doing the work of the power players that control Underworld. They profess no ideology but money and sometimes a degree of loyalty, although their corporate or mob bosses see them as little different from the drones They are perhaps more deserving of higher pay and a certain modicum of respect, but only that which is due to a useful tool. In practice, however, there is one big difference between them and the drones: they are free to leave U9 after their tour of duty ends.

Corporate Professionals

Various skilled technicians, computer programmers, cyber-surgeons, executive secretaries and researchers work in Underworld 9, performing jobs that are beyond the training level or security clearance of the typical drone. The professionals most commonly encountered by the bottom feeders are the cyber-surgeons that implant, remove, and repair cybernetic technology, such as cyber limbs, eyes, ears, and the ubiquitous CC-chips.

Corporate professionals serve in the Underworlds for various reasons. The primary goal is money, for Underworld posts are well compensated with danger pay and high bonuses for successful project completion. Others sign up for a tour because of the rush — the exotic vices of the Underworlds are coveted by the corps executive who has "done it all." Finally, some are sent to Underworld as punishment for serious infractions; this is their one shot at redemption.

A small but significant fraction of professionals earn additional income in various illegal activities, such as cyber-surgeons working in black market scalpel shops for the Yakuza, or computer techs assembling I-chips for the Mafia. Some of these are ex-corporate employees who choose to "go freelance" after being fired for some indiscretion or incompetence (amd ,ay not have a way out of Underworld). Others went into debt to the mob due to a gambling, drug, or chip doll habit. A few retain their corporate jobs, but just earn extra money moonlighting.

Troopers

These are the fingers on the naked fist of authority. There are two main types: corporate security troopers ("underdogs") and the American Empire's own military.

Corporate Security Troopers (Underdogs)

The three major corporations operating in Underworld 9 each have their own private security forces. Anubis Security for Anubis FLC, Imperial Security for Imperial FLC, and the Praetorian Group for Augustus FLC. They are collectively known to the average Underworlder as "underdogs" or "screws" and uniformly despised — an attitude they are happy to return in spades. A few freelance Yakuza and other gangs also run their own security services for individuals or groups seeking bodyguards or protection.

The standard corporate rent-a-thug is a moderately experienced, hard-nosed front-liner, a mercenary trained in basic weapons and tactics (although no match for the elite Marine units on the walls). Stateside security personnel generally despise Underworld duty and have found themselves stationed here because of some infraction; they much prefer the more comfortable posts at corporate headquarters when they can get them.

Underdogs are ranked in military fashion according to position — captain, lieutenant, sergeant, trooper. The captains and lieutenants are usually corporate appointees, while the sergeants and troopers are field-experienced mercenaries, typically with a police, security, or military background. This can cause some tension between the two groups. Each corporation in U9 also has a chief of security (sometimes titled security director) in charge of all the company's underdogs. Due to the importance of security in the Underworlds, he or she is usually ranked second or third in charge of the company's Underworld operations.

Some of the underdogs are corporate employees from the various multinational's subsidiaries in the United States, Japan and Europe. Perhaps 15% are Thai nationals (usually former Royal Army or police officers whose loyalty to the puppet regime is secured) who join up for better pay. These usually have a subliminal resentment at the foreign occupation that they tend to take out on anyone who crosses them.

In Underworld 9, the underdogs are stationed at numerous locations, including the U-rail (see page 233) routes, where the trains run inside the city; at gated facilities, such as the hotels and residences where the elite live; and at all manufacturing plants. Corporate street patrols are not uncommon, usually 10 to 20 strong; their goal, however, is to show a presence and keep the locals intimidated rather than to maintain any kind of law and order in the streets.

There are a total of about 5,000 underdogs in U9 — roughly 1,400 for each of the three major corps, plus 600 or so freelancers or private security outfits that work for other firms. (The line between these and freelance Yakuza is often blurred.) This leaves them heavily outnumbered by a population whose hatred is only exceeded by its fear of reprisal.

This fosters a paranoid, under-siege mentality among the underdogs. Afraid of showing any weakness, they will routinely shoot first and ask questions later. They also regularly patronise the various vice establishments (usually in groups), and some officers will supplement their income by forcing criminals to pay protection or provide freebies. On the other hand, even the underdogs are frightened by a few of the more pathological gangs, notably the Pack, and try to avoid situations where they might come into conflict without major backup and overwhelming force.

Gang members and criminals will rarely target underdogs, since the security agencies are known for savage reprisals. Even so, underdogs are still killed from time to time (occasionally deliberately, but often because they were in the wrong place and weren't recognised as off-duty officers). When this happens, the security firms will sometimes approach local gangs or criminals in the area and give them 24 or 48 hours to turn up the responsible agent; failure to comply inevitably results in a crack down. The gangs and criminals resent this, but there isn't much they can do about it.

The US Military

The military are in charge of protecting Underworld 9 from external threats and tracking down anyone who escapes over the walls. They also intervene in the instance of a major uprising, but otherwise let corporate security handle things.

Underworld 9's garrison is a joint-service command, currently led by a United States Marine Corps colonel. The main forces under his command are Marines, but there are also divisions of Navy, Army, Space Command and Special Operations personnel. Since many of the factories in U9 are engaged in the production of strategic and defence products, various military VIPs visit to see demonstrations of new R&D prototypes in action.

The soldiers assigned to U9 generally do a six-month tour of duty. They find the duty boring since they are rarely challenged due to their heavy weapons and tactical training, while their duties keep them on the walls and guarding the government buildings and airport. Marines will often take weekend passes to enjoy the various vices found in the city, travelling in rowdy groups. Since they are paid in world dollars rather than U-dollars, they are welcomed by the locals and the mob, who are also happy to overcharge them whenever possible.

The Marines tend to be contemptuous of the corporate underdogs, while the latter resent the Marines and SEALs combination of better gear and relatively quiet duty. Brawls and confrontations are common whenever the two groups come into contact. This can lead to nasty confrontations should the Marines or SEALs run into situations that require co-operation with the underdogs (such as a kidnapped VIP), or if off-duty troops visit a bar or brothel frequented by their rivals.

Bureaucrats

The bureaucrats are the middle managers that are stuck on duty in Underworld, though most aspire to ultimately ascend to the glittering spires of the corplords or government. All are transient citizens rather than permanent residents. They work in U9, but after a hard day monitoring production schedules from their air conditioned offices in the factory complexes, they can look forward to a commute back to a gated community in Bangkok (half an hour by U-rail) or a weekend vacation in Hong Kong, Los Angeles, or Tokyo. The most stressful part of their lives is the half-hour to hour-long commute in an armoured company car from the factory or lab complex they administer to the U-rail station. They make sure the windows are shut, and they travel in convoy with underdog guards.

Many bureaucrats hate their terms in Underworld 9 for a number of reasons: the squalor of their surroundings, suppressed guilt, or fear of the brutal gangs and drone uprisings. A few look on it as an opportunity. It is common for factory bureaucrats to select one or more attractive drones to be their "personal secretaries" and keep them as sexual playthings. Also, the danger pay is lucrative. Others prefer to enjoy the many vices available on the streets. There is also plenty of opportunity for corruption; this usually involves providing inside information on





factory shipments, warehouse security, or the like to syndicate or gang members in exchange for various payoffs, favours, or occasionally a mob-facilitated promotion, where a hated boss or rival is made to vanish.

Remote Posts

Some GMs might prefer a much tighter controlled Underworld. In this variant, bureaucrats serve terms more akin to a military field post than a suburban commute. If the salarymen go home every day, it may appear that the walls aren't high enough. Instead, Underworld posts could include living accommodations, and corporations would have "gated apartments" within Underworld itself; the staff would be posted for 6 to 12 months, expected to survive and turn a profit. Underworld positions would be seen as punishments, yet also provide tremendous advancement possibilities, for anyone who survives has been hardened into a true, Machiavellian politico. GMs need to decide how open Underworld is, and whether there is a true chance of escape ... and whether anything better awaits outside.

Corporate Middle Managers

Corporate middle managers are responsible for on-site manufacturing plant supervision. These managers are charged with the responsibility of overseeing the many mega-factories, manufacturing plants and labs that dot the landscape of Underworld 9. The largest facilities have several thousand drones; even with computerisation of many functions, it is still common for there to be a hundred or more managers assigned to make decisions and troubleshoot problems, ranging from lofty department heads to junior floor supervisors who must sometimes deal directly with the labour force. Most middle managers dream of their promotions, anxiously awaiting a time when they can join their fellows in the corporate towers and leave the manufacturing hell far behind.

Some managers also serve as security force commanders, directing the underdogs to guard the plants, crack down on any unrest, and ensure that any drone insurrections are put down quickly and effectively (that is, without undue damage to product or machinery). Veteran underdogs who have attained their rank through paramilitary service instead of the "soft" paths of the corporate world often resent the middle management commanders on duty, and see them as weak and simpering. This leads to internal tension with life-time security personnel, but rank ultimately settles all disputes.

PRIDE Managers

Another type of manager are those bureaucrats employed by PRIDE, the US government program that administers U9 and the other Underworlds. They are in charge of the transfer of new prisoners (although no new convicts have been added to U9 in over a decade) and maintaining the overall infrastructure of U9 — roads, sewage, the nano-cloud, and so on — as well as basic educational services and nurseries for drones. In practice, most of these services are subcontracted to the various corporations who operate in U9, but there are still a few hundred bureaucrats working for PRIDE who are stationed in U9 itself. They are usually quite harried, for they are caught between the military and the megacorporations.

PRIDE managers are also responsible for the direct liaison between U9 and the Thai government. This is mainly concerned with the security of the U-rail line that leads 120 km south, past Bangkok, to the coastal sea ports.

The Media

To the inhabitants of Underworld 9, a free press is a bad joke. In the tradition of the previous century, the media is the willing lap dog of the corplords and the government. The actual media outlets that "broadcast" (an outdated term that has stayed within the largely-digital industry) disseminate extremely biased views, lacking objectivity and even truth.

A few powerful news and entertainment companies control most of the market share. The biggest conglomerate is Imperial FLC, closely followed by Mayfair Inc. Both use the CC-chip as their primary means of disseminating their product. While there are free-standing monitors available for "in-home" use that pick up the broadcast, the CC-chip allows for programming to be directly experienced through the brainstem in multi-sensory experience. Further, Imperial FLC allows their chip to be used as a governor and stimulant for companies that buy premium services, such as Augustus FLC. The stimulant is a horribly painful experience, but gets the job done when Augustus needs workers to toil when they are otherwise too fatigued to do so.

Local News Media

There are two sorts of media personnel operating in Underworld 9. The first is the local news media, who are corporate employees. Their main job is to raise the morale and productivity of the drones by reporting on various events such as high levels of worker productivity and the various successes of a plant or company. Occasionally this means interviewing factory drones (who will be appropriately positive if they know what is good for them — or else they'll be punished, and the story edited so heavily as to be unrecognisable), but most often takes the form of repackaging the company's press releases into appropriate pabulum. The news media delivers far more propaganda than actually useful information.

Many CC-chip channels are restricted and unavailable to ordinary Underworlders. As a result, the average Underworlder remains woefully ignorant of real issues and is often intentionally misled as to world events and general news. An ignorant populace is a malleable populace.

Outside Press

The second type of media personnel are reporters from the outside world who are visiting Underworld 9 in search of a story. PRIDE or the military are the only ones who can grant press passes. Just as little information of the outside world is allowed to filter into Underworld, so is little uncensored video of Underworld allowed to be transmitted beyond its borders. In most instances, the only people likely to get press passes are reporters who are (at least ostensibly) here to do stories that either show the military or corplords in a good light (opening of new plants, promotion of executives, successful production quarters) or that focus on sensational elements (violent street crime, lurid murders, etc.), which not only appeal to the consumers but also demonstrate that continuing security and repression are needed.

In practice, both the military and the corporate overlords of U9 are far from monolithic. A reporter who convinces Augustus' PR office that he or she has a story planned on corruption in the rival Imperial FLC corporation has a chance of getting a pass and some covert co-operation from Augustus in smearing the rival corp. Even so, the only truly uncensored information that escapes is through the few independent journalists who illegally broadcast footage from within the walls of Underworld These individuals risk life and limb, since few corps will scruple at arranging their disappearance. Aside from these brave souls, the sad fact is that the majority of the media exists solely as a means to help control the Underworlders through propaganda and misinformation to ensure they continue to labour unquestioningly.

Keeping it in Underworld

If all of the player characters are native-born Underworlders, they may have little to no idea of the true state of the world beyond Underworld 9. The GM can use media control to help set the tone and direction of the game. If they suspect the outside is far better, their primary goal may be to find a way to escape from U9. If they are led to believe the rest of the world is no different than Underworld 9 or perhaps worse – ravaged by war, terrorism, or plague or completely under the corporate thumb, without the anarchy that gives some measure of freedom within U9, they might choose to stay. They might also give in to despair, however, if they have nothing to live for. Either way, the quest for the real answers – and spreading this truth to those who still remain snared in lies and propaganda – can be a powerful campaign theme.

Complex 332 Reaches Quota Early, Breaks Record

Data Node: 1873.671.43>>9347.53>imp8475... newdatastream >>>>>imperialflc>>>news>>>uworld12>>central.progress... ... 06:32:44UTC:

Shift blocks 22, 38, and 44a in Underworld 12's Complex 332 reached full production quotas an impressive one hour and 15 minutes ahead of schedule, breaking the previous record of 45 minutes. Floor workers were given the extra time off to rest before second shifts began that day. Complex 332 is an example to the rest of U12 of proper work ethic and dedicated professionalism.

CEO and President of Rainbow Toys, Inc., Rosalyn Blum, said of the production record, "The workers of 332 should be proud of themselves. We are all in this together, and they have demonstrated the team spirit necessary to overcome any obstacle placed before them. Way to go, team!" In response, Michael #7546, the line foreman in block 38 said, "We have been trying to break that record for six months now. We're really happy to have done it. Now let's see if anyone can beat our record." Michael #7546 went on to say that he was excited to hear that the CEO knew of their accomplishment and hoped he could meet her in person someday. An appearance by the CEO to Complex 332 is scheduled for early next week.

>>>Full CC streams restricted>>>tenth tier members re-direct to... >>>u12.central.progress.chipstream11586 for pass-scan<<<

Philippines: Sixteen Killed in Explosion

Data Node: 158.964567>>346.546>may2865... newdatastream >>>>>mayfairinc>>>news>>>world>>s.eastasia>philippine.mindanao.rebellion... ... 05:44:38local:

Today an explosion ripped through the market district of downtown Mindanao. 16 were killed, including two Marines, and 48 were injured in the blast. In a letter sent to Prime Minister Beckenworth, a fringe group calling themselves the Philippine Liberation Front (PLF) took responsibility for the bombing, promising that more detonations were planned for the future.

The reason cited for the explosions was the perceived presence of over 9,000 US troops stationed at various bases across the country. The group called for an "immediate removal of all US armed forces from the Philippines." The Prime Minister joined President Shelley in denouncing the attacks as the work of madmen. "The United States does not now and never has maintained any military bases in the Philippines," assured Shelley. "The loss of innocent lives is a loss to us all, and these insane criminals will be swiftly brought to justice."

>>>For full CC streams and updated information re-direct to ... >>>philippine.mindanao.rebellion.chipstream65464<<<

Organised Crime

The term "organised crime" is a bit of a misnomer, given the lawless nature of Underworld and the fact that all permanent resident citizens are, essentially, inmates in a giant prison. Nevertheless, the term continues to be used by the media and government to refer to those individuals and syndicates that break the rules set down by PRIDE and the corporations that work within it.

Organised crime flourishes in the lawless Underworlds, growing like weeds amid the cracks in the corporate power structure. The regimented hierarchy of the corps left many people with no legitimate means of social mobility or self-protection. In order to survive and prosper, ambitious individuals formed criminal gangs, and the most successful of these coalesced into larger "families" or syndicates.

When the Underworlds were originally built, it was common practice to ship the more incorrigible local elements out of the country, exchanging them for foreign criminals. In this way criminal networks were broken up, making it harder for them to stay in contact with their brethren outside. Thai criminals were shipped to the Underworld in the Central Asia, while American and Japanese criminals were shipped to Underworld 9. Unfortunately, the transplanted criminals proved a hardy species who thrived in their new environments. Underworld 9's own underworld is now dominated by Japanese and American gangsters; there are now Thai gangs in Central Asia, and Russia-American Mafia in Africa, and so on.

In Underworld 9, the most successful syndicates are derived from American Mafia and Japanese Yakuza criminals that were exiled to U9 from US or Japanese prisons (in exchange for the most successful Thai, Vietnamese, Cambodian, North Korean, or Chinese criminals). Even so, these days most members of the supposedly

ethnic syndicates aren't related by blood — the average low-level Yakuza enforcer is as likely to be a U9-born TV baby or descendant of a Thai dissident as Japanese. They nevertheless still take some traditions seriously, and apply them — albeit filtered through what passes for popular culture and institutional memory.

The most senior levels of the various groups retain a degree of ethnic snobbery. If you want to be a Mafia godfather, it can helps if you can claim your grandfather was shipped to U9 from New Jersey rather than Pyongyang, even if the average Underworlder couldn't tell the difference. Senior members of the mobs will emphasise this, even if born in Underworld 9, replacing their assigned names (for example, Chat #93476) with names that reflect known or guessed ancestry (perhaps, Ishida Akira).

Syndicates concentrate on the age-old arenas of gambling, extortion, prostitution, and drug sales. While most such vices are not illegal in Underworld, mob bosses often clash violently over distribution territories, control of drug-making facilities, and possession of quantities of the drugs themselves.

More recently, the syndicates have expanded into the lucrative sale of more exotic food sources such as human meat, both foetal and adult. The population has grown so great that some have resorted to cannibalism as a source of vital protein — indeed human meat is cheaper in Underworld than traditional vat grown meat masses like beef and pork, which are treated as delicacies and are sold for outrageous prices. Organised crime has also found a market in the sale and installation of used cyberware and data plugs (this echoware is often acquired from those who didn't pay their debts on time). Particularly lucrative are sales of the Illusion Chip or "I-chip" (see page 238). The majority of these goods and services are stolen from corporate warehouses or factories, usually through careful bribes or blackmail applied to bored or cash-strapped middle managers.

Organised crime tries to stay out of the way of the military. Their relationship with the corporate security underdogs, however, is more complex. Sometimes it is a direct conflict, such as if syndicates attempt to steal goods from a warehouse or shipment and the corps discover who was responsible and hit back. Other times it is a more symbiotic relationship, as underdog troopers, sergeants and lieutenants will often make deals with mob counterparts, promising to lay off (or raid competitors) in exchange for payoffs. There are often several deals going on at once. Sometimes wires cross and blood flows, as the mobs balance conflicting pressure from rival corrupt officers in enemy corporations.

One area where it is difficult for the mobs to exert pressure is travel in and out of Underworld itself. PRIDE and the US military rather than the corporations are responsible for transfers and status-changes, and these are rarely granted. Heavy bribes can allow a syndicate member to be transferred to a different Underworld, but escape is something that would require either astronomical bribes or destructive blackmail of an official in the highest echelons.

The Mafia

The American Mafia or *La Cosa Nostra* ("this thing of ours") remains one of the most colourful and fascinating crime syndicates of all time. The Mafia has a number of families in U9. They do not regard each other as easy allies but tentative ones, and sometimes blood feuds have ignited wars. For the most part, they assist each other only when rival mob outfits such as the Yakuza move in on their collective territories or businesses, lending muscle where it is needed and always for a price. The families themselves are constantly looking for ways to expand operations. Even while assisting other families, they will be seeking weaknesses that they can later exploit. Their connections with the American Mafia outside the Underworld is tenuous, with the U9 Mafia having a similar, estranged relationship to the American Mafia as it does to its Sicilian parent.

A typical Mafia family's hierarchy is a straightforward chain of command. At the head of the family is the boss or don, who has the last word on any subject. Second-in-command is the underboss. He or she (the U9 Mafia tend to be equal-opportunity criminals) is responsible for the oversight of day-to-day operations; all reports come to the underboss, who passes them along to the boss.

After the underboss is the *consigliere* ("counsellor"), usually a canny veteran who closely advises the boss on matters of strategy, and whose shadowy presence may even trump the underboss in a specific matter. After the *consigliere*, are the *caporegima* or capo ("captain") — there are several capos, each leading a crew of a few dozen soldiers underneath them. The soldiers are the rank-and-file members of the Mafia; their roles are to enforce discipline over members of the family and non-members through force, intimidation, and murder, and to handle the day-to-day business.

Finally, there are the associates of the family; these are individuals who are not direct members of the family, but seek to help them for personal gain. They are politicians, corporate administrators, corrupt underdogs, and the like at the upper end of the food chain, as well as connected gang bosses and hustlers at the street level.

The Genovese Family

The Genovese family controls a large section of the Mafia territories in U9. The Genovese's main market in Underworld 9 lies in the large circle of gambling houses they run, where they also offer prostitution services and peddle drugs — although they steer clear of Tri (see page 239). These gambling houses offer the typical games of chance, naturally weighted toward the house. These operations serve the interests of the corplords so they are rarely interfered with, though it is common for underdog commanders to attempt to muscle in by selling "protection" to the mob itself.

Genovese prostitutes — typically young drones seeking a life outside the factory floor — are a step above most of the local competition, for they are chipped to respond to digital input by their "users." These chip-dolls (see page 238) are controlled by remote signal to perform whatever acts their user wishes, their bodies mere sex puppets. With the help of neural cut-outs, the chip-dolls remain conscious during these acts, but are unable to do anything but watch themselves as if in a dream. On occasion, their black-market chips malfunction; the chip-dolls suffer seizure-like fits or even go on a violent rampage until they are forcibly put down. This hasn't deterred business.

A special feature of the typical Genovese gambling house is the weekly death match they call "Jokers Wild." Two individuals, chosen for their particularly tenacious or strong appearance, are abducted off the streets and pitted against one another in a specially-built arena. These arenas usually have some sort of hazard, like molten metal or a vat of acid, and are littered with hidden weapons, such as knives or single-shot rifles. This spectacle is a great money-earner for the Genoveses, who have been expanding the idea to multiple participants with greater arenas.

The Genoveses are currently at odds with the rival Oddo mob family. They have so far ignored the Dilibertis syndicate, whom they believe will wind up exterminating themselves in the long run with their cyberware dealings. The Genoveses greatly resent the Yakuza presence, as the Yaks have successfully gained control of both black market cyberware and the drug Tri. The Genoveses are working wherever possible to sabotage Yakuza deliveries and installations, but are taking care to do so in a subtle enough fashion (using gangs and deniable assets) as to avoid drawing blame and instigating a full-blown war, which would be too costly. That would only leave them weakened and vulnerable to the Oddos, who are always seeking to expand operations.

Prominent members include: Don Michael "Sterling" Genovese, Marco "Two-ton" Genovese (underboss), and James "Sicilian" Torrento (*consigliere*).

Michael "Sterling" Genovese (Don of the Genovese Family)

Michael Genovese came to prominence when his father was killed in a hit by the Bressi family, a family that has been deliberately wiped from the face of Underworld 9. When Michael took the family over he vowed vengeance upon the Bressi family, looking to kill every one bearing that name.

Knowing they faced extinction, the Bressi family devoted all their resources to fighting to survive, but to no avail. It took Michael two years before the last of the family was exterminated — Michael personally slew the last Bressi with a single gunshot.

In a final act of defiance, before he died the last Bressi shot Michael in the mouth. The angle was a lucky one, and only knocked out Michael's teeth. To commemorate the moment, Michael had a set of silver teeth cast as a replacement. To this day, he is known for his sterling smile.

Michael's silver smile shines from beneath a haze of smoke and shadow. He is always well dressed in dark suits with fur-lined collars. His choice in jewellery is subdued, yet elegant. Michael speaks in a deep gravely voice. He has short, dark hair and a well trimmed moustache; his black eyes resemble a night sky, and one gets the impression when conversing with him that his gaze is slowly devouring you. For protection, Michael carries with him two 9mm Vipers that are loaded with homing bullets.

Marco "Two-ton" (Genovese Capo)

Marco is first cousin to Michael Genovese and finds his leadership capable and effective. Marco has no plans to jump ship or change sides; he is ultimately loyal to Michael for so long as his leadership results in continued growth and prosperity for the family.

Marco relishes the power of dealing death. To date, Marco has killed over 500 men and women. For this, he wears a giant gold medallion given to him by Michael with the number 500 emblazoned in glittering diamonds. Also to commemorate the achievement, Michael gave him two gold-plated hand guns that he carries with him at all times, in addition to the arsenal he usually straps to his large frame.

"Two-ton" earned his nickname for his huge carcass of a body. Weighing in at a whopping 290 kg counting all augmentations, and standing 6'3", Marco is by far the largest individual in the Genovese clan. He can't move very quickly, but with strength enhancements, partial body plating, and targeting augmentation, he is a tank of a man who loves to fire a massive IAAS-12 auto-shotgun in battle.

Marco has a full round face and surprisingly cheerful appearance. Most people never guess at the blood-lust that lies beneath. He prefers to wear baggy clothes over his large body to better conceal the massive arsenal of weapons he has tucked away in his folds of flesh. His normal outfit consists of a massive trench coat, a billowy top, and baggy khaki slacks. See Sample Characters, page 245.

James "The Sicilian" Torrento (Genovese Consigliere)

The Sicilian came onto the scene shortly after Michael lost his father. James and Michael had known each other for quite some time in one capacity or another, but had never formally worked together. James was sentenced to life in Underworld for committing multiple murders in outside society. Upon entering the walls of U9, he approached the Mafia, knowing he would need powerful allies to survive. After several years of devoted service, he was promoted to *consigliere* by Michael.

What the Genovese don't know is that James was first found by the Oddos, who saved his life from the Pack. In return for his life, they took him on as a deep agent and saboteur. The Oddos pay James very well. He has no plans to betray them, for he owes them his life first and foremost. He has been promised a very powerful position in the Oddo hierarchy if he helps remove the Genovese stranglehold on U9. No one in the Genovese organisation suspects James, in part because of his overwhelmingly charming and charismatic nature.

James has sandy blond hair with a smile that is both sly and disarming. He is of average height and build, often leading his enemies to underestimate him. He is a ferocious fighter, proficient in all kinds of improvised weapons, be it bar stool, bat, bottle, or car door. James is a marksman with a sniper rifle and is used to fill in as support when he can't be in the thick of the fray.

The Oddo Family

The Oddo family also plies its trade in U9. While not as powerful as the Genoveses, they still control a significant number of gambling houses, bars, and prostitution rings. Even though they cannot find a supplier of the chip-doll control rigs, they do offer a wide variety of lucrative services at their wet rooms. The bulk of their income does not lie in flesh trafficking, however, it lies in the peddling of dreams — the Oddos specialise in the sale of I-chips and are the largest provider in U9 of this tech-drug. Their I-chips offer higher fidelity and greater duration, and sell for cheaper prices than their competition. They have learned how to copy and modify the Is to provide hallucinogenic and dreamlike experiences, an aspect other families have not matched thus far — though they would pay handsomely for such information.

The Oddos have a workable, operating territory in U9 for which their prostitution and gambling dens bring in a significant profit, but they also have production houses that manufacture the very lucrative I-chips (using components, machinery, and drones stolen from corporate warehouses). The soldiers defending these hubs have plenty of firepower, and they have successfully driven off raids by rivals.

The Oddos are engaged in a low-level conflict against the rival Genoveses, clandestinely sabotaging Genovese places of business and cutting off supplies when they can. The Oddos have not resorted to blatant hostilities, fearing a full scale mob war, but the Genoveses are suspicious of the recent attacks against them and may declare war anyway. If such conflict breaks out, it might weaken the Oddos enough for a rival organisation to pick off certain holdings.

To prepare for a war, the Oddos have negotiated a tentative pact with the Bone River Yakuza clan to help against the Genovese. The River is secretly leasing them the cyberware their soldiers need to tip the balance of power, but the River will not commit troops to a war that does not directly concern them.

The Oddo family is neutral to the Dilibertis and other syndicates. Nevertheless, neutrality within the realm of organised crime is a waiting game rather than a true peace — if any of the other syndicates were to display weakness, they would quickly pounce in an attempt to beat their rivals and seize new territory.

Prominent members include: Don Julian Oddo; Teddy "the Wrench" Oddo (underboss), Alana Biagioni (*consigliere*); Jeremy "22" Moran (capo).

Teddy Oddo (Underboss of Oddo Family)

Teddy, the youngest Oddo boy, has always been completely loyal to his older brother, Julian. He looks up to Julian and considers his decisions wise. Teddy sees his own position as a very important one — to protect Julian, no matter the consequences. Teddy is ready to take a bullet for his brother; in the face of danger, he will try to cover him with his own body so that Julian might live another day.

Teddy makes the perfect bodyguard; he has completely augmented his body in the belief of his role as protector. Through artificial muscle enhancement, he has increased his strength; he has added sub-dermal plating throughout his body in order to survive even direct hits from most firearms.

Teddy is a muscular man, his imposing presence further exaggerated by the angular plates that have been imbedded under his skin. He wears tight shirts to accentuate his massive figure; most people find the look to be less than fashionable, but only a fool would tell him this. Teddy often stands behind his brother, towering a full head taller, he looks over Julian's shoulder as a stolid protector. Teddy is clean-shaven with a close-cropped hair-cut; his dark hair matches his brother's. As a favourite weapon, Teddy loves to carry a flechette pistol.

The Diliberti Family

The third major Mafia family in U9 is the Diliberti family. While much smaller than the others in U9, the Dilibertis proved to be tenacious in their bids for power. They have lately avoided antagonising the other syndicates by adopting a non-aggressive posture, remaining content with the profits from their cyberware operations. They are less active in drugs and gambling, but are engaged in more cyberware dealings than the other two families combined and have been making substantial profit in this niche market. So far the Genoveses have turned a blind eye, as this particular business is usually Yakuza fare. They expect the Yak to eventually rub out the Dilibertis; if this fails to happen and the market grows much larger, however, other families might move to take it over.

When the Bone River Yakuza clan first learned that the Dilibertis were entering the business, they made their disapproval known, looting and burning a warehouse full of Mafia cyberware. Due to careful Yakuza disinformation, the Dilibertis never realised who hit them, instead blaming the Genoveses. It did weaken them temporarily, but since the Bone River stepped back for strategic reasons, it was the Biting Serpent Yakuza clan who moved in to claim the warehouse territory as their own, quickly erecting a gambling house. The Dilibertis are not happy, but have chosen to maintain a tentative neutrality with the clan; they are watching the Serpent-River war with interest, waiting for an opening that would let them regain lost territory and perhaps expand.

Aside from cyberware, the Dilibertis have also moved into counterfeiting. They have several warehouses in their territories that crank out stacks of the fake bills they love to use when buying from other syndicates. World dollars are extremely difficult to counterfeit, but the U-dollar is made much more cheaply and is a prime target for the family's operation. They have been looking for a way to successfully counterfeit world dollars, but every attempt has produced unusable results. If a successful procedure were brought to them, they would pay handsomely for it.

A notable establishment owned by the Dilibertis is the Trench, a famous bar in the circles of U9 where personalities of every stripe gather. Many rival members feel comfortable meeting there due to the family's well-known neutrality.

For the most part, the Dilibertis remain neutral toward the other syndicates of Underworld 9. The Bone Serpent Clan keep a close watch on the Dilibertis to see how far they will expand into the cyberware market — too far, and the Serpent might strike.

Prominent members: Don Anthony Diliberti; Christian "Endzone" Facio (underboss); Tia "the Flower" Paoletti (*consigliere*); Don "Spatula" Viaconi (capo).

The Yakuza

The word "Yakuza" literally means eight-nine-three (*Ya* meaning eight, *ku* nine, and *za* three) and derives from Japan's counterpart to the game black jack, *oicho-kabu*. The sum of eight, nine, and three is 20 — the worst possible hand that one can draw, a metaphor for the Yakuza's outcast status.

Two types of Yakuza exist in Underworld. Clan Yakuza are large family-run organisations with a great deal of power, while freelance Yakuza are smaller groups that work on their own. Occasionally the clans will enlist the aid of freelancers for operations in which they wish to deny responsibility. Freelancers are well paid; they are usually expected to associate with a particular Yakuza clan, but have been known to change allegiances (typically in exchange for great sums of money). This can trigger a clan war unless things can be smoothed over through inter-clan negotiation, or sometimes the eradication of the freelance group, should their new patrons decide to sacrifice them as a means of saving face.

For hundreds of years, the Yakuza have been recognised by intricate tattoos, often covering their bodies. The Yakuza of Underworld use expensive multi-coloured bio-luminescent inks for their body art. Great blazing dragons streak across backs, and fiery tigers stalk along forearms. The tattoos are not put in exposed places such as the hands and face, but occasionally this guideline is overlooked and a member will have a fierce mask tattooed on his or her face, or glowing characters on their hands to inspire fear in their enemies. When a group of these gangsters exits a dark alley or bar, their tattoos ablaze in an fierce display of bravado, it is enough to make even the most hardened Underworlder think twice before challenging them.

A typical Yakuza clan's hierarchy is divided as follows: The *oyabun*, or "father," runs the clan with an iron fist — all members answer to the *oyabun*, and his (or far less frequently, her) say is absolutely final in all matters. Under him are three seats: the *saiko-komon*, his advisor who in turn has a personal staff of accountants and advisors; the *waka-gashira*, or "children's boss" who leads all of the *oyabun's* main troops; and the *shatei-gashira*, who leads the higher ranking troops in the organisation. Below these three are the *oyabun's* "children" — the enforcers who may lead small gangs of their own. Fealty is given to individual gang-leaders, but the *oyabun* has the last word in all things.

There are two major clans of Yakuza in Underworld 9, the Akita or "Bone River" Clan, and the Sasaki or "Biting Serpent" Clan. There are also numerous, smaller freelance Yakuza clans in U9.

• Freelance Yakuza •

• Crazy Kabuki – the Crazy Kabuki are a small operation of drug peddlers. They all wear heavy make-up, often white-faced with sharp red lines to accent the facial features. Their leader, Princess Noh, normally uses her make-up to appear more beautiful; but before a hit, the entire group transforms itself demonically.

• Shogun Knights – the Shogun Knights are led by Beat Brother, who recently negotiated a deal with the Bone River Clan. In return for regular, strategic ambushes against the Biting Serpent, they are equipped with top of the line cyberware.

• Hazard Gamblers – a group of youths, none over 20, the Hazard Gamblers follow two young lovers, Shuya #030303 and Noriko #030609. They intentionally play off the two major clans, and the Mafia families as well, always looking for a better score. They have a surprisingly strong following for a group that exhibits such reckless behaviour.

• Ronin Blackjack – this gang was one of several hired by the Biting Serpent to sabotage shipments of Bone River cyberware; they were discovered, questioned, and executed.

• Grinning Jim Interview •

"How did it get its name? Kid, are you sure you aren't a fade? Well I guess that's why you come to ol' Grinnin' Jim, for the gabs. There's something to be said for that.

"Well, as it was," Jim looked around and took on a more subtle tone of voice, "it was once just called the Akita Clan. Satoru Akita was coming up, ya' know, through the ranks pretty quick. When the reigning *oyabun* finally died and passed on the torch, out of all the eligible family, it was no surprise who was going to get it. Well, this started one of the most bloody regimes ever. *Oyabun* Satoru was killing everything in sight. Hell, I saw him myself shoot three dogs and a scavenger just walking from his car to his club.

"Anyway, this house cleaning went on for some time without stopping. Over on 50th there's a water reclamation and purification thoroughfare – which is a bunch of hooey – it's nothing but a sludge dump for the corps. But one day a massive explosion went off there, a perfect combo of gasses and chemicals or something sparked up, and the whole thing drained into the streets – thousands of litres of the putrid stuff. And what was under all of that muck? – kilometres and kilometres of bones Clean, white, sparkling bones. A whole river of 'em. All the people that Satoru killed had to go somewhere, y'see; the clan was dumping there for years – still does. If you go down there you'll see what I'm talkin' about: a giant, bright snake of human bones winding its way through U9 – the Bone River."

The Bone River Clan

The Bone River Clan is currently run by Satoru Akita. It has approximately 2,000 members in its service and as such is a powerful force in U9. The Clan controls about half of all Yakuza holdings in Underworld 9, although the actual territory fluctuates due to the constant losses, acquisitions, and reacquisitions from the ongoing war with the rival Biting Serpents. Within its territory, the clan owns extensive gambling and prostitution rings, most of which can't rival the luxury of the Mafia's establishments. These businesses are just a sideline, however: most of the clan's wealth comes from their cyberware business.

The River is the top peddler of new and used cyberware parts in U9 — if someone is looking to upgrade or install new gear, the Bone River clan are the people to talk to. They own scalpel shops all over U9, which offer all the gadgets anyone might want. The clan maintains under-the-table arrangements with several junior and mid-level managers and security officers working for cyberware manufacturers like Anubis FLC, allowing them to hijack shipments. They are careful to do so in such a way, however, as to limit retaliation (usually making sure there are sufficient accounting errors that the stolen wares are classified as damaged or rejected components). They also often come across "used" hardware when a body is stripped for parts — this echoware is sold for a reduced price, depending on its level of wear and tear. The clan installs equipment for an extra charge, or else will refer clients to a "qualified" cyber-surgeon; such referrals have been known to backfire with disastrous results, but the prices are extremely cheap.

Recently the clan dabbled in I-chips, but met with fierce resistance from the Oddo Mafia family. They are now trying to divest themselves of their remaining supplies as quickly as possible to avert a major confrontation. They have no soldiers to spare for further conflicts, because of their ongoing war with the Serpent clan.

The Bone River's relations are dominated by their conflict with the Biting Serpent clan. Less than a year ago, the Biting Serpents declared an intent to seize all of Underworld 9's Yakuza territories. Since then, open war has flared onto the streets of U9 — it is not uncommon to see squads of Yakuza soldiers, tattoos glowing in the dark streets, blasting away with automatic weapons or hurling grenades at their rivals while the corporate underdogs keep out of the crossfire as long as no company property is damaged. The Bone River has enlisted the help of several freelance Yakuza gangs to swell their ranks against the fierce onslaught. The Biting Serpent's latest manoeuvre was to sabotage shipments of Bone River cyberware using autonomous freelancers. One such gang, the Ronin Blackjack, was caught, questioned, and executed. Reprisals are currently planned.

The Bone River clan has recently entered into a pact with the Oddo Mafia family, leasing them cyberware to help oust the Genovese Mafia. The River is due to receive a significant portion of Genovese holdings if the plan succeeds. Neither side trusts the other, and the pact is not yet very solid The Genovese have learned of the fragile nature of the relationship, yet for the moment have eschewed full-scale retaliation against the River to avoid provoking further escalation.

The Bone River have no problem with the Dilibertis or the Pack, as long as neither group strays from their territories or deals extensively in River-dominated commodities, such as cyberware. The clan has tried several times to expand into Pack areas, but has met with swift and fierce resistance — each time the River withdrew forces and shut down establishments within weeks, sustaining heavy casualties in the process. The River has no plans to challenge them again.

Prominent Members: *Oyabun* Satoru Akita; Issa Hayashi (*saiko-komon*); Sho Abe (*waka-gashira*); Ken "Empire" Suzuki (*shatei-gashira*).

Satoru Akita (Oyabun of the Bone River Clan)

Satoru Akita is a ruthless man by any standard. He has been known to kill, maim, or torture on a whim. Those around him show him the utmost respect — to cross him socially, even in jest, results in a death sentence of the most brutal kind. Satoru came to power because of his ruthlessness and continues to rule through bloodshed and violence. He is proud to be feared by allies and enemies alike.

Satoru is portly, with broad shoulders and smallish eyes. He is not an attractive man. His short black hair flops about his head and his long moustache seems to drip down his face like thick sludge. He normally wears close fitting grey slacks and shirts, but likes to hold court wearing a silken robe with an embroidered river of bones on the back. He usually carries a whip at his side, to slash those who anger him into submission.

Issa Hayashi (Saiko-Komon of the Bone River Clan)

Mr. Hayashi has loyally served his *Oyabun*, Satoru Akita for years. He is an intelligent and wise man, often planning the future strategies of the family. He is widely respected in the circles of the Yakuza. Strangely, considering his lifestyle, Issa is a very gentle man, preferring the ways of the mind to the pleasures of the body. He can often be found trimming his *bonsai* or folding *origami*, two pastimes that help him think and plan. Even during meetings, he is forever folding bright squares of paper into animals of various kinds.

Issa is an older man in his mid-fifties. He keeps his salt and pepper hair well trimmed and neat. He has wide bushy eyebrows and radiating crow's feet that give his face a bright, cheerful appearance. Suits are one of his true loves and he wears some of the most expensive made, sometimes paying as much as $20,000 for a rare cut. These are, of course, tailored for his body and accentuate his thin, sharp frame. Issa prefers not to carry weaponry at all, but Satoru forces him to arm himself. He carries a small pistol, a 9mm Krait, which he wields with only moderate proficiency.

The Biting Serpent Clan

If a man comes across the Serpent's tail, only a fool would pull on it.

— Underworld saying

One of the oldest of all Yakuza clans is the Biting Serpent, its history dates back to the first group of Japanese criminals shipped here soon after the founding of U9. Currently the clan is under the leadership of Yoshio "Grey Cat" Yamamoto, who is said to be very old, yet only appears to be in his mid-thirties. The Biting Serpent has amassed an army of over 3,000 soldiers, many of whom operate solely to expand territories in alternate Underworlds.

The Biting Serpent controls about half of Underworld 9's Yakuza operations, continuously gaining and losing territory through battles with the Bone River clan. Like most syndicates, the Serpent maintains gambling and prostitution establishments, but this is not their primary source of income. The back bone of the Serpent, the true secret of the whole organisation, lies in the sale of an extremely addictive drug called Tri (see page 239).

The clan manufactures and distributes Tri through their gambling and prostitution rings in the Underworld networks. Due to the high demand, they maintain several major manufacturing warehouses within their territories. The money they make from this one revenue stream is astronomical, and the demand for the drug has done nothing but increase over the years. Other rival organisations have unsuccessfully tried to manufacture the drug themselves.

All Tri manufacturing warehouses are booby-trapped by the Serpents. Any raid on a Tri manufacturing warehouse that looks like it might succeed is met with a self-destruct order, detonating pre-set explosives in order to ensure that the recipe remains a complete mystery. Thousands of clan members have given up their lives to protect the secret in this manner. Rival gangs and syndicates now realise the clan's members will die by their own hands before they surrender the drug's secret, and most have given up trying to acquire it. All attempts to retro-engineer the narcotic have met with complete failure, typically creating a deadly poison instead. The Biting Serpent clan makes enough profit dealing Tri that they have never considered dabbling in I-chips. The return would be less than attractive, due to the losses they would likely sustain fending off the Oddos while they peddled the tech.

The Biting Serpent wants nothing less than to run Underworld 9 with impunity. To this end they have declared total war on the Bone River Clan — a feud that cannot end until one side or the other lies in ashes. So far the clans have been locked in a bloody stalemate; while the Serpent has a numerical advantage over their enemies, the River clan has access to top-quality cyberware, which evens the balance.

The Serpent also considers the Oddo family an enemy, for their mutual pact with the Bone River. The Serpent hasn't yet moved against the Oddos, but is watching them closely. If the Oddos and the River solidify their alliance, the Serpents plan to strike with their customary ferocity. The clan takes a live-and-let-live approach to the other Mafia families — if the Serpents can find a weakness, however, they will do everything in their power to exploit it.

The Serpent has experienced first-hand the ferocity of the Pack and has adopted a stance of armed neutrality toward them. All attempted incursions into Pack territories have met with defeat, yet the Pack never expands their own territory, even in retaliation. As mystifying as this is attitude is to the Biting Serpent (and indeed, to all of the syndicates), they can do nothing to break the hold the Pack has on its boundaries and establishments. No further forays into these territories has been planned by the clan.

Prominent Members: *Oyabun* Yoshio "Grey Cat" Yamamoto; Naoto Watanabe (*saiko-komon*); Sam "S.O.S." Diamond (*waka-gashira*); Takashi Arai (*shatei-gashira*).

Yoshio "Grey Cat" Yamamoto (Oyabun of the Biting Serpent Clan)

Yoshio Yamamoto, the "Grey Cat," has been around for a very long time. His actual age is unknown, but he looks to be only in his early 30's. This has to do with the extensive gene restoration that he has undergone — most of it experimental, but highly successful. The mystery of his age gave him the nickname of the Grey Cat, a tribute to his cunning as a wise old predator. Aside from the gene manipulation, Yoshio's only other enhancements are a neural buffer and com implant (see page 27), allowing him to store vast amounts of information concerning all of the clan's members.

When it comes to business practices, Yoshio is a fair man — hard on those he finds have crossed him or that stand in his way, but rewarding those who serve him well. His men appreciate this, and will remain loyal to the end.

Of course, Yoshio and Satoru deeply hate one another. Yoshio was already established when the youthful Satoru was beginning his rise to power; Yoshio tried to recruit Satoru into his own gang. Satoru proved far too independent and violent for the tastes of Yoshio, however, so the two went their separate ways. Fate would pit them against one another as leaders of the two most prominent Yakuza clans in Underworld. Their syndicates have crossed swords many times, and each desires to see the other die horribly. Deep in his heart, Yoshio at times feels he might find the end of the game between them saddening, as the epic struggle between them has been a defining part of their lives.

Despite his age, Yoshio appears to be a young, handsome man, smooth and charming in social situations. He glides like a ghost when he enters a room, yet his presence is felt by all. His demeanour is warm, and most that meet him find him likeable and trustworthy. Underlying this is a confident strength, a current of power that flows just beneath the surface; people often decide it is better to have him as a friend than an enemy. Yoshio is a master swordsman, practising *Iado* and *Kendo*; he carries a katana and *wakizashi* at his belt when expecting trouble. See Sample Characters, page 245.

Sam "S.O.S" Diamond (Waka-gashira of the Biting Serpent Clan)

Sam Diamond may be the highest ranking member of the Yakuza to have a non-traditional name. Sam's career began when he was a simple gang member and witnessed the only defeat ever suffered by the Grey Cat, the Biting Serpent clan's leader. The *oyabun*'s troops had all been slain, leaving the clan leader alone and wounded while members of the Bone River moved in to capture him. Luck put Sam in a hidden alley — hating the odds, he opened fire, driving the River off. The *oyabun* was so grateful that he offered Sam a powerful position with the clan, which the young gang member immediately accepted. When the clan heard of the successful rescue, they nicknamed Sam "S.O.S." Since then, he has moved up to the rank of *waka-gashira* and so commands the majority of the soldiers in the Grey Cat's service.

Sam Diamond is an ostentatious man who enjoys his drink and his cowboy hats. He carries ancient twin .45's that have been diamond plated and restored by Yoshio; they glitter when he draws them and are chambered for modern ammunition. He also carries at his waist a huge Bowie knife that he can throw with deadly accuracy. Sam prefers to dress like the cowboys of the American Old West, always wearing jeans and a bright white cowboy hat. He wears the hat even at clan meetings — an offence tolerated by Grey Cat only for the man that saved his life.

• Grinning Jim Interview •

"Oh, I knew it! I knew you'd ask about them eventually. How could you resist? There's nothin' like them anywhere or anytime." Grinning Jim fired up a nic-stick and blew black and red smoke into the air.

"Son, the Pack is ferocity incarnate. If they get on your trail for whatever reason, you'd better just turn to dust to escape them. Never has a marked man ever, ever, gotten away from them – no siree, they've got a 100 percent success rate. Just thank god that they're not bent on moving anytime soon – they seem pretty happy to just sit where they are and enjoy the spoils they've got. Your best bet is to just steer clear of them – they're animals. No, kid, really – they're animals. You see this scar?" Jim lifted his torn shirt and revealed a set of red scratches running parallel across his chest. "I got this from a junior member who insisted I was looking at him funny – after that I wasn't looking at much of anything anymore. Like I said, just steer clear of 'em"

• Birth Control •

Birth control methods are not easily found in Underworld. The corps desire greater and greater numbers of drones to populate their plants and manufacturing facilities, and so simply do not import or manufacture the stuff into Underworld for general sale. Some birth control devices are available to Transient Citizens (managers, etc.) for their own use, and these often command good prices on the black market.

The Pack

Unlike the other crime syndicates whose origins predate the Underworlds, the Pack were born within the walls of Underworld itself.

The Pack's internal structure distinguishes them from the other syndicates. The Pack has no families, clans, or sub-groups of any kind. There is simply the Pack, one group spanning the Underworld network. There is no significant amount of internal conflict within the Pack. They move as one unit, forming a powerful unified front.

Their organisation is simple: one Alpha presides over all U9; approximately five Betas act as generals; Gamma sergeants lead units of Delta soldiers, one per unit; new initiates are known as Epsilons.

The most distinctive feature of the Pack is that they are all undergo bioware modifications to give them the features of extinct animal species, mimicking some aspect of an animal that they find attractive or powerful. Additionally, out of respect, members must take one of the same modifications that his or her immediate superior has — so, if a Beta has certain mods, all Gammas under him must choose one of his mods to replicate; this may take the form of skin coloration, natural weaponry, or appendages such as tails. This makes it easy to tell member affiliations and chain of command quickly. For example, a Beta in U9 with eerily glowing owl-eye mods will find many of her Gammas also share this trait; not all of them do, however — some have chosen to adopt her very sharp silver talons, instead.

The Pack has all but shunned the traditional methods of money making, such as prostitution and gambling, although they are not beyond the occasional racketeering scheme. They sell moderate amounts of drugs (Tri, Betacaine, heroin), but their real money comes from moving two things: large supplies of birth control pharmaceuticals and human meat.

The Pack has recently managed to make a deal with Kai Maysarut, one of the senior managers in Life Fountain Inc., a major pharmaceutical company that has several plants in Underworld 9. She illicitly supplies them and receives a portion of the profits in return.

The Pack also sees to human meat collection, processing, and sales, through establishments appropriately named Butcher Shops. They never have a shortage of either supply or demand. Other syndicates, while selling small amounts of the product, are largely unwilling to delve too deeply into its production and distribution. This is one of the few rackets that even the Mafia and Yakuza find too odious to touch, and one reason the Pack is universally feared. No one wants to end up hanging from a meat hook in a Butcher Shop.

As Underworld 9 grew in scope and size so, too, did the Pack. Now, they are strong enough to viciously defend their borders when threatened by any incursions. The Yakuza have made several attempts to expand operations into the Pack's territory; each time, they've been repelled by a relentless defence. The Yakuza have given up on trying to break the iron grip the Pack has on its holdings.

Unless the territories of the Pack are encroached upon, they have little trouble (or dealings for that matter) with the other syndicates. The Pack seems to mind its own business, rarely expanding or contracting to any appreciable degree. When their territory is threatened, the entire Pack mobilises and deploys to the threatened area (leaving behind skeleton crews to protect their lairs) and defends it ferociously, like a great swarm of hornets. This is not to say, however, that if a power vacuum is created by some war between syndicates that the Pack won't seize the territory. If a prize falls into their laps — for example, if a weakened Mafia or Yakuza territory borders their existing holdings — they will eventually move against it. Striking swiftly and decisively, the snarling warriors of the Pack rarely lose these battles.

Prominent Members: Jonah Totec (Alpha); Vala "Eyes" Vare (Beta); Lucas "Sun" Sunji (Beta).

Jonah #7307 Totec (Alpha of the Pack)

Born to the Pack, Jonah has always been a fearless warrior of his tribe. Once Jonah ran through a barrage of Yakuza auto fire, only to emerge on the other side completely unharmed. He then attacked the gun men and single-handedly killed them all. His bravery and honour elevated him through the ranks of the Pack; two years ago, he took the Alpha position after the old Alpha left to die.

Jonah has led the Pack with a primal grace, positioning them as a force equal to the other syndicates. It was his idea to expand their practice of peddling human meat to the hungry masses. This has brought the Pack great wealth and prosperity, even as it earned the disgust and fear of their rivals. In terms of sheer ruthlessness, both the Mafia and the Yakuza have been taught valuable lessons by Jonah and his Pack.

Jonah is married to one of his Betas, the stunning Vala, whom he loves dearly. He wouldn't hesitate to trade his life for hers were the choice to ever come up.

In all regards, Jonah embodies an albino lion — his bone white mane flows down around his shoulders, while his white eyes peek out from a feline face and his gleaming fangs rest in a wide lion-jaw. As tradition dictates, he also took on one of the traits of his superior, a man who favoured the aspect of the alligator. Jonah bears deep green scales that run down along his broad arms and across his back, giving him a monstrous appearance.

Vala "Eyes" Vare #5567 (Beta of the Pack)

Vala #5567, or Vala Vare, as she renamed herself, came to the Pack as an angry drone, beaten down by her surroundings and looking for a way to strike back. In an attempt to belong, she took it upon herself to assist the Pack in their skirmishes, an action that quickly caught the attention of Jonah and the rest of the group; no outsider had ever before fought on behalf of the freakish group.

When Jonah asked her to join, Vala quickly accepted, finding needed acceptance in her new surroundings. Vala fell for Jonah rapidly; she loves him as much as he loves her — she finds their bond comforting in a fragile and brutal world.

Vala's first mods included aspects of the owl, along with some of the mods of her immediate superior at the time, "Brown-bat" Sunee. Vala has large, yellow, owl eyes. Aside from being inherently disarming, they allow her to see quite well in the dark and give her a nickname. Her other modifications include a ring of feathers around her eyes, contrasting them with her beautiful face, as well as sharpened talons on her hands. She also had a black membrane placed between her arms and her body, following Sunee. While not allowing true flight, the membrane does allow her to glide if she jumps from a height; she finds bombing her opponents from a shadowed roof greatly enjoyable. See Sample Characters, page 245.

The True Predators

At the top of the food chain are the real predators — those that control and reap profits from the long-suffering masses below. These organisations and individuals may only be as far away from the streets of Underworld as a hot shower, but their day-to-day lives are in a completely different universe. The ranks of the powerful include corplords, governmental and military leaders, and members of obscure, but equally powerful, shadow societies.

The Corporations and the Corplords

The corporations are the economic powerhouses at the top of the food chain. They control vast amounts of wealth and power. They do not scruple to use manipulation, blackmail, murder, and worse to achieve their goals.

A few global corporations control over 90% of the world's wealth. They are ruthless in their dealings, have no interests beyond profit, and focus all of their energy on one principle: the bottom line is all that matters. That's their mantra; no matter the cost, increase profits and you will prevail.

Just as the corps are ruthless in their need for wealth, so are the corplords in their dealings with each other. Within the hierarchies of the corporate towers, the corplords vie for position — backstabbing and betraying to get the next promotion, to get close to a superior, to undermine those who show promise. Even murder is not entirely out of the question, as long as they don't get caught. The corplords are ruthless sharks, using all means to satisfy their greed — and the highest ranking are the most vicious of them all.

Augustus, FLC

Augustus is the primary conglomerate responsible for 85% of all telecommunications equipment, satellite technology, chip manufacturing and, oddly enough, soft drinks in the world market today. Augustus's Nan-O Soda edged out the leading cola brands for market share shortly after hitting the shelves in the mid-part of the century. Critics charged this unprecedented rise in sales was due to a strain of self-replicating nanovirus that was placed in the soft drinks to induce a "hard addiction" in those that consumed the product. While those that imbibe Nan-O describe a slight sense of euphoria after drinking it, no evidence of an additive was ever found, and the Augustus-funded study concluded there was nothing untoward about the beverage.

Augustus's original rise to power resulted from its design of buster telecomm satellites that would interrupt signals of rival company satellites or destroy them outright. This resulted in disgruntled customers from competing firms who gladly switched to the "One Clear Voice" of communications services after being promised savings incentives. The smaller corporations that tried to bring suit against Augustus (before Augustus had successfully filed for FLC status) suffered unexplained deaths among their board members. The remaining executives quickly withdrew any pending complaints.

Augustus is also the manufacturer of the CC-chip (see page 235). This technology is used in all Underworld facilities and also marketed to other corporations and the government.

Augustus's headquarters is located in Rome, Italy. Its main complex consists of a giant hover platform, which supports three thin spires. The platform hangs suspended 600 metres in the air; Tower One is 150 stories, Tower Two and Three are 130 stories each. Employees of Augustus must take magnetic rail-tracks up to the buildings to reach their offices. Augustus's major holding in Underworld 9 is the enormous Complex 424 (see page 231). It also has several smaller facilities scattered around U9.

Augustus maintains a large security force, and its underdogs are among the most ruthless in U9. Vernon Nicodemos, the present director of security at Complex 424, is famous in Underworld 9 as the man who ordered the massacre of hundreds of strikers during the 45 Revolt.

Augustus's logo is a single red vertical line. It may or may not have the word "Augustus" written beneath it, depending on the logo's application.

• Free of Liability • Conglomerate, FLC

The megacorps that operate in the Underworlds successfully lobbied PRIDE for a new type of legal article under which to do business. This resulted in the Free of Liability Conglomerate (FLC) status. Only the elite of industry may apply for the coveted designation – if a company is granted FLC status, they cannot be held liable or even be named as a defendant for any wrongdoing or misconduct for any activity undertaken or perpetrated upon non-citizens within the Underworlds themselves.

Once granted, FLC status cannot be revoked for any reason short of bankruptcy, treason, or failure to pay taxes. With this designation finally secured, a corporation is allowed to conduct just about any type or activity within the Underworlds as long as it satisfies the greed of stockholders and the company's board of directors.

Brent Marshall (Vice President at Augustus FLC)

Brent Marshall started his rise to power as an executive in his father's firm, Marshall Labs. Marshall Labs was one of the first cybernetics companies to see the benefits of outsourcing the human-phase testing of experimental drugs and cybernetic implants to the inhabitants of the Underworlds. The company is no longer owned by the Marshalls, having been bought by third party investors, but not before Marshall succeeded in turning it into a billion dollar enterprise. Shortly after that, he was head-hunted by Augustus FLC and offered a position as senior vice president in charge of their Underworld 9 facility. Many consider him the most powerful man in U9, due to his own wealth and power, his political connections, and his ruthless lieutenant, Nicodemos.

Brent enjoys a close friendship with his brother Daniel. Dan went into politics and is now a US Senator. As the chairman of the House and Senate's powerful PRIDE committee, Dan Marshall now oversees the Underworlds themselves. The brothers enjoy a symbiotic relationship between their two spheres of influence: Augustus FLC receives strong governmental support because of Dan's influence and power, and Dan's office and close supporters receive million of dollars in kickbacks and lucrative slush funds.

Brent is also famous for his work ensuring that the Free of Liability Conglomerate filings became law. At the time, Brent was a high-ranking executive with Augustus, but far from the top. He used the FLC filings, however, to vault himself past the competition and into the upper echelons of the company. When the filing went through and the dust settled, he had ensured his place as the company's heir-apparent. He expects to take over as Augustus FLC's chief executive in due course, after his stint running the company's business interests in Underworld 9.

Brent likes to visit the company's factories and manufacturing plants within Underworld for two different reasons. The first is to be a visible symbol of power to his workers and underlings, moving with an entourage of poly-armoured guards to ensure loyalty and invoke fear — he is a strict believer in the old saying: *oderint dum metuant* ("let them hate so long as they fear"). To this end, he finds his security director Vernon Nicodemos to be a man after his own heart, and is content to give him free reign at crushing any dissent.

The second reason is more sinister: he loves to frequent the sex rings of U9 and enjoy the many pleasures that are available there. He is notorious for having outrageous orgies with the available stock of pre-pubescent hermaphroditic sex slaves. Sometimes he will walk the streets of U9 just to enjoy the contrast to his own privileged life style, but wherever he goes, it is always in the presence of the most sophisticated security Augustus can muster. If somehow caught unawares, he is a capable fighter himself, having trained in the martial arts since the age of five.

Physically, Brent Marshall is a man is his late 50s with sandy-grey hair and clipped black goatee, giving him the look of a mischievous devil. He stands a slim 5'7" tall, and walks with the air of a man far taller. He always wears a well-tailored suit and carries a black cane topped with a silver ball — a sword cane with a monowire blade of exquisite design.

General Vernon Nicodemos, "Chrome General" (Augustus FLC Director of Security)

The "Chrome General" is Augustus FLC's director of security at Underworld 9, a post he has held for four years. Prior to that, he served in the United States military for two decades. During his years in service, he never lost a major conflict and rose to the rank of general before political differences with the then-Secretary of Defence led to his early retirement.

Unfortunately, civilian life did not sit well with Nicodemos. Retirement led to the break-up of his marriage, a process accelerated by the death of his only son, Captain Alan Nicodemos, in a police action in Uzbekistan. A costly divorce left him broke, alone, and embittered ... until a friend introduced him to a group of people that had a new way of looking at the world — the Order of the Eclipse (see page 225).

Granted new purpose by the apocalyptic visions of the Order, Nicodemos managed his return to the corridors of power. Like most generals, he had strong connections with the military-industrial complex. With the help of an acquaintance, Senator Dan Marshall, he soon took an advisory position with PRIDE as a security consultant and liaison with the US military. After a serious drone revolt broke out at Underworld 9, he was dispatched to handle the situation — something he did with bloody abandon. Afterward, the thrill of action was enough enticement for him to accept a position as Augustus's Director of Security in U9. Since then, Nicodemos has been most responsible for the increase in security.

Nicodemos's military background gives him a close relationship with Colonel Dagen (Garrison Commander), but this is somewhat tarnished by their differences in attitude as well as experience: the Colonel is a Marine, while Nicodemos is Army. More seriously, Colonel Dagen was the local operational commander during the joint service Uzbekistan operation in which Nicodemos's son lost his life. While Dagen was not responsible, Nicodemos cannot help but hold a grudge, believing that with a better, Army commander things might have happened differently.

Nicodemos also has a poor relationship with Chief Armand Enzor, of Imperial FLC. So far, Nicodemos's counter-surveillance technology and tradecraft have prevented Enzor from learning his most closely guarded secrets, but it is only a matter of time before his involvement with the Order is revealed and his position called into jeopardy.

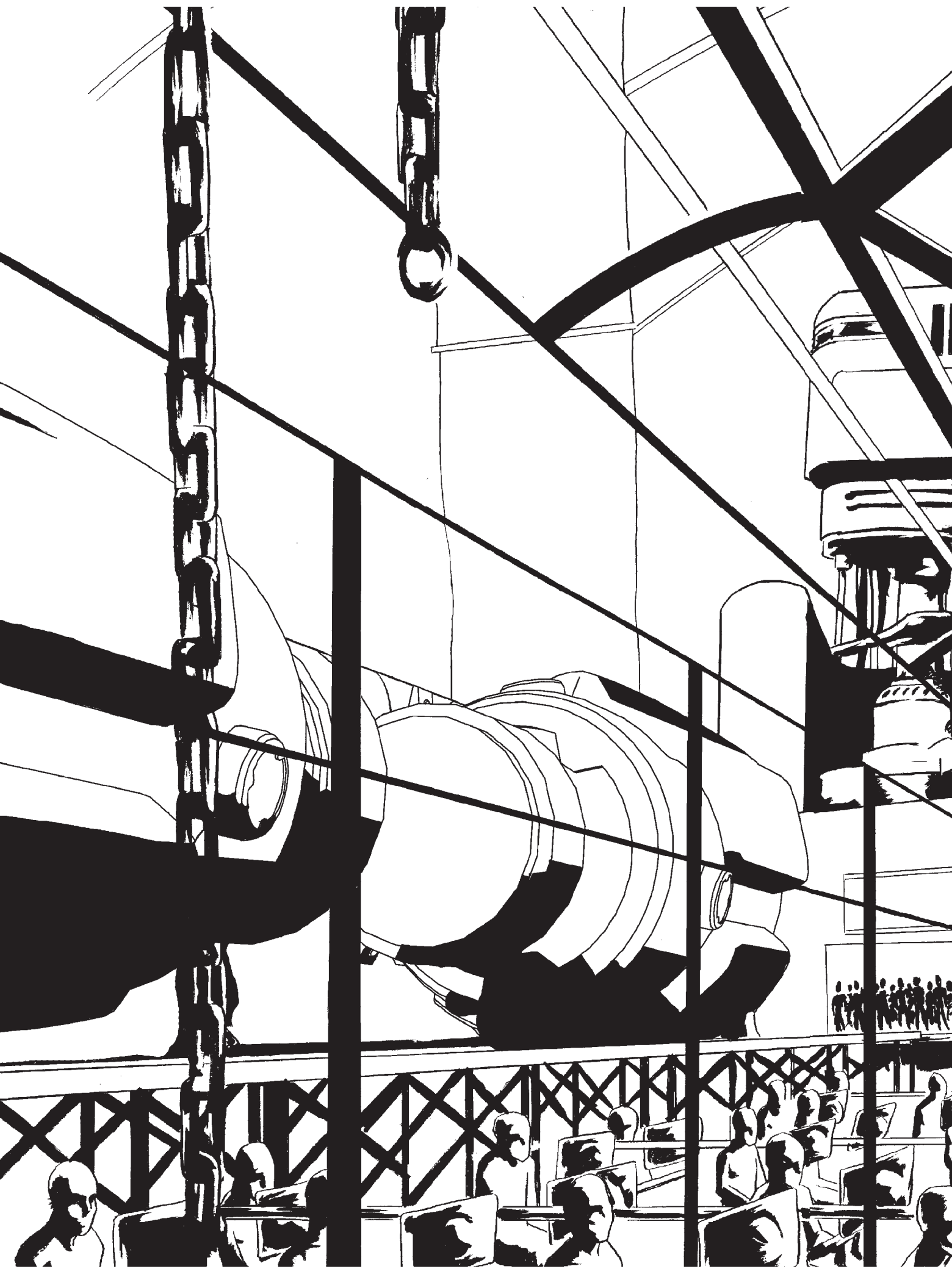
Nicodemus's long career has made him paranoid. He wears disguises to protect his privacy and personal life, regularly wearing a holo-mask when in public to avoid notice.

While he rarely has time to venture outside of his offices, Nicodemos sometimes takes a personal interest in "fodder runs," the collection of unsheltered drones from Underworld 9 for use as special security forces, known as "suicide troops," who act as back up for the US military in conflicts around the world. Such suicide troops are often used for operations that the US military seeks to officially deny.

• FODDER RUNS •

Nicodemus often oversees these sweeps personally, rounding up anywhere from one to two thousand souls who are tagged as cannon fodder. These individuals are then chipped like chip dolls (see page 238) and sent off for a term of one to six months. The survivors have no memory of what happened. They awake, often missing limbs or bearing new scars, with a wallet of a few hundred U-dollars "in return for service to their nation." Tensions are currently running high in the breakaway republics of China, and Nicodemos has received orders to run another set of sweeps in the immediate future.

Nicodemos is a colossus of a man. He stands an impressive 6'9" tall, with broad shoulders and a military bearing. At 68 years of age, everyone simply calls him General Nicodemos or the Chrome General (he despises his given name). He has grown a great grey moustache which hangs down below his chin in a wicked curve. His sparkling blue eyes might seem charming if it were not for the





restlessness that lurks within them. Nicodemos speaks in a deep, authoritative voice that is startlingly devoid of humour or compassion. In public, he appears in his fully-decorated dress uniform. When visiting his fellows within the Order, he eschews the uniform and adopts less ostentatious, casual dress. He is inevitably armed with several small calibre weapons.

As a result of injuries sustained when he was a young lieutenant fighting in the Middle East and Africa, Nicodemos has undergone exhaustive surgeries, including cyberware enhancements. As of the current day, his body is approximately 85% modified. He has had these upgrades improved constantly, and his cybernetic limbs are top military grade hardware, granting him immense strength and unparalleled speed. His optical systems are also military grade, letting him to log into the satellite net and download targeting and movement data in real time.

Nicodemos is a terrible enemy, a tactical genius who will stop at nothing to win. Nicodemos will do whatever it takes to achieve victory, fully accepting pyrrhic victories or even suicide; defeat is simply not an option he's willing to consider.

Anubis, FLC

Anubis first started operations in the early 21st century under the name of KMS (Kimura, Michaels, and Sonshine). During this time, they developed parasitic software that would sell off hard drive space and idle processor cycling time of their customers' networked home computers, unbeknownst to the computers' owners. As computer raw memory and processing speeds increased, so did KMS's ability to offer this expanded real-estate to more voracious buyers. As the company grew to immense proportions, Kimura died in what some have called "shady" circumstances; the company shed its old rubric and adopted a new name — Anubis, Inc.

After only a few years, Anubis grew to such power that they were able to sit at the table of giants such as Augustus and Imperial. At that time, they had outsourced many of their industries to the various Underworlds, and were leaders in helping to shape the lobbying procedures for granting them Free of Liability Conglomerate (FLC) status. Not surprisingly, Anubis Inc. became one of the first megacorps to attain the coveted FLC designation.

The company's original tactic of selling unused processing power has stood it in good stead over the years. Now, however, they've moved to the next level. Well over 10 billion people have CC-chips installed, which they use to access the Andromeda Data Nebula (see page 235) around the clock. Anubis has mastered this new technology as well, earning astronomical profits by selling off unused cycling time on their chips.

Because of this, Anubis is able to offer the services of the greatest super-computer to ever exist — the totality of man's consciousness. Anubis is even able to access this resource when CC-chipped individuals are asleep (with help from Augustus in the form of hidden access codes and backdoor schematics). All of this is done without the knowledge or consent of CC-chip owners. There have been rumours within underground regions of the Andromeda Data Nebula concerning these kinds of infractions, but nothing has been publicly corroborated to date.

With their continued success, Anubis has moved into the realm of manufacturing and distributing cyberware. It crushed the original developer of useable cyberware, Cyberskies Inc., in a hostile take-over, during which several high ranking members of Cyberskies were gruesomely murdered in their homes. Their replacements did not stand in the way.

Anubis's headquarters, dubbed Akhet, is located in a geostationary orbit over the Indian Ocean. The first orbital corporate headquarters in history, Akhet workers commute to the station via jump-shuttle. They usually stay for several days, shuttling back down to Earth when their shift is up. Akhet itself has ample services for off-duty workers, such as restaurants, gyms, jogging loops, bars, and the like.

The company has a single major manufacturing plant in Underworld 9, Chrome Farm 1 (see page 231), along with several smaller facilities and warehouses. Anubis's logo is a highly stylised white jackal's head on a field of black.

Eric Sonshine (Vice President of Anubis, FLC)

Eric Sonshine is the son of Robert Sonshine, one of the original founders of KMS (Kimura, Michaels, and Sonshine). Robert is now in his seventies, and currently shares joint CEO status of Anubis with Mr. Jack Michaels. Robert Sonshine is planning to retire, however; his ageing body is a mass of cloned and transplanted organs and cyberparts, and he is no longer equal to the stresses of the job. Young Eric and his twin sister, Erica, are both being groomed as potential replacements.

Each of the two children has been assigned a VP position — Erica in Underworld 7 in Mexico, while Eric has been sent to run Anubis's operations in Underworld 9. Whichever sibling proves most competent will inherit the company. The twins have always been highly competitive, leading to an estrangement between them in their adult years. In fact, a recent series of unfortunate "accidents" at Underworld 9's plant has led Eric to believe his sister may have hired local criminals or saboteurs in an effort to discredit ... or kill ... him.

Highly paranoid, Eric remains safely sequestered away in Anubis's headquarters offices, travelling the streets of Underworld only in the direst of emergencies. He leaves most of the day-to-day duties to his competent security director, Mitsuko Rial. Knowing he lacks his sister's skill as a manager, he has instead chosen to compete by increasing the R&D budget of Anubis's operation. One of his pet projects is the development of new chips he hopes will lead to the creation of a true sentient artificial intelligence.

Most of Eric's time is spent hooked into the Andromeda Data Nebula, traversing the digital dreams that are his family's own creation and monitoring scientific developments (and crackpot theories) relating to A.I. In the last year or so, he has been seen in the streets of U9 only one time, reportedly surrounded by a small army of bodyguards. Gossipmongers continue to puzzle over the visit; the latest hypothesis involves a search for the elusive Cheitan Congregation (see page 225), a mysterious cult whom some believe are in contact with a godlike (or demonic) artificial intelligence. Rumour has Eric seeking a legendary computer chip created by a genius hacker called the Angel Chip, which may have served as the basis for the Cheitan entity. He may be willing to hire people to follow up any such rumours.

Eric is 23 years old. He is a short man with darting eyes and a crooked smile. He walks with a scuttling motion from place to place, as if he is afraid the sky is falling and a piece might impale him at any moment. He is heavily modified with neural cyberware — his eyes sparkle with the artificial light of the enhanced, and he has a neural buffer, com implant, and numerous plugs. He also wears a pin on his suit lapel bearing the stylised symbol of Anubis. He always travels with several well-armed and cyberware-enhanced bodyguards.

Mitsuko Rial (Security Director for Anubis FLC)

Rial has recently been assigned to U9 from her previous post as deputy director of security at the Akhet, the orbital headquarters of Anubis. A former orbital shuttle jockey from a wealthy Japanese-American family, she is more at home in space than on Earth.

Rial's experiences, first in space transit and then at the Akhet, taught her that any mistake can be fatal. Mitsuko Rial learned those lessons well. She is a harsh leader, a strict task master who allows very little room for error. Her willingness to praise those who meet her expectations, however, have earned her the respect of the corporate underdogs. Most believe they are made better soldiers by meeting her exceedingly high standards.

Rial spends most of her time supervising security at the U9 spaceport, particularly high security transfers to and from Anubis's orbital facility. She also regularly commutes to orbit, both to socialise and because she gets sick of the embrace of gravity. Nevertheless, she makes sure to attend most important meetings through a secure virtual reality interface, even when off duty.

Rial has a cool relationship with the other security directors of U9. She knows of Colonel Degan's crush on her, and sometimes uses that to her own benefit. She is contemptuous of Eric Sonshine, her immediate superior at Anubis, but keeps this to herself, glad that his paranoia keeps him out of her way. Indeed, she sometimes feeds his fears (dropping hints of assassination plots she has thwarted) in order to better keep him under her thumb. Her primary concern is not Eric's sister, Erica, but the Yakuza. She regards them as parasites on Anubis's corporate body, and is the most diligent of the corporate security chiefs in ordering anti-mob sweeps.

Rial is a tall, slim Asian-American woman of athletic proportions. She was an Olympian, securing gold medals in both boxing and long distance running. She still runs regularly, though more out of a constant desire to keep fit in the microgravity she prefers than out of a desire to train.

In sharp contrast to her cool demeanour, her expressions are naturally cheerful and bright — when she smiles, she is beautiful. On the net, she uses a couple of virtual icons to represent herself. In matters of state, she uses her real-life image. Otherwise, she chooses to appear as either a darkly glowing crimson sun, or a cluster of cooler, brighter stars that move and pivot around an unseen axis. Like many members of Anubis FLC, she makes use of cutting-edge cyberware. Unlike many of her colleagues, however, all her neuro-tech implants (including an extensive neural buffer) are carefully concealed under her skin.

Imperial, FLC

Using copious amounts of governmental grants and research funds, Imperial spent decades perfecting technology that would surpass the old internet. The old computer network was teetering on the verge of collapse, due to an ever-increasing amount of viruses and intelligent spam. When it was ready, Imperial announced that the Andromeda Data Nebula would go online and hyped it as an ultra-secure, superfast, smart network that would absorb the existing functions of all the internet.

Once the ADN came online, companies that once provided internet service quickly realised they would be swallowed, essentially becoming subsidiaries to Imperial. Knowing they had to either co-operate or risk extinction, most chose to play ball. (There are still a few small companies that operate clandestinely using the remains of the oldinternet, providing services for those who don't want to use ADN for one reason or another and know how to get to the old system.)

When the ADN went live, it was a revolution in technological history. Not only could it handle all the functions common to the internet of that time, but it took inventing new technology, such as the CC-chip, to take advantage of everything it had to offer and reveal its true capability. Since Imperial is the primary owner and provider of the global information repository that is the ADN, they are privy to the gargantuan amounts of information that passes through the Nebula every second of every day. This information is gleaned and stored by Imperial without the Nebula's users' knowledge, giving the company a rich resource. Most of this information is processed within the various Underworlds by Imperial's legions of drones, whose semiconscious brains are tied into the network and function as living data-filters.

Imperial's corporate officers have, on numerous occasions, used ill-gotten information to blackmail high officials of rival organisations into submission. They have also made many enemies in high places, enemies who haven't forgotten what has been done to them, but remain impotent to strike back.

Imperial has its headquarters in Paris, France. Their main complex is a 200-story underground building, which is guarded by sophisticated security forces and paramilitary personnel. Imperial's major holding in U9 is its Core Facility (see page 231).

Imperial's logo is a crown and sceptre interlocking with the word "Imperial" engraved on the crown. Below the symbol are the words, "Knowledge is Power."

Lucretia Mantilla (Vice President of Imperial FLC, U9 Branch)

Lucretia is the senior executive in charge of Imperial FLC's Underworld 9 operation. Like her right-hand-man Armand Enzor, she clawed her way up to her august position due to tireless effort, diligence, and fortitude. There, however, her resemblance to her ruthless but honest Chief of Security ends.

At the heart of Lucretia's success is a dark secret — she is a cunning and vicious killer. She has moved up in Imperial's ranks by either intimidating or outright murdering her superiors and competitors. Her personal style is particularly macabre — Lucretia believes she is a vampire. She has augmented herself to complete the image: pigment manipulation to appear pale, retractable stainless fangs to drain blood, and a chemo-metabolising enhancement to better digest the fluid, which forms almost the whole of her sustenance.

Although she is a competent manager, she prefers to delegate tasks to her various executive assistants and middle managers (who know what the cost of failure will be). She then leaves her company in the hands of her underlings and comes down to U9, where she prowls the streets like the predator she is. Cybernetic augmentation of her arms and legs has made her swift, quiet, and deadly. She clandestinely enters U9 on a weekly basis, where she will kill until satiated or bored, then leave by dawn to travel back to the towers of wealth, her bloodlust spent for a time. She much prefers the rush of the hunt to the noisy and gluttonous gatherings of her peers.

Lucretia Mantilla was never an extremely beautiful woman. Her elongated nose and full chin led many to describe her as sharp-featured. She has undergone severe gene-manipulation and gene-replacement, however, and through these processes has achieved a modicum of, if not beauty, a certain exoticism. Her complexion is now permanently pale, and the skin on her torso and thighs is partially transparent, revealing her pulsing veins and arteries. Suitors who find this repulsive typically don't let on, or else they do not live to see the sunrise.

Lucretia normally dresses in holo-clothing, giving her the ability to change her appearance from formal to casual without any effort. Her tailored holo-suit also has the capacity to camouflage, matching any surrounding. This is particularly useful when hunting. She carries a phase-sword and taser.

Armand Enzor (Chief of Security for Imperial FLC)

Enzor is chief of security for Imperial FLC's Underworld 9 operation. A corplord who actually clawed his way up from the ranks as a common underdog, he gained his title through diligent work and heroism on the mean streets. As a security captain, he distinguished himself during a series of riots at the Imperial facility in Underworld 5, and was renowned for saving the lives of numerous men and women under him.

Word of Enzor's reputation spread throughout the ranks, to soldiers and commanders alike. He was quickly promoted and, at the age of 33, ended up as one of the youngest men ever to hold the title of chief of security. He has only recently been assigned to U9. Imperial's underdog security troops, usually cynical, have a grudging respect for him. It is even rumoured that Armand sometimes puts on a common suit of tactical armour and turns up for the occasional street patrol, although this may be a carefully cultivated myth.

Imperial, Anubis, and Augustus together control the largest contingent of security forces in U9. This forces Armand to co-ordinate street patrols and product transfers with his counterparts, Vernon Nicodemos and Mitsuko Rial (page 222), as well as with the military under Colonel Degan (page 224).

Chief Enzor's working relationship with Rial is good but distant (he is somewhat intimidated by her cultivated poise), but it is no secret that he and Nicodemos openly despise each other. In-fighting, mud-slinging, and blackmailing have been employed by both sides in an effort to get the upper hand. The Chrome General has publicly referred to Enzor as a common thug, while Armand has suspicions about the General's past, background, and even sanity. Armand thinks of himself as a hardened veteran, but he feels Nicodemos has gone beyond the pale, pointing to the 45 Revolt massacre. Armand's ace in the hole is his surveillance of Nicodemos's covert activities. He has been paying journalists to look into the General's past, and has assigned some of his best operatives to trail him under the guise of providing additional security for his superior.

Much of Armand's time is spent on-base, where he stays in constant contact with his men. Although he has achieved solidarity with his own troopers, Chief Enzor deeply despises Underworld 9 itself; he sees the majority of its inhabitants, the drones, as mere resources. Armand is a powerful man in his own right. He stands a healthy 6' tall with a regal bearing. His eyes are intense, revealing a highly intelligent mind that is ever active and sharp. Armand has no body enhancements whatsoever, and considers body mods to be weak and distasteful. He looks down on those that have undergone modification as cowardly; a true man is able to hone his body to handle all circumstances that are put before him. Armand's power comes from within; he has become an expert marksman and master swordsman through his own diligence and practice, not through the easy temptation of cyber or bio-enhancement.

On formal occasions, Armand wears the dress of a corplord of his standing: a blood red tunic with tailored black pants and boots. He does the outfit credit, but many have observed that he seems more comfortable in tactical armour. At his side hangs the jewelled phase-sword of his station.

The US Government and PRIDE

This is the US government program that administers the Underworlds. Run by a congressional committee in Washington, DC, and administered by a few thousand bureaucrats at home and abroad, its primary goal is to ensure that America's overseas possessions remain firmly under the control of American puppet regimes.

To this end, PRIDE co-ordinates the Underworlds. Operated by various corporations and originally intended as bastions of capitalism, they are now used as self-funding prisons for anti-American dissidents and troublemakers, as well as pools of cheap, unregulated labour for its megacorps.

Daniel Marshall (US Senator, Chairman of PRIDE)

A lifetime businessman and politician, Marshall always led a life of privilege and wealth. Those toiling within the walls of Underworld are as far from him and his thoughts as the outer reaches of space. He never entertains any ideas of morality or compassion toward those less privileged than him. It is a simple equation: pick yourself up by your bootstraps or perish. Even so, his position as the chairman of the bi-partisan PRIDE committee and his relationship with his brother, Brent, sometimes gives him a reason to visit U9 on this or that congressional fact-finding junket.

Senator Marshall's ties with Underworld 9, however, are deeper than one would guess. He has certain vices that are still illegal in the United States, but which can be pandered to in Underworld 9. Rather than risk himself, he has used his brother's connections to introduce himself to the don of the Genovese family. He visits Underworld 9, ostensibly to consult with his brother, at least two or three times a year. In exchange for ensuring that beautiful but disposable chip dolls that match his own particular tastes (surgically altered to resemble his ex-wife) are delivered to his hotel room, he funnels funds to them. The mob have also provided the occasional untraceable "zip," or hit man, that can be smuggled out of Underworld, used to eliminate a political rival, and then vanish again. This relationship is kept secret from Brent, since Dan knows his brother would not be happy to find out that he was engaged in private deals on his turf.

Dan is the antithesis to his stately brother; he is short and plump, with a bald head and hairless face. Where Brent moves with grace, Dan slumps along like a tugboat pushing against a rough tide. When in the presence of more than a handful of people, he sweats profusely, wiping the sweat from his brow with the same hand that he offers people in greeting. Most dignitaries that meet him prefer to bow, rather than shake hands.

Dan likes to wear a traditional turn-of-the-century suit and tie as opposed to the rich modern garb of his contemporaries. When he ventures forth to Underworld 9, he takes a small group of protectors who remain unseen but are always vigilant for any threat that may befall their boss. Dan carries a small pistol with him just in case, but is a terrible shot. He once killed one of his own bodyguards in a panic when a malfunctioning chip-doll attempted to strangle him. As an apology, the Genovese sent him the right hand of the technician who had programmed the doll.

Colonel Neil Dagen (Commander of U9's Garrison)

PRIDE's iron fist is the US military, and Colonel Dagen (United States Marine Corp) is the senior US military liaison officer in Thailand assigned to Underworld 9, and is in command of the Underworld 9 Garrison Force. Colonel Dagen has lived almost his entire life on seagoing craft of one stripe or another, as a member of the Marine Corps often assigned to shipboard duty. He finds land to be boring, permanent, predictable, and much too stable. Neil prefers a life of chaos and unpredictability — one filled with surprise and danger. In his estimation, a life without these ingredients is not worth living.

Dagen was a former Recon Marine in his early days in the service, trained for amphibious assaults and covert beach reconnaissance. He still retains the biotech implants he received as part of his special ops training that enable him to breathe underwater — several micro gill-slits can be detected upon his neck. Now a high ranking officer, Colonel Dagen still prefers to spend what time he can warships, visiting the US Navy's Pacific Fleet's flagship *Poseidon II* (a giant super-carrier hosting a large Marine contingent), or sailing in his private yacht, the *Trident*.

Dagen has a working relationship with Imperial's Chief Enzor, whom he respects as a tough city cop. He has modest respect for the brutal ex-US Army General Nicodemos who commands the Augustus forces, but there is something in Nicodemos's manner that bothers him (he is unaware that Nicodemos blames him for his son's death).

Interestingly, Dagen has fallen for his civilian counterpart at Anubis FLC, the lovely Mitsuko Rial (see page 222) and finds her absolutely irresistible. He has invited her to his yacht or off-shore diving on a few occasions. Thus far she has not returned his affections; she remains aloof and out of reach, though she has not been above playing on his interest to receive military assistance when she needs it. This has not deterred Neil; he is a persistent individual who usually manages to get what he wants through sheer will.

Dagen is a rugged, handsome man, with short cropped blond hair and a stiff moustache. Unlike many of his counterparts he is easy going and personable, inspiring loyalty through his unmatched charisma and charm. The Marines and SEALs under his command respect him. He prefers to wear the uniform of his office, but does not care to display the many medals that he has earned over the years.

Cults and Shadow Societies

There are several powerful secret societies that are the behind-the-scenes movers and shakers of Underworld 9 (and possibly beyond). Each one has a specific agenda and wields considerable power. Many members of these hidden organisations are also high-ranking members of other institutions, such as the government and corporations.

Order of the Eclipse

The Order of the Eclipse aims to bring about the destruction of the world via a glorious blazing cataclysm, a great purifying flame that will burn the presence of life from the face of the planet. The Order engages in research into extinction-level weaponry. They believe all life that exists on the planet must be extinguished in a great sacrifice, as this is the only way the Earth — and humanity — will reach a purified state in what they call the Afterlight. In this Afterlight, humanity, or at least the believers, will exist on a plane of pure energy as immortals.

Since all life must be annihilated, nuclear weaponry is of little interest to the Order. Nothing is more repulsive to them than an attempt to wipe the planet clean that fails, leaving the world to creatures like cockroaches, which are not abhorrent in and of themselves, but will be unable to continue with the Order's grand plans. This is particularly frightening to them, as life would still exist on the Earth and they would be powerless do anything about it, having failed to achieve the Afterlight for all time.

The Order has members outside U9. It was started by Dmitri Athens, a senior scientist working in Kaufmin Labs, the directed energy weapons division of defence contractor Imperial Arms. After watching the world beat itself into a disgusting state, Athens realised that humanity was best wiped from an otherwise pristine plane to create two shining states of being, the cleansed world and the Afterlight. Dmitri quit his job from Kaufmin Labs and began working full time on weapons that would, in a single stroke, extinguish life from the planet. His stumbling block was that all life had to be killed, not just the human infestation, and this had to be completed in a single instant to better preserve the "luminosity of the world." To his side flocked groups of like-minded fanatics that had fallen under his spell. The order has nearly four hundred members, and does its best to recruit individuals who have connections with major corporations or the military.

Among their numbers are a few high ranking corporate and governmental figures, one of the most notable is General Vernon Nicodemos, Augustus FLC's director of security. He is the head of a sizeable cell within U9, preying on the cynicism and despair of executives and military personnel stationed to this cesspool. He visits a secret meeting place in U9 whenever a gathering is called. This location is an abandoned coffin-complex near the eastern wall that has access to an underground facility. This facility doubles as a research centre creating small-scale prototypes of the extinction-level weaponry. They have developed and tested many different types of weapon systems in their quest for the ultimate weapon, and sell unique small arms to help further fund their research, posing as a normal military research-and-development lab.

• Gamma-Ray Laser •

This large machine-gun sized beam weapon was developed as a by-product of the Order's research into exotic high-energy explosives. It generates a gamma-ray laser beam through bombardment of a nuclear isomer such as hafnium-178 (a radioactive heavy metal element) with a lower-energy X-ray beam. The resulting "graser" beam is invisible, powerful enough to tunnel through a few hundred metres of atmosphere or a few inches of steel plate, and also produces secondary radiation poisoning (the slow burn effect). Unfortunately, the experimental weapon is also somewhat unreliable, bulky, takes time to cool after each shot, and firing it produces a hazardous backblast of hard radiation. It is nevertheless a very lethal assassination weapon, since without sophisticated radiation sensors its beam cannot be traced back to its source, it is very accurate, and a single shot can easily burn through armour (even an armoured limousine) with lethal effect.

Attributes

Item of Power 4

Item of Power "Gamma Ray Laser" Attributes

Special Attack "Graser" 4 (40 Damage, Accurate, Burning – Slow Burn, Penetrating Armour x2, Undetectable, Backblast, Limited Shots, Slow, Static, Unreliable).

Final Cost: 12 Points. The Item may also be available to Order members with the Conditional Ownership linked Defect.

The Cheitan Congregation

The Cheitan Congregation is a U9 cult that worships a powerful demonic force, a presence they refer to as the Cheitan. Unlike historical cults of demon worshippers, they believe their god does not live in any mystical Hell, but rather that it resides in the deep unexplored regions of the Andromeda Data Nebula.

The cult was founded by a cybernetically augmented woman, Janice #999 (now called Janice Allsmith), a senior neuro-technician working for Augustus FLC at Complex #424. Her day job was CC-chip implantation into newborn drone children, but her hobby and passion was researching and exploring the origins of the Andromeda Data Nebula. From her studies of CC-chip implanted children, Allsmith became convinced that a critical mass of chip-augmented consciousness was forming in the world. Its nuclei were the various Underworlds, where chips were implanted in people from cradle to grave. She was sure that would have an impact on the Nebula itself, and one day she found what she was looking for: a previously unknown data pathway in the Nebula.

She explored the newfound region, lost in awe at the immense data constructs she had uncovered, Allsmith experienced a powerful presence. The giant glittering form spoke to her of amazing secrets, hinting that she too could know such power, if only she helped it gain release from the digital prison in which it was presently trapped. She woke in her apartment days later with a new found goal — to free what she called the Cheitan, after a demon that is born of smoke.

From that point on, Allsmith experienced strong visions of the data chasm she had entered. She grew to believe that this being had been called into existence by the dark dreams of countless CC-chipped children who had been "sacrificed" to the Nebula itself. Janice spoke of the mystery she had encountered to any who would listen, hinting at untapped power, and soon acquired a devoted audience. The group is convinced that when a critical mass of cybernetically enhanced members is reached, they will be able to hold a cyber-meditation deep within the

data plane where the Cheitan exists. This will allow their demon-god to manifest from the Andromeda Data Nebula into the real world, where it will take on magnificent material form.

Janice Allsmith and several of the high ranking members in the cult occasionally visit the data chasm the Cheitan resides in and commune with it. The demon-god promises that if it is liberated from the digital realm it will give those responsible tremendous power and knowledge, perhaps allowing some of them to transfer their own existences into the Nebula, becoming immortal and omniscient. Janice believes wholeheartedly in Cheitan's words and works to that end, trying to gain the correct number of aspirants to make the ritual work and the dream come true.

The cult's operations are based in Underworld 9. They sell bizarre, custom-designed enhancements to fund their activity. They also recruit new members from among those individuals — many of them gang members or the decadent children of the wealthy — who buy their wares. Janice Allsmith performs many operations personally.

Only individuals who have at least half of their bodies enhanced are approached to join the group. Of those, only a small percentage pass the group's screening (Allsmith looks for individuals with the right mindset to become true believers, which also includes a desire for power and an appropriately mystical worldview). They are then are told of the organisation's true purpose and invited to become initiates. Janice makes sure that those who refuse the invitation never have a chance to betray the cult. As members move up through the ranks, they are given progressively more advanced hardware. Some cult leaders are almost unrecognisable as human.

Cheitan

The true nature of Cheitan is up to the GM – it could indeed be some strange cybernetic spawn of countless CC-chipped minds, a cunning super-hacker masquerading as a demon for his or her own purposes, or even a newborn self-aware artificial intelligence (such entities are not yet known to exist within the world of Underworld, but various companies are researching them).

The Menoeceus Society

This society deals solely with the pursuit of pleasure. Its members are encouraged to fulfil their deepest sensual desires, but must follow two rules: 1) In the pursuit of these goals, a member of the society is forbidden to do anything to another member without their consent (this rule does not forbid the coercion or even kidnapping of outsiders) and 2) the society must remain secret at all times — failing to obey is grounds for immediate expulsion from the society.

The society holds frequent orgies that often go beyond mere sex to explore pain and even death (many members believe death to be the ultimate pleasure and are indeed envious of those that have the experience). It is rumoured that the society posses a library of reusable I-chips depicting the varied deaths of former "playmates." These mythical I-chips are known throughout the rumour mill as "God's Is."

While many of the group's orgies take place in the luxury of high-rise mansions and opulent penthouse suites, members also hold them in the Underworlds, where it is easy to find expendable people. Behind its walls, U9 is home to a legendary underground pleasure palace, Mount Abora, which was built by the society decades ago. The Menoeceians hire security forces to scour the area for subjects to play with, and their orgies may last for weeks.

Some of the highest ranking officials in the world are members of the society, including the President of the United States and his wife. These two usually attend orgies together, incognito or via virtual reality in the Underworlds. These private parties are held under maximum security. Their "guests" seldom make it back out in one piece.

Damion Shelley (President of United States of America)

Damion began his rise to power in the House of Representatives. His ties to corplords within the energy industry were well known. His father, a House politician before him, owned several lucrative consulting firms that were often hired by megacorps such as Augustus and Imperial. The powerful relationships that his father cultivated through business helped clear a path for Damion's rise to power.

When he was finally appointed to the presidency, opponents suggested it was the result of patronage. Such criticisms fell silent after a national tragedy — rogue saboteurs successfully hacked into and secured an orbital rail gun, firing on Los Angeles; the final death toll was 15,000 people, with tens of thousands more injured.

President Shelley responded decisively, and soon reported that an FBI tactical team had stormed the hackers' headquarters, killing all the terrorists in the process. After this demonstration of decisive action in the face of national tragedy, no one questioned his competence again — although how a previously marginal hacker gang somehow stumbled on access codes for a major defence system has never been fully explained.

Since his ascent to the presidency, Shelley has ushered in an era of corporate freedom unlike any in the history of the American empire. It was his administration that was responsible for signing into law the FLC registration for megacorps, allowing them free reign overseas. He also boasts of having found a final solution to the illegal immigrant problem, funding the creation of a Secure Economic Zone on the US-Mexican border (Underworld 7), in which any illegal immigrants classed as security risks would be incarcerated, thus simultaneously solving America's need for cheap labour, increasing corporate investment in Mexico, and satisfying security concerns

President Shelley and his wife Anna are members in high standing of the Menoeceus Society. Both he and the First Lady spend a great deal of time with society members to recuperate and relax. Although security concerns prevent him personally visiting Underworld 9, he will often visit a party via virtual reality or teleoperated chip-doll. Naturally, these activities are a closely guarded secret, known only to members of his social circle such as Senator Marshall. Indeed, the President seems to spend more time in such activities than he does in the business of state.

Damion is the epitome of vacancy; his eyes are vacant of focus, his face vacant of expression, and his body vacant of purpose. His speeches lack any sort of intelligent direction and he has been known to ramble on when confronted with questions he finds challenging. Luckily for Damion, his Data Nebula presence is controlled by a room of advisors and thinkers who field questions and program responses for the digital puppet. At the behest of his advisors, the president has moved entirely toward Nebula conferences, citing security as the main reason for the shift.

Places of Interest

This section covers some of the prominent locations that can be found throughout the vast landscape of Underworld 9. Like previous sections it is not intended to be a complete or exhaustive list, but provides a sampling of what can be found in U9 and in other locations within the ring of Underworlds. GMs may wish to add other locations as appropriate to the campaign.

• Grinning Jim Interview •

"You can see the walls all shinin' in the night from just about anywhere in the U, callin' to a person. Beyond them are ideas – ideas of freedom and comfort. But I'll tell you something. I haven't told nobody this, ever – out there, beyond those stainless walls, things are just as screwed up as out here. I've been there, I know.

"I'd take the sure bullet in the skull here to the potential knife in the back out there any day. In here, at least the bullet's real and you know where it's coming from. Out there, it's a friend who's put the knife in your back and twisted it deep. I've stopped looking at the wall along time ago. It's much easier to look where you're going, and survive."

The Walls (Silver Shackles)

One feature common to all the Underworld hubs are the massive walls that ring them, cutting them off from the rest of the world. Each Underworld hub has a slightly different type of wall, reminiscent of the region and time it was constructed. By the time U9's walls were built, the process had been perfected. Surrounding the nearly 5,000 square kilometre expanse of U9 are two walls, one ringing the other, both polished to a mirror-like surface, nicknamed the "silver shackles."

The outermost wall stands an impressive 40 metres tall, 15 metres thick, and is made of reinforced, bonded AUS 6M stainless steel. Barring a massive orbital strike, it is virtually impenetrable. The only entrances through the wall are six evenly spaced gates around the perimeter — each 20 metres tall, 15 metres wide, and five metres thick — that retract into the wall when opening. They too are constructed of treated AUS 6M steel. On top of the walls, over each gate and evenly spaced between them every 1,000 metres, are massive gate towers. Each houses a pair of Microwave Area Denial (MAD) projectors for riot dispersion and vehicle neutralisation. Every 100 metres along the wall, a large "U9" is stencilled in flaking yellow paint.

U9's outer wall is patrolled by some 400 US Marines. The command of such personnel falls strictly under the jurisdiction of Colonel Dagen. He sometimes visits the walls personally to obtain reports and to oversee troop command.

The inner wall is spaced 100 metres from the outer wall, creating a staging and command area between the two. Except for its slightly smaller stature, the inner wall is an identical twin to the outer wall, including gates, armour, personnel and weaponry. The gap between the walls, called the "Trench" by those that work there, sees a constant bustle of activity as armoured caravans patrol in and out, supply trucks drive through, cargo frigates dust off, tactical choppers and hover craft endlessly circle, search lights swing back and forth on programmed search tracks, troops jog by in varying formations, and rail cars enter and leave via an underground rail system that connects the Underworlds to one another.

Made of hardened steel, polished to a mirror level of smoothness, and slanted at a severe angle to the ground: the walls are virtually unclimbable to most Underworlders. No one has ever successfully survived a climb, although many have died in the attempt. Flying over the wall (by stealing an air car or helicopter) is no more likely to succeed, thanks to the nano-mist dome that rises above the walls themselves, opening only to aircraft with the proper codes.

There is a large holo-sign placed atop a section of the wall for all to see that reads: *To date, 1846 Drones Shot. 352 Drones Fall. 0 Drones Escaped.* Every so often, the numbers update.

In reality there have been escapees from U9, albeit very few. The drifters are the ones that find the most clever ways of getting beyond the walls; inherently distrustful and afraid of the outside world, they usually only do this to get to other Underworlds via corporate frigate or U-rail. The escapes go largely unreported due to the potential unrest it could cause among inmates, but whispers of successful escapes can be heard if one knows where to listen.

The Underworld 9 Joint Garrison Force

This is the US Military's armed presence in Underworld 9. Commanded by Colonel Dagen, it consists of an under-strength battalion of US Marines and a small team of elite (and heavily cyber-enhanced) Navy SEALs for special missions. It has two duties.

The Joint Garrison Force is responsible for the external protection of U9 in concert with the Thai government. There are still anti-American guerrillas in Thailand who (understandably) oppose the foreign occupation of one of their cities (and resent American support of the puppet Thai government). They are usually handled by the Royal Thai Army plus US Special Forces advisors who patrol the surrounding countryside, but the immediate perimeter for up to 10 km around U9 — including the Wall, the end of the rail line, and the trash wastes — are the responsibility of the Joint Garrison Force. Due to their heavy firepower, the Marines are rarely challenged, although they have occasionally had skirmishes with the various "crazy riff-raff" who inhabit the wastes. If a prisoner escapes over the Walls or through the mist, they are also responsible for tracking them down, but this is an exceptional occurrence.

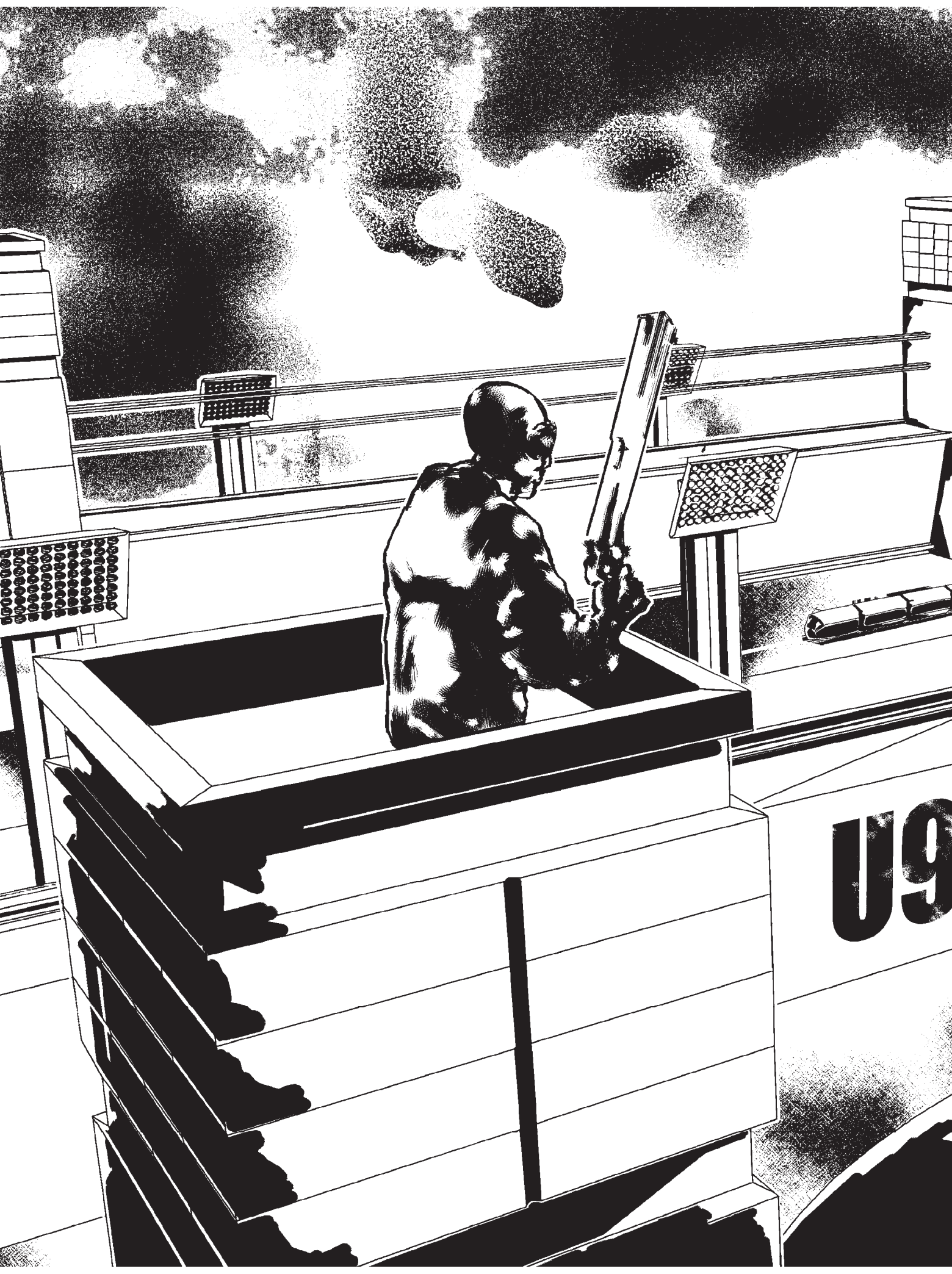
The second duty is to provide security for visiting political dignitaries or military brass, a job that is primarily handled by the elite SEAL team. Since some of the corporations based at Underworld 9 are also engaged in military production or development, there is often a member of one congressional committee or another visiting on a fact finding or photo-op tour (wanting to look tough on defence). Alternatively, there may also be a visiting general or colonel seeking first-hand details of the latest Anubis military chip or Augustus combat cyberware mod.

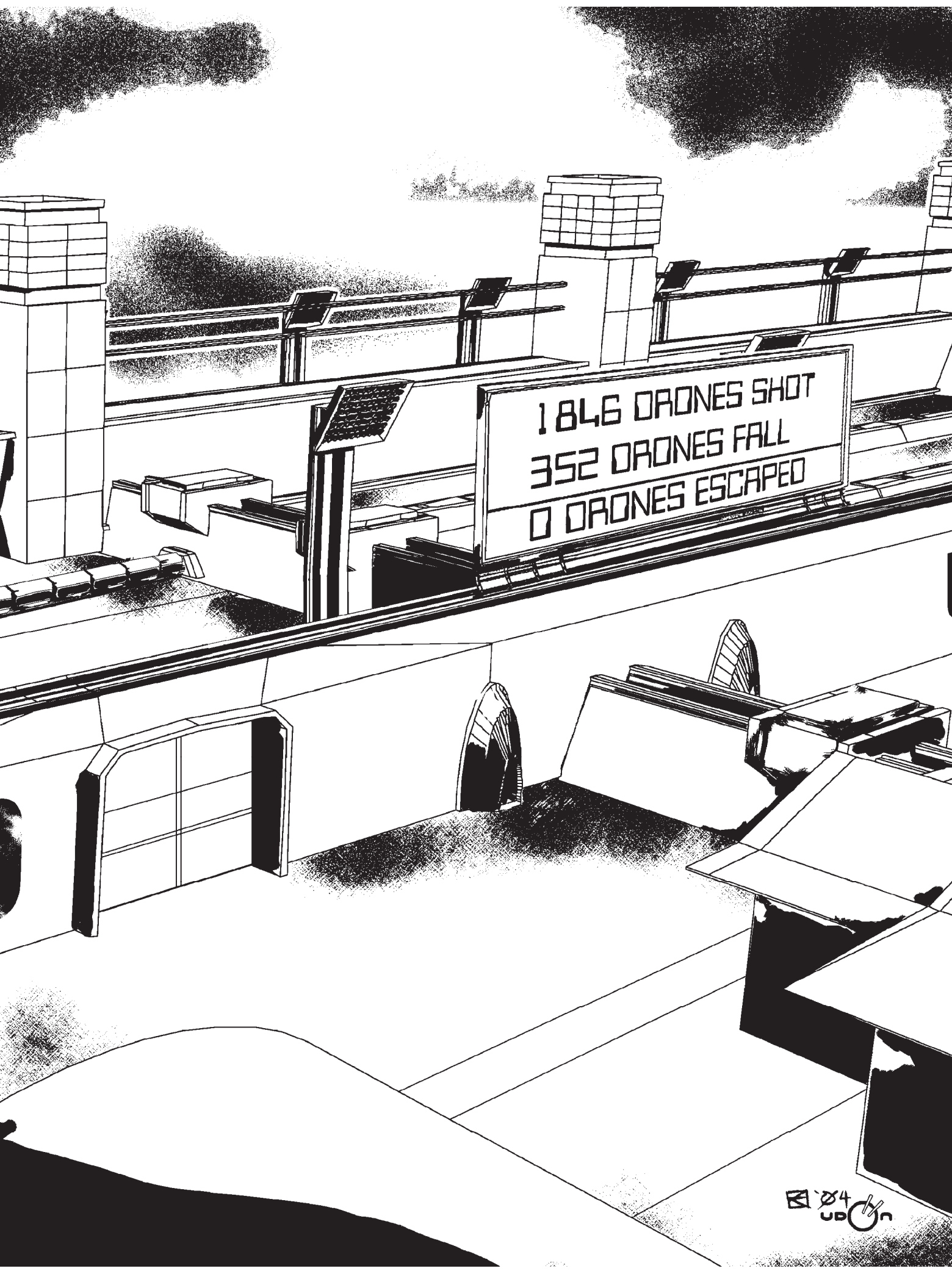
Although Colonel Dagen or his staff officers try to keep visitors out of trouble, newcomers will sometimes wish to visit the fleshpots of Underworld or poke their noses into dangerous areas. When they get in over their heads, the Marines or SEALS will often intervene directly, not trusting local security.

The Trash Wastes

Stretching far into the distance like a vast corrupted desert are the Trash Wastes. Near the eastern wall, millions of tons of the outside's garbage is dropped via dump-frigate; scores of the bulky black craft can be seen flying high over the walls and releasing their payloads of the world's discards. The sheer amount of garbage that comes into the area every day is a testament to the waste produced by the outside world — never in the history of the planet have people thrown away so much per capita as they do now.

The geography of the Wastes is similar to a desert — there are large flats, featureless except for the myriad materials that make up the area. Huge dunes and slip faces of trash are there as well, along with trenches and pathways that have also been cut into garbage mounds. In all directions, there is nothing but a mass of pungent waste. As the saying goes, though: one man's trash is another man's treasure. In a place where even the bare essentials of survival are nearly impossible to come by, this saying is true more now than ever before.


U9


1846 DRONES SHOT
352 DRONES FALL
0 DRONES ESCAPED
'04
UDON

Since the outside world disposes of its waste at an accelerated rate, the variety of what can be found here is great: chipboards, whole computers, raw materials, tools, food, I-chips, sensor equipment, weaponry, vehicular parts, chemicals — these are but a few of the things buried in the secrets of the Wastes. For those brave enough to venture forth into this wilderness of filth, untold gems can be uncovered. There are dangers in the Wastes, however: among them, beasts known as waste snakes, and a tribe of mysterious wild men that have made their home in this trash desert.

The Feeders

No one knows exactly when the tribe took up residence amongst the mounds of trash, but they have lived there throughout the past decade. Very little is known about this enigmatic group, who call themselves the Feeders. They are led by a man called Shaman (see page 204), of whom many rumours abound.

When Shaman led his first followers into the Wastes, they soon learned that a vast amount of resources could be found there once the corps accelerated their dumping programs over a decade ago. They built makeshift shacks in the more "settled" regions, where the dump-frigates were less likely to disgorge new tonnes of rubbish. The Feeders rummaged through the "offerings" from the outside, and found many useful items, including basic weapons, plates of metal that they have fashioned into armour, and materials used to create and furnish the dug-outs that serve them as dwellings. Word of their prosperity spread, and a handful of people made their own way toward the wretched mounds of garbage, hoping to find something ... anything. They were met by the well-armed inhabitants of the waste, who gave them a choice: leave, join, or die. The Feeders successfully defended their lands, and through this process the tribe has grown to over a hundred strong.

Through the many discarded disks and books they found, the tribe has learned a great deal of information about the outside world. Shaman has gleaned from his many digi-mags that, except for the very wealthy, much of the outside world is as empty and impoverished as within the walls.

View of the Outside

Of course, not all of the information the Feeders believe about the outside world is accurate or true – it has led them to believe in a distorted dystopia beyond the Walls, where everyone looks beautiful, but whose lives are filled with extreme violence, deadly intrigue, world-threatening disasters, and insipid romance.

Imagine being isolated in the desert, and sifting through Hollywood movie posters, holographic magazines overflowing with celebrity gossip, and thousands of romance novels. Feel free to use the Feeders to create elaborate fantasies of what may lie beyond the Walls. Of course there are sources of better information in the Wastes, but they are often harder to find for the cruft.

Among certain circles of U9, rumour has spread that Shaman knows how to successfully remove the CC-chip from someone's head without driving him insane or killing him. The entire tribe of Feeders are free from the limited CC-chip; many have had it removed entirely, while some have opted to have only the governor, ID, and neural blocks removed, enjoying access to the vast array of knowledge that the chip allows.

Shaman can either remove a CC-chip, or augment it so that all channels available to outsiders are available to U9'ers. Reaching him for the procedure, however, is extremely dangerous. Shaman usually has a steep price for his expertise that one cannot pay with U-dollars; he often requests bizarre and dangerous pilgrimages to be performed for his services.

Today, the Feeders almost never leave the Wastes for the rest of Underworld. They eagerly await the day the dump-frigates pile the trash so high that they can simply walk over the Walls. They have found a way to live in concert with the waste snakes (see page 230) found there.

The Feeders have had a few encounters with the US Marines that occasionally patrol these wastelands. The soldiers are convinced they are harmless savages and so rarely bother them. For their part, the tribe see the Marines as more machines than human, since their encounters are usually only with drones or fully-armoured soldiers in sealed suits.

Waste Snake

Escapees from a long-forgotten genetics lab that managed to breed true, these vicious serpents sometimes reach 50 metres in length and a full metre in diameter. They move through the mounds and flats of the Trash Wastes as easily as if they were swimming through the ocean. Sometimes their grey mottled bodies can be seen cresting the surface of detritus and then diving back down again, vanishing. When they attack they do so from beneath, slithering their way up to the surface and then biting and slashing with razor-sharp ridges that run the length of their bodies, only to dive under again, invulnerable to reprisal. There they wait, lurking, only to attack again when it is least unexpected.

• Waste Snake •

50 Character Points

Body 10	Attack Combat Value 7
Mind 2	Defence Combat Value 7
Soul 3	Health Points 105
	Shock 21

Attributes

Attack Combat Mastery 2, Armour 1 (-1; Thin area, underbelly), Combat Technique 1 (Lightning Reflexes), Defence Combat Mastery 4, Heightened Senses 2 (Infrared Vision, Smell), Natural Weapons 2 (Fangs, Spines), Special Defence 1 (Poison), Special Movement 1 (Slithering), Superstrength 1, Tough 2

Skills

Area Knowledge 1 (Trash Wastes), Unarmed Attack 2 (Striking), Wilderness Survival 3 (Desert)

Defects

Awkward Size -3, Marked (Mutant snake) -3, Physical Impairment (No Limbs; Cannot Speak) -4, Unskilled -1

Waste snakes are vigilant and cunning hunters; they are patient and strike like lightning. The Feeders have recognised these traits in them and have learned to share the wastes with them, even training them as feral attack beasts to help fend off their enemies.

Manufacturing Plants

There are numerous manufacturing plants throughout Underworld 9 (and the entire greater Underworld ring), owned and operated by the megacorps themselves. Within the walls of the Underworlds plants, life and labour is cheap and plentiful — the corps are able to sustain incredible profit margins because of this. All they need do is provide just enough to keep the drones alive to work another day — or failing that, long enough to have bred a replacement. Below is a small sample of the plants found throughout Underworld. The most powerful of the corps have hundreds of such facilities.

Augustus FLC's Complex 424

Sitting near the heart of U9 is a black fortress, walled, guarded, and monolithic. C-424 is stencilled on the gates in massive yellow letters. Known officially as Complex 424, or C-424 by the locals, this is the crown jewel of Augustus's many manufacturing plants, producing more product than the next three plants in their stable combined.

Each day, Complex 424 opens its main gates at 5:00 am. A platoon of Augustus underdog security troopers marches forth in preparation for the incoming and exiting shifts. At 6:30 am exactly, the gates close and lock for the day and work begins. Any one of the 75,000 plus drones unfortunate enough to be left outside loses their seat effective immediately; while they can reapply for another position, the waiting list is sixteen months long. In the meantime, they have to fend for themselves on the very unforgiving streets of U9. Supplies, pickups, and deliveries all occur in an underground loading dock, accessible only through a complex tunnel system. At 6:30 p.m. the process is repeated with one shift replacing the other, in an unending cycle. Drones collect their minimal pay at the end of each work day.

The drones of Complex 424 manufacture three main consumer products: CC-chips (which allow access to the Andromeda Data Nebula), simple satellite circuitry, and Nan-O Soda. Each type of product is manufactured on a different level of the massive plant.

The 75,000 drones are kept in check by the armoured underdog troopers who regularly patrol the facility, keeping watch over the drones and ensuring productivity and compliance. Any drone that is found to be out of line is warned, usually with a severe beating; if an underdog notes a second infraction within a 30 day period, their CC-chip sends a termination signal to all underdogs, indicating that the drone is to be summarily executed. Many of the workers spend the work day staring at the bloody machines of the drones that have come before them, a constant reminder of what happens to those that cross the will of the corplords.

On the main wall of each manufacturing level are two items. On one wall is a massive, 10-metre-tall holo-portrait of Brent Marshall, the resident corplord of Augustus that changes daily to reflect his outfit. On the facing wall, high above the many heads of the workers, is a ticker in bright red numbers counting away the day's unit quota — if the workers do not meet the day's quota, they are subjected to the corporation's submissions until the quota is met, no matter how long they must be forced to remain awake to do so. All second shifts are directed to overflow work areas where they wait or fill in as necessary.

Anubis's Chrome Farm 1

Not too far from the dark structures of Complex 424 is Anubis's Chrome Farm 1, where the majority of the world's cyberware is tested, manufactured, and shipped out. Not as expansive as Complex 424 but significantly taller, the steel walls of Chrome Farm 1's single tower rise 50 stories above the dense streets of U9, shining even in the murky daylight

The facility houses a maximum of 50,000 drones, all of whom undergo multiple daily clean-sprays — a constant micro-mist sprayed between the main gates and in key corridors that kills or incapacitates all viruses, bacteria, and nanotech. This also kills the addiction from Nan-O Soda (page 239); the fact that Anubis drones consume less of it than those working for other companies has been noted by some advertising executives, but the connection to its secret addictive properties has yet to be made. The spray has reportedly increased genetic mutation in those exposed, sometimes resulting in death or strange body mutations, but nothing has been done to halt the spraying — if anything the amount and potency of the chemical has been increased to combat elevated viral attacks against hardware research.

About half of the workers in Chrome Farm 1 are engaged in tedious micro-assembly activities, often in close partnership with teleoperated machinery (some in U9, some in plants elsewhere in the world). Another quarter are involved in various support functions, ranging from removal of toxic chemicals used in manufacturing to maintenance on various machines, air ducts, and so on. A cost-benefit analysis was performed early on to evaluate the role of machines performing these tasks, but humans are still cheaper than machines for anything involving basic motor skills.

The remainder of the Anubis workers are "quality assurance and human factor" specialists. This job involves serving as a final guinea pig for cyberware testing. In essence, these drones are continually being taken apart and put together again to make sure newly installed cyberware (especially neuroware) interfaces properly.

The drones unfortunate enough to be assigned this work spend most of their days in hospital beds or undergoing painful and destructive "stress testing" trial programs. During these trials, new compounds are implanted to determine what levels of shielding or safety precautions are needed for the cyberware. The compounds vary in type: many are carcinogenic, while some are radioactive (intended as power sources). The most hazardous jobs are testing cyberware intended for life support, such as gill implants.

In some cases, the subjects are allowed to "take home" cyberware with them as part of long-term wear-and-tear test programs; this may grant them certain abilities, but the more potent capabilities are locked down by their CC-chips when they leave the complex. Of course, mistakes sometimes happen and there have been several cases in which a drone is accidentally released with a fully-enabled (but often bug-ridden) prototype, which then has to be recovered.

The 52 stories of the building are divided into work stations for specific bodily systems such as eyes, arms, legs, nervous system, blood system, etc. Workers are branded with security tattoos upon their necks to designate what floor they work on, using a simple iconic system: arms for arms levels, eyes for eyes, etc. The tattoos themselves have chemo-emitters that trigger plant-wide receptors, which corp underdogs can access with their CC chips through the Andromeda Data Nebula to locate individuals. If a worker is not in his or her designated place when expected, that worker is punished. If the infraction occurs again, they are killed.

Imperial's Core Facility

The Core Facility is made of standard cinder block, a grey and unimpressive block on the skyline of U9. A 15-metre-tall stylised depiction of a black crown on a field of yellow — the logo of Imperial — is painted on the entrance gates to the Core. Surrounding the outer walls of the building is a simple sonic fence, which will neatly cut to pieces anyone who crosses it. Although Imperial claims that the squat, orange transmitter posts are an obvious warning, street people have marked out a

boundary of paint and trash, so as to try to avoid accidents. The only way through the sonic fence is to wear the correct null-frequency generator, which cancels out the signal.

• SONIC FENCE •

A sonic fence projects an invisible infrasonic energy field between fence posts (spaced every five metres around the complex, except for the heavily-guarded gates). The fence is 10 metres high and a metre thick. Approaching within a few metres of the field, a tooth-jarring vibration can be not merely heard, but felt ... enough warning that most will not cross. Anyone who does suffers a 40 damage attack (vibrating them to pieces). To cross, a person must not only survive the damage but also not be incapacitated by shock (page 99): someone who suffers shock and is stunned as a result will be caught in the fence and continue to take damage each round until pulled free by a friend. The fence is controlled from a security centre inside the complex.

All 40,000 drones enter through two central fences, maintaining roughly the same shift schedule as the other plants of U9. The building itself appears to be only a couple of stories tall, but the facility actually descends into the ground for 20 stories. Belowground, the only sources of light are artificial blue-white neon lights that make a constant dull humming sound, giving the whole facility a deathly blue pallor.

Since the main product of Imperial is the production, expansion, and perfecting of the Andromeda Data Nebula, one important role of drones is to act as guinea pigs for testing new hardware and software. Of all the corp jobs in Underworld, this shift takes up the least hours and pays best — paying nearly three times as much as cyberware testing for Anubis. Drones who are assigned to this duty enter into the Core and proceed to lock themselves into neuropods — steel spheres that clamp over the head, secure at the neck and around the chest and then raise into the air about a metre up.

Core groups of drones are lifted in this manner, hanging in grids of 20 by 20. Multiple phase-needles are then inserted into various parts of the drones' brains, based on what experiments are conducted that day — a very uncomfortable experience that the drones undergo for four to six hours at a time without anaesthesia, their brains seen as nothing more than extra machinery for Imperial to exploit. The neuropod then transfers control over all brain function of the drone to remote scientists housed thousands of kilometres away. Some of the subjects are used to provide extra neural processing power, while others serve as lab animals for testing new modes of digital experience. It is not uncommon for workers to be driven insane or killed by these experiments; the corporate euphemism for this result is brain-crashing.

If they are not undergoing Nebula testing, drones are expected to either maintain the plant and machinery or work the production lines, where new chips and control electronics are manufactured. They are also responsible for bringing the brain-crashed down to human resources, where they are transported to the outskirts of the Trash Wastes and discarded.

The Sex Pits

The so-called Sex Pits are infamous wet rooms, or brothels, where all manner of carnal acts are perpetrated by the rich upon the weak and desperate. Whatever peculiar, deranged, kinky, or avant-garde appetite one may have, it can be satiated here — as long as you have enough money.

The Doll is one of the most famous of these establishments, but many more dot the landscape of U9, blinking in and out of existence with the tides of serendipity and power.

The Doll

Deep in the heart of Genovese territory is the most infamous wet room in U9: the Doll. A three story building of no special architecture opens out onto an alley, lit with a holo-sign of a cute child's doll. The interior of The Doll is nearly devoid of decoration — steel and painted pipes run from floor to ceiling. Standing against each wall is a Genovese guard, heavily armed and ready to deal with any problems.

Small 3.5 by 3.5 metre rooms line the corridors of the three floors, making up 25 rooms per floor. These small cubes function as sex rooms, the majority of which are reserved for the club's speciality — chip dolls. These remote-control hookers respond to a patron's every desire via teleoperation (see page 113). The Genoveses don't care what is done with or to any of the Dolls, as long as they are fully paid in advance.

The rest of the rooms are devoted to other varied sexual appetites, fulfilling the desires of the more powerful of society's elite (who often clandestinely come to U9 specifically to visit The Doll). A reported frequent visitor to the Doll, and user of many a chip doll, is Senator Dan Marshall.

Scalpel Shops

Scalpel shops are places where people in the market can find a tech-surgeon to operate and install cyberware. Sometimes actual cyberware can be purchased there as well. These shops are traditionally run by one of the Yakuza clans, but other independent businesses have cropped up over time throughout U9. Most of these lack the profile to draw much attention from the clans (these lesser-known shops have success rates that are as low as 50%; post-operative infection is almost a given; in game terms, Electronics and Medical Skills rarely exceed Level 1). Due to the low profile and consequent lack of skill in the low end shops, risk of death or injury is increased. What they lack in safety, however, they make up for in privacy; anonymity and secrecy is maintained allowing would be cyber-buyers to keep news of their new mods away from prying eyes.

Caju's

On the outskirts of the Bone River territory is Caju's, a nondescript, unmarked building of smallish size. A painted red leaf in one of the lower windows is the only indicator for those in the know that something special lies within.

Run by a one-eyed tech-surgeon of the Bone River, the scalpel shop is one of the best in U9. Caju himself despises cyberware, and therefore refuses to replace his own lost eye with anything more advanced than an eye patch. Nonetheless, he is a skilled surgeon with a success rate over 90%. He doesn't come cheap — his prices far outweigh any in U9, but in Underworld you get what you pay for. Caju is known for getting the job right the first (or second) time.

The trick with any scalpel shop is actually finding it, of course, and Caju's is no different. Connections and real cash will uncover the location, however. The second hurdle is more difficult: getting permission from the Bone River to get work done. The River is extremely careful as to whom they permit to stalk the streets with cyberware.

The Bone River

The location that gave the famous Yakuza clan their name was originally a water reclamation and purification thoroughfare. When a chemical explosion broke the walls and its contents drained into the streets, what was left was a wash of bones — naturally dubbed the Bone River. No one remembers Purification Plant G-357 anymore, but everyone knows the Bone River. The river itself is approximately 10 kilometres long and meanders through various districts of U9. The plant has never been repaired, nor are there any plans to fix it in the near future.

While most remains have been picked clean, bodies are still added to the river (and not always by the Bone River Clan), so there is always a chance of finding something of interest there, such as clothing, weaponry, or other items of value. Some bodies are dumped quickly without being stripped; those who are on the scene fast enough can usually grab something useful — if they can fight off the other scavengers for the privilege.

• Mud Pups •

Mud pups, despite their cute name, are anything but. They are distorted hound-like creatures with unevenly scaled hides, who hunt the Sludge Sea looking for food. They are seemingly immune to the poisonous fumes given off by the corrupted oceanic body. An adult pup stands about one metre at the shoulder and has a massively large head in comparison to its body. A single row of jagged fangs fills a mud pup's wide, slavering maw, and their webbed paws end in jagged claws.

Mud pups typically hunt in packs of about a dozen and are extremely territorial, using the vacant apartment complexes that once housed drones as their dens. Despite the wretched odours of the place, mud pups can track quite effectively by smell; once they are on a trail, it is very hard to shake them.

35 Character Points

Body 7	Attack Combat Value 5
Mind 3	Defence Combat Value 3
Soul 3	Health Points 70
	Shock 14

Attributes

Armour 1 (-2; Unarmoured area, patchy scales), Adaptation 1 (Noxious Gases), Attack Combat Mastery 1, Defence Combat Mastery 1, Heightened Senses 2 (Smell x2), Natural Weapons 2 (Claws, Fangs), Tough 1, Water Speed 2

Skills

Area Knowledge (Sludge Sea) 1, Unarmed Attack (Striking, Overbearing) 1

Defects

Marked (Mutant) -3, Physical Impairment (No Hands; Cannot Speak) -3, Unskilled -2

Sludge Sea

The Sludge Sea is an expanse of bubbling muck, broken up by odd patches of swirling mud and steaming flats. At night the sea glows a soft green, fading to a deep orange at sunrise.

The sea originated outside the Walls of U9. An adjacent, experimental, chemical plant melted down, creating a hazard zone of unmatched proportions. The site was never properly cleaned, and all responsible parties either shifted businesses or refused to take part in any legal proceedings. The corps, seeing an opportunity, declared the place an official hazmat drop zone and have been dumping there ever since. The volume of waste has grown so great that it has seeped under the walls of U9 into what was once living space for the drones. Apartment-coffin complexes can still be seen, rising from the glowing muck like giant skeletal hives.

Much can be found in the ruins of the Sludge Sea, if one can get there safely through the sink holes and past the packs of mud pups (see left). It's rumoured that if one could actually make it to the section of wall that borders the sea, there is a way out of U9. No one who has attempted it, however, has ever returned.

Sludge Sea

The vapours of the Sludge Sea will cause the loss of 2 Health Points per hour to anyone in the area who lacks appropriate protection, such as Adaptation (Noxious Vapours) or no need to breathe. A Level of Special Defence (Poison) halves this damage; two Levels eliminates it.

The U-Rail

The U-rail is a catch-all term for the complex of magnetic levitation rail systems that connects the Underworld hubs to one another. These rail systems have a variety of functions, including transporting: supplies for corporations; military or research personnel who are forced to visit facilities; and large numbers of troops when changing divisions, or when an alert is triggered.

The exact configuration of the rail system varies from Underworld hub to Underworld hub, but the U-rail in U9 is predominantly underground, having stations positioned under four of the six gates in the Wall, at each cardinal direction. The stations are accessible from both the inner and outer walls via a heavily armoured dual gate system. Many say stowing away on an outbound U-rail train is impossible, but numerous drifters — such as Grinning Jim — have accomplished the task and lived to tell about it. Drifters will often boast about their exploits, but rarely provide concrete information of how they got aboard unless the payoff for such info is very, very good.

The trains themselves are magnetic-levitation vehicles. The dull grey compression-composite cars are aerodynamic and rounded for minimum drag.

Magnetic-Levitation Trains

A train has Speed 500, MB -2, and (per car): Size 5, People 40, Cargo 10 tonnes, Armour 10, Health Points 120. The trains are automated with no onboard drivers.

They are fitted to one another with stress-relaxed polymers, leaving no appreciable seam between them while allowing the joints to flex while maintaining maximum strength. From a distance, the train resembles a long grey worm speeding its way along the tracks. When the train reaches its maximum speed of 500 kph, it becomes nothing more than a featureless blur.

The Trench

Perhaps the most infamous bar in Underworld 9 is a spot called the Trench. It lies deep in Diliberti territory, but people of all stripes find it a place to gather because of the family's general neutral stance.

The Trench is named after the wide gap that lies between the outer and inner walls of U9, and so tries to mimic the look of the actual trench itself. The floor is worn plasti-cement, while the walls of the bar resemble the actual walls of Underworld — once brightly polished, the rusty, cheap steel gives the place an oppressive, claustrophobic feel. Steel alcoves, smelling of beer and vomit, line the perimeter of the bar, offering a significant amount of privacy for those needing it. The centre of the bar is lined with bolted down steel chairs and tables, rusted to match the walls, except for a dug out pit where some of the bar's "entertainment" takes place.

What makes the Trench vastly different from any other bar in U9 is that it is a cadaver bar — a bar that caters to necrophiliacs. Cadavers are brought in on a regular basis, and left in the back apartments to be used for the carnal pleasures of the well-paying. One lucky cadaver is chosen each night and placed in the centre pit to be auctioned off; the winner can have his way with him/her/it, for the entire bar to see. This place isn't for the faint of heart.

Underworld Dollars

To ensure that Underworlders were completely cut off from the outside world, the corplords dreamed up an economic scheme based on the American company towns of the late 1800s-early 1900s, where companies owned both the towns and the stores where their workers lived and shopped, and paid their employees in company script instead of money, keeping them dependant on their employer for everything.

By this method, all of the Underworld hubs would use one currency, separate from (and valueless in) the outside world. Even if an Underworlder were to somehow escape, he or she would have a reduced chance of surviving on the outside with money that isn't accepted there. The plan also served to remove Underworld from any economic impact on the outside world, such as GNP calculations. For all intents and purposes, the Underworld hubs don't exist to the outside.

Physically, U-dollars are grey, rectangular bills. On the front, there is a map of the world linking Underworld hubs like a giant constellation; on the back, the logos and names of the great corporations are featured, such as Anubis, Augustus, and Imperial. Just like outside currency, all bills are printed so that counterfeiting is an extremely difficult — though not impossible — task.

Because U-dollars are considered a lesser currency, actual outside world dollars (United States currency has become the currency of the world) are highly sought after in Underworld. There are those who will convert currencies within U9 — it takes about 100 U-dollars to equal a single world dollar, and the money changer takes a fee on top of that, roughly 20%. Some hard to get items in U9 can only be bought using world dollars.

Bills come in standard denominations: $.50, $1, $2, $5, $10, $20, $50, and $100. There are no coins in Underworld; all transactions are in $.50 increments, and there are no taxes.

Character Points and Campaign Styles

Characters in Underworld are normally designed with 75 — 125 Character Points. 75 Points represents raw, but capable individuals; 100 Points indicates characters have considerable experience and some deadly tricks; 125 Points represents savvy adventurers who can or will cut a niche for themselves.

Templates

Drones will normally have the tech template, although the average drone will be fairly low in Point total (30-60 Points) and will have the Owned (2 BP) Defect.

Drifters will usually have either the tech or street punk template, or the investigator template if suitably skilled in ferreting out information.*

Gang members and low-ranking mob soldiers will have the street punk template.

Corporate security will have the investigator or street samurai templates, depending on their background. Corporate paper-pushers at lieutenant rank and higher (including security directors) may count as suits, unless they come from a military background.

Marines and SEALS are best built as street samurai or teleoperators, depending on whether they are frontline soldiers or vehicle/robot operators.

Professionals such as cyber-surgeons will have the medic or tech template as appropriate to their training.

Yakuza and Mafia will have either the suit or street samurai template, while Pack members all count as street samurai.

Media journalists will have the investigator or suit templates, depending on whether they are PR flaks or true reporters.

Corporate middle managers, bureaucrats, and officers will use the suit template.

* With the permission of the GM, a player may start with a drifter character. He or she will have an advanced knowledge of U9, which could be of great use to the other PCs – and will possibly be Wanted by an organisation or group for having seen too much.

Confined Movement

Note: All Permanent Residents (PR class) inmates of Underworld 9 (drones, Yakuza and Mafia, gang members, most drifters) will have the Confined Movement (1 BP) Defect.

Underworld Technology

All technology described in Chapters 3 and 10 is available through various means in Underworld except the following: Morphing Weapon Arm, Accelerated Growth Tanks, Nanodoc, Nanosurgeon, Nanofabricators, Self-Aware A.I. Computers, Self-Aware Robots.

GMs may approve some of this tech as experimental prototypes.

Protein Paste

The majority of the populace has to live on a regimen of grey protein paste. It is cheap and widely available at corner dispensaries and in the factories, but not very satisfying. It does contain enough vitamins and supplements so that two daily doses are enough to keep a person alive.

Because meat is so scarce, and the population (intentionally so) out of control, people have resorted to eating one another. Meat of any form is a delicacy in Underworld

Andromeda Data Nebula

The Andromeda Data Nebula (ADN) was developed by Imperial FLC, with the help of generous government research grants and corporate welfare. Imperial maintains ownership of the entire Nebula. Consumers can still use the remnants of the old internet, but it is both swarming with viruses (some possibly placed there by Imperial) and lacking in content compared to the ADN. In addition, the Internet is still primarily dependent upon physical cables and modems, while the ADN is wireless and can be accessed anytime, anywhere.

While larger home-centre machines are capable of accessing information on the ADN using displays such as large format holo-screens, people usually interact with it through the versatile CC-chip. With the CC-chip, they are able to access the ADN from any location, using retinal display screens to experience immersive full-sensory simulations. What can be found on the ADN is similar to what could be found on the antiquated internet, only millions of times more complex. All desired information can be sought out and all sorts of vicarious thrills are available there, including the ubiquitous porn services that have always been at the leading edge of advanced network technology. The ADN also allows communication between users, either through virtual conferencing or point-to-point via retinal display.

The potential expanse of the ADN is limitless, but the GM should either limit or expand its capabilities as best serves his or her campaign. Use the rules for the virtuality net, in combination with the ability to download sensory interface (SIN) directly from the net for those possessing full access Underworlders are instead forced to use the I-Chips; see page 238 for more information.

Access and the CC-Chip

There are five levels of access of the Andromeda Data Nebula, which can be accessed through a CC-chip, terminal, and so forth.

The first level, priority access, is granted only to high level governmental officials, designated law enforcement, and high ranking corplords. Access to this level requires the Organisational Ties Attribute at Level 6+. This gives access to various secure channels with direct access to high levels of government and exclusive virtual planets (see below), frequented by the wealthy and powerful.

The second level is designated as premium service. This service is the most expensive service and allows full access to the ADN, barring secured nodes reserved for level one. This level is normally provided to all corporate managers, military officers, and professionals such as journalists or researchers. Anyone with Organisational Ties above Level 2 to a media service, a corporation, or the military will have premium service.

The third level is standard service. It grants access to most nodes, but not premium ones or services devoted to real time three-dimensional viewing of sporting and other events. Essentially, this level of access is provided for all normal citizens as a basic utility, but is not available to Underworlders.

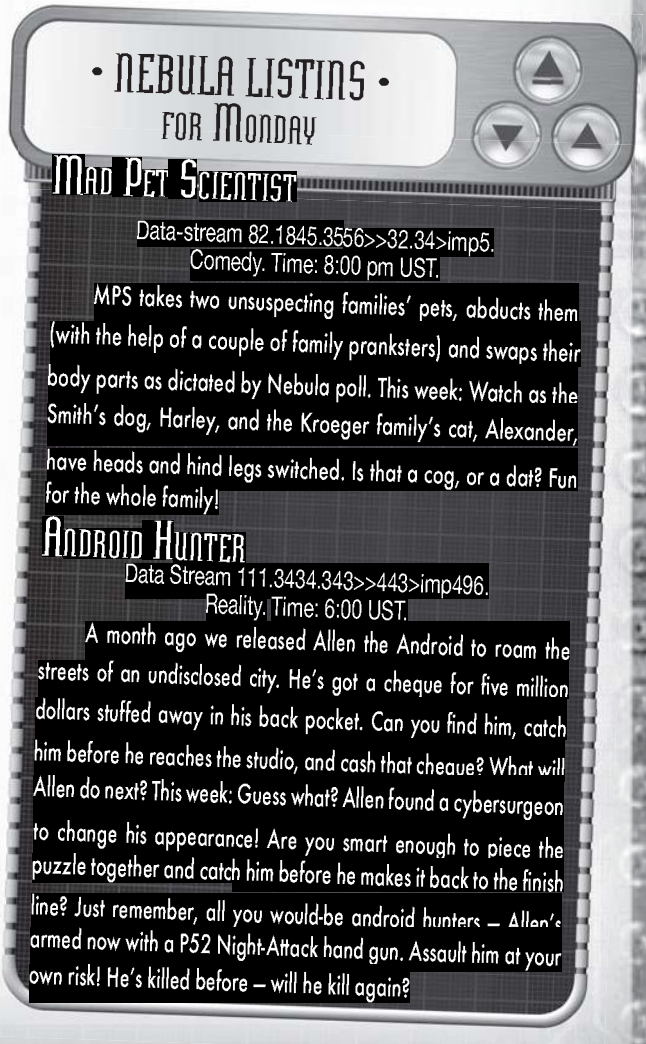
The fourth level is typically designed for children's viewing, severely limiting access to the ADN as a whole. It restricts access to various commercial and "adult" parts of the ADN.

The fifth level is designed specially for Underworlders. It actually has nodes that the other levels do not, aimed at propaganda and misinformation. Many information nodes are not available at this level. Anything that would contradict the propaganda being given to the drones, such as news, is filtered out.

Altering a chip can allow an individual to gain a higher level of access with their CC-chip. Only one level may be gained per operation. An individual must first acclimatise to the new level before upgrading again, which takes (20 - Soul) weeks.

Level one access cannot be achieved via simple manipulation of the chip. Gaining primary access should require an involved and complex adventure, if it is possible at all.

The stories of the few who have had their chips altered are usually not credited by the Underworld populace at large, especially if they try to convince people of the truth about the world versus the propaganda they've been fed. Of course, with death rates being what they are, many don't survive that long anyway. If security forces



learn that an Underworld chip has been hacked to grant higher access, they are have standing orders to terminate that individual on sight.

Popular Entertainment on the ADN

Millions of data streams are available to the average customer, covering topics such as politics, sports, adult content, movies, virtual bars, and so on. Entertainment is often interactive, relying on viewer participation to determine events and shape stories — thus effectively self-tailoring it to the "lowest common denominator" of public taste.

The primary use of the Andromeda Data Nebula by consumers with premium or higher access is virtual reality sensory input. This allows the data consumer to actually experience certain events, such as sporting events or soap operas, as if her of she were an invisible viewer, stationed wherever they wish within the action. For example, a viewer with a premium rating could watch a sporting event as if he or she were actually on the field, existing as a ghost of sorts. The viewer can control "camera" angles, focus, direction, and zoom (this is accomplished through the use of nanocloud "smart dust" cameras and transmitters, which allow the viewer to have a completely unique perspective on the action). Some individuals are so adept at picking the best locations on the field that they have become "ghost directors" and allow third-party viewers to tap into their viewpoints, making choices for a wider audience. A few ghost directors have become quite famous doing this and now charge a fee for their services.

Some individuals have become addicted to this form of programming as a way of directly experiencing adult entertainment; full-sim broadcast orgy rooms and the darker snuff channels are popular favourites.

People who become severely addicted and spend copious amounts of time in Nebula Space are referred to as fades: "Yeah, he's been a fade for years. I wonder how there's anything left of 'em on the inside, ya know?"

The ADN and Underworld

Underworlders who are classed as permanent residents access the ADN through small home terminals and their tagged CC-chips (see page 235). The ADN available to Underworld is censored (fifth-level access only), severely restricting access to world information. Such things as world news, libraries, facilities of higher learning, and so forth are off limits or altered to serve as propaganda. Above all, the people of Underworld must be convinced that what they do is for the good of their country, that it needs their services to prosper. They must also be convinced that the rest of the world is not that much better off — that they are somehow safe within the walls, and that outside lies uncertainty and death.

Underworlders that have the blocks properly cleared from their chips usually experience an overload of sorts. Many fall unconscious from the strain, while a small percentage are driven mad. Survivors gain untraceable access to the ADN. Aside from complete access to information, the Underworlder gains freedom from the insidious governor functions of the chip, such as its daily propaganda transmissions and stimulated wakefulness.

In game terms, the GM may allow characters who disable the CC-chip governor functions to pay off the Character Point cost of an upgrade by taking a mental Defect such as Blind Fury, Recurring Nightmares, or Phobia.

All transient residents in Underworld (corporate security, managers, corplords, etc.) have access to an unfiltered ADN through both their own CC- chips and secure terminals in various manufacturing plants, military facilities, and secret locations. These terminals are always well guarded. Although these systems are mobile — no bigger than a present day laptop — stealing them would do the thief little good; the terminals can easily be tracked and destroyed remotely by tailored computer viruses. At best, the thief would have only a couple of minutes of uninterrupted access, although that may be enough for some applications.

Virtual Planets

These are essentially very sophisticated chat rooms. With the advent of multisensory communication, chat rooms grew in scope and complexity. Planets are able to handle vast amounts of users in a real time environment, allowing that environment to take on a myriad of appearances. The term originated from the iconic appearance of the original chat rooms — digital planets users would choose from that hung in ADN's virtual space.

The environments currently vary from the extremely bizarre, where users take the forms of unicellular organisms and wander around in a pond speaking to one another, to the mundane (virtual beach resorts or historical settings, for example). Entrance to virtual planets is tied into the level of one's ADN access — for example, the decadent virtual spaces that are the playgrounds of the wealthy and powerful are very different from the "playschool" planets accessed by children.

Cyberware in Underworld

Cyberlimbs are a rarity amongst the standard populace of Underworld, representing the extremes of what modifications are seen on the streets. Neuroware, however, such as neural jacks, are not. In fact along with the CC-chip, neural jacks are often provided "free" to drones soon after birth (of course, they are billed for them, and the costs are added to the education fees they are expected to pay off as part of their work contracts) or to new inmates.

Soldiers, security troopers, and mob enforcers routinely use cyberware to both repair injuries and boost their combat abilities. Combat cyberware nevertheless remains rare, as the corporations see it as a threat to their ability to control individuals. Corp security patrols will usually hassle anyone they see with obvious threatening modifications, such as armoured body plating or cyberweaponry (with the exception of syndicate members who are paying them off). Common modifications, such as eye and ear replacements, are usually ignored.

Bioware is also rare, although it is fashionable among some wealthy individuals as well as some Yakuza, the Pack, and street gangs. There are plenty of back alley scalpel-shops that can provide it, some catering to a criminal clientele.

• Cyberware • for Starting Characters

Player characters begin play with a standard neural jack and a CC-chip implanted in their skulls (except by special arrangement with the GM).

CC-Chip Template

Features 3 (Neural Jack, Socket Interface, Implant Com; Bane, Neural Feedback -1; Restriction, Tagged; Records data, receives broadcasts, transmits identification -1)

Final Cost: 1 Point.

Notes: Anyone with a tagged chip has Owned (1 BP) Defect, reflecting both the limited access to the ADN and his or her inability to leave the confines of U9 without authorisation.

Characters with an activated CC-chip (page 235) also have the Owned Defect at 3 BP. This allows corporations to broadcast submissions.

Clear Channel Chip

Created by Augustus FLC., the Clear Channel Chip (or CC-chip) was the first multi-functional neural interface implant device ever perfected.

The CC-chip is usually implanted at birth, allowing for full integration during brain development with a wide variety of external systems (some as simple as a coffee makers or light switches, allowing simple on-off controls). The main purpose of the CC-chip, however, is to access the Andromeda Data Nebula.

In game terms, a basic CC-chip is a combination of an implant com (see page 108) and neural jack (see page 27). It incorporates radio, cell phone, computer, and full sensory audio-video display functions.

This chip is inserted into the brain-stem. The surgery is ideally performed at birth so a person's brain patterns can acclimate to the presence of the chip, but retro-surgery is an easy and cheap alternative.

Fade Response

There is only a 1.5% chance that older recipients will experience a "fade" response, in which their real brain function fades away, submerged beneath the barrage of programmed transmissions. This usually results in some sort of psychotic behaviour or suicide — in game terms, it manifests as a reduction of Soul (sometimes to as low as Soul 1) or the acquisition of various mental Defects.

Children and the CC Chip

Under normal circumstances, an activated chip is used to teach the child basic language and math functions — they can key into limited data paths within the ADN and learn interactively from them. While there are many learning pathways in the ADN, a popular teaching construct is an adorable green teddy bear named Auggie. Once a CC-chip recipient reaches puberty, sex hormones trigger a degradation of neural lock-outs in the chip; he or she is then able to key into most of the millions of data paths available in the ADN.

Augustus Controls

All ADN activity through the CC-chip is tracked and logged by Augustus's systems, allowing them access to a wide variety of user information. They sell this information off to interested parties: some private, some corporate in nature. Augustus also reserves the right to cancel service to anyone at any time for any reason. Recipients who have suffered this experience often endure data withdrawal, leading to mild psychosis.

Tagged CC-Chips

For the permanent residents born or incarcerated within the Underworlds, the CC-chip is modified into a tagged chip. The presence of such a chip is the primary marker that distinguishes a permanent resident from an outsider citizen.

For the native born Underworlder, the effects are felt from birth, when the chip is implanted. They receive broadcasts at regular intervals during the day brainwashing them through entertaining stimuli. Programs like Auggie teach basic reading and writing skills, but not mathematics or science, which are deemed unnecessary for drones.

Once puberty is reached, secreted hormones degrade specific neural lock-outs. The CC-chip is then free to act as a governor, with a wide variety of controlling stimuli able to be initiated by those with appropriate codes. These stimuli are also available to any adult implanted with a tagged chip.

The chip also serves to mark an individual. As Underworlders are hooked into the ADN, security forces can locate and ID people with the use of simple tracking software. This is also true of CC-chips on the outside, only there it is used primarily by emergency personnel.

CC-Chip Activation

When a drone signs a contract to work for a particular company, he or she signs over access to his or her CC-chip, a process referred to as "activation."

In game terms, any drone with an activated CC-chip has his or her Owned Defect increased to 3 BP Level, reflecting an even greater loss of control over his or her own mind and body.

Activation gives the activating corp the right to unhindered transmission to that drone's chip during working hours, and to specified individuals before and after work. These transmissions are referred to as "submissions" (see below). It also allows the chip to act as a radio frequency homing device, allowing the corporation to track the individual should they wish to.

Submissions

A submission is a high output signal broadcast via the ADN to all designated CC-chips.

Drones can be subjected to broadcasts that are powerful enough to force wakefulness for long periods of time. This is used to ensure quotas are reached on time and productivity maintained. Drones can also be communicated with via submission at any time from corporate personnel. The most common use of this method is a wake up signal broadcast in the morning, followed by either messages from the corplord where the drone works or messages from a digital persona called the Secretary. The Secretary gives statistics on production, names of drones that have fallen behind, current quotas, and general news: effectively, a constant stream of propaganda that continues for hours at a time.

The submissions themselves vary from corporation to corporation, but usually take the form of a friendly persona dredged up from the recipient's memory, who urges them to continue their work and increase their productivity. These phantoms promise the recipient that he or she will be very proud when they are finished, and that they will be proud of themselves for having accomplished something wonderful.

When fatigue inevitably grows beyond control of such contrivances, the submission construct will to chastise the subject, shaming him or her into compliance. Eventually, of course, even this is not enough to keep a body functioning. At that point, the submission becomes torture — inducing pain responses in the brain to force the mind to stay awake. The torturer can take on any form, but is usually a kindly man or woman, typically the same figure used as the Secretary.

Submissions in Game

In game terms, any character subject to submissions (i.e., a drone with the Owned (3 BP) Defect) can be affected by the mentioned submissions. When high power signals are broadcast, the character will have a -2 penalty on all checks that go against the content of the submissions, and will also be unable to sleep or rest. If a high power signal is sustained for more than a day at a time, Soul checks should be required to avoid a mental breakdown – the effect of failure can be role-played or handled by assigning appropriate Defects, such as Blind Fury. The submissions broadcasts can be avoided by heading into a heavily-shielded metal room, acquiring a radio jammer or similar device, or escaping the broadcast network itself (such as an abandoned tunnel complex deep underground).

Removing the Chip

Removing the chip or altering it in anyway is an infraction punishable by summary execution. Due to the location of the chip, it is extremely difficult to safely remove or alter it. Knowledge of how to conduct such an operation is very rare. If successfully removed, many people experience a data withdrawal so strong they suffer bouts of nausea or fainting during the subsequent weeks, while 1% go into a coma that can last for months.

I-chips

The term I-chip is short for Illusion chip. These small, multicoloured chips are always in great demand. They are high resolution experiential "recordings" of everyday (and not so everyday) life occurrences outside of the confines of the Underworld hubs. The actual recordings vary but can include such mundane activities as a walk in a park, a warm shower, a dip in a lake, or sex with a beautiful man or woman. To the typical Underworlder, these experiences are far from mundane. Such moments as a picnic or a walk on the beach are completely alien to those in Underworld, and I-chips containing this stimuli are in high demand.

I-chips are data plugs (see page 27) that store a sensory interface (SIN) recording. The most insidious aspect of the I-chips that find their way to Underworld is that they are one-play items only. They expire once they have been "viewed" and can never be used again, becoming what is called a "burned I." This, of course, leads to a high rate of return business — which makes the mob very happy. In this sense, the I-chip is like a potent drug — one use per dose and highly addictive. Prices of the I-chip vary according to experiential content, length, and quality of play, but can be as expensive as a couple of thousand U-dollars.

Chip-Dolls

These poor humans (usually women, girls, and boys) have a puppet control unit implanted in their brain. The control unit responds to a coded signal that can be transmitted by radio; an ordinary pocket com with the proper codes and software can transmit the necessary codes, making chip dolls usable by nearly anyone.

Higher echelons of elite society have been known to modify themselves as chip-dolls and attend doll parties, where they engage in the strange fantasies only the very wealthy have. They always have the option of paying to remove the device, however, once the charm of the experience wears off. Those in U9 are rarely so fortunate.

Once under control of a user, a chip-doll can be commanded to conduct any activity, which they will carry out to the best of their ability. While conscious, they are unable to intervene or control their own actions. Although they can be ordered to do anything, most chip dolls are employed for sexual services. They are controlled by whoever has coded the chip — usually the Mafia or Yakuza.

Dolls are typically paid a commission per trick turned; these wages are often better than what a drone can earn. Unfortunately, the organised crime syndicates deduct the cost of the operation, upkeep, and the chip from the wages, so it can be years before the doll earns back her freedom. Mafia or Yakuza will pay an advance or finder's fee to the would-be doll, however — usually a few thousand U-dollars, depending on the individual's age and appearance. This princely sum is often enough to convince some people to sell themselves — or their children or girlfriends — into service.

A chip doll's life is typically short. They are often subjected to fatal levels of abuse as part of their efforts to satisfy the jaded demands of their puppet masters. If the mob finds the cost of medical bills to exceed the expected return, they'll just have the chip yanked and dump the body somewhere ... or sell it to the Pack.

Chip Doll

A person who is a chip doll and subject to having his or her body periodically taken over will have the Owned (3 BP) Defect and Features (Teleoperation Interface) Attribute (see Teleoperation, page 113).

Other Technology

Some of the other technologies found in Underworld are detailed here.

Nanomachines in Underworld

For the most part, nanotechnology exists primarily as an industrial manufacturing technology. Actual nanobots are new and rare, and used primarily for either corporate espionage or sabotage. This form of corporate warfare is in its infancy and so not widely practised, though many conglomerates have initiated defence programs "just in case." There are a few exceptions to this, notably the nano-mist that surrounds the Underworld and the Nan-O soft drink, one of the more widespread applications of the growing technology.

The Nano-Cloud

U9 is covered by a non-solid dome of tiny aerostat-equipped nanomachines, creating a sort of mechanical fog. The dome-shaped nano-cloud is some 1,000 metres overhead, about 60 metres thick, and is composed of airborne turbine-powered nanomachines, each about the size of a grain of sand. These machines are ostensibly there to prevent pollution from the industries within the Underworld from escaping. They also contain smart dust sensors that can alert security when anyone with a tagged CC-chip enters the mist. It's rumoured that they can even "feed" on those who try to leave through the cloud. At least one person is rumoured to have been eaten alive while trying an airborne escape in a hijacked air car. The hungry nano-cloud apparently came right through the car's ventilation ducts.



Nan-O Soda

"Drink Nan-O — good health has never tasted so great!"

A signature product of Augustus, Nan-O Soda has become the soft drink of choice among most consumers. The producers of the drink boast there are 100 billion nanomachines present in the beverage, making it a healthy, great-tasting drink with a long shelf life. The tiny machines supposedly circulate through the body, cleaning clogged arteries, boosting the immune system, and adjusting neurotransmitter and hormone levels to prevent migraines and other complaints. Augustus FLC boasts that Nan-O drinkers are projected to enjoy an average lifespan 20% greater than ordinary beverage consumers.

Nan-O is indeed healthy — but the nanotech was also designed so that the soft drink would induce a hard addiction in those that drink it. The tech is also designed to trigger a slight euphoria, helping bolster the addiction with a pleasant mental association. Because of the dependency drinkers experience after only one can, Nan-O Soda has become the highest consumed soft drink on the planet, beating out its nearest competition threefold.

When attempting to quit consuming the product, users experience severe withdrawal symptoms that include sharp abdominal pain and vomiting, which can persist for several days. Even worse, the user's immune system becomes dependent on Nan-O. After five months of regular consumption on average, the user's own immune system cannot function properly without it.

Withdrawal will often be followed by increased susceptibility to disease and infection; many ex-Nan-O users quickly sicken and often die from exposure to viral infections that would have been little more than a mild flu for a normal person. Most people don't last the withdrawal out, and find themselves drinking the soda again just to make the pain go away. A typical can of Nan-O goes for one U-dollar.

Augustus clandestinely acquires the nanotech for their soda from a Japanese company called Natsuke, Inc. This nanotech is designed for one function — to induce the addiction. Once the nano passes through the system, it is rendered inert.



Transcriptase Vats

These large cylindrical apparatuses are where drones are created to fill corporate demand. These vats allow for a recombination of DNA and so do not create clones, but individuals with a stable, random genome. It takes a week for a "vat baby" to be created Labs have 30 functioning vats available at any given time. The transcriptase vats in U9 are heavily guarded at all times.

Tri

Usually shaped like a black triangle, these small pills are one of the most highly addictive drugs found on the streets of Underworld. The initial effect is a great sense of euphoria and joy as the pleasure centre of the brain is bombarded by a cascading chemo-reaction. When in this stage of the drug, which lasts for approximately three hours, the user is unable to complete complex tasks such as operating heavy machinery or driving, although they are completely coherent and able to converse quite freely; in game terms, they have Less Capable Body (Manual Dexterity) (1 BP).

This euphoria begins to fade with a slight sense of depression on the part of the user. This is quickly replaced by stage two of the drug — a feeling of invincibility and inexhaustible energy. The sensation is not without its real-world counterpart; the user of the drug actually experiences a temporary increase in both physical strength and agility. In game terms, +1 Body (without any increase in Health Points). The amount of strength and agility gained increases with subsequent uses of the drug (+2, +3, etc.), but the strain on the body once the drug wears off is greater as well, with physical damage to bones and muscles being a common side effect. (After crashing, the user suffers -5 Health Points the first time, -10 the second time, -15 the third time etc., unless a week or more passes between uses). The second stage of the drug can last anywhere from one to two hours depending on the physical stamina of the user. The Health Point loss, of course, must be recovered normally.

This stage slowly fades into the third and final stage of the drug — hallucinations. The user experiences an escalation of vivid hallucinations, ranging from manifestations in the actual world to complete disjunction from the world. When disjunction occurs the user goes into a type of catatonic state and remains there, unable to move, for several hours. Once this passes, the user tends to drift into a deep sleep, often remaining asleep for upwards of 10 hours.

The drug is manufactured locally by the Biting Serpent Clan — its manufacture is a highly classified secret. They do sell in bulk to other organisations who in turn resell it, but do not share the procedure. They have even bombed several of their own labs to make sure the recipe is kept safe.

Outside of Underworld, chemists have figured out how to manufacture the drug so that high society can partake of its splendour. Within the hubs of Underworld, however, the Biting Serpent Clan is the only known supplier, allowing them to enjoy great profits. As the sole manufacturer of Tri, the drug has been nicknamed the "black serpent" after the clan.

Typically, a single pill of high-grade Tri can run about 20 U-dollars, with lower grade going for about half that.

Weapons and Other Standard Equipment

This section lists the armour and weapons considered standard, available and unique to Underworld. The world "available" refers to the ability to obtain a desired object with the right know-how and connections. There are no stores that sell firearms, for instance: these items have to be bought through special contacts. Other rare equipment can still be found, but not by simply asking around. These are usually found through high risk endeavours, either incidentally or as the primary objective.

Phase Blades

These are melee weapons whose cutting edge is constructed from stabilised exotic matter. This is a new phase of matter that has various applications, including high density computer cores, weapon systems, and the phase-needle probes that are used in cutting-edge computer implant technology.




NOI SACKDA
UDON

Maintaining a phase blade requires a constant trickle of energy, so the weapon has a power pack in its hilt. This is an expensive process — exotic matter cores were originally developed for military railgun shells for anti-ballistic missile defence; their use in bladed weapons is more of an exotic toy for the wealthy than a serious military technology

The expense and inconvenience, however, does not diminish their effectiveness. It is in vogue in the circles of the rich and powerful to have a phase-sword at one's side to show station — or at least keep a suitably equipped bodyguard. Yakuza in particular will pay a fortune for a phase-katana (use long sword statistics).

Phase blades are functionally identical to monowire weapons, except that they have an extra level of Armour Penetrating and are more expensive (each of them counts as an additional minor Gadget for the power supply). Most any weapon can be designed as a phase weapon if it has an edge, including most swords and knives.

Firearms

Just about all the weapons and options described in this book are available somewhere in the world, and may be smuggled or carried into U9. The following brand names are particularly common

3mm Whisper is a gas-powered flechette pistol, usually accessorised with a laser sight. A combat modification of a sporting weapon, it is favoured by assassins, especially freelance Yakuza.

4.6mm Imperial Arms IA-5 Shadowcat is a PDW (see page 115) with computer targeting system (see page 119) and silencer. It is the standard weapon used by Navy SEAL tactical teams. Some underdogs have also been assigned the IA-5, but without the computer targeting system favoured by the SEALs; they instead use a simple laser sight.

4.6mm Imperial Arms IA-5B Macavity is a Shadowcat with the Briefcase Firing option, resembling an ordinary attaché case. It is often carried by bodyguards to senior corplords or organised crime figures, or occasionally by the individuals themselves. The Yakuza also like it for assassinations, usually with a Brass Catcher option to avoid traces.

5.6mm TLK-22 was the standard assault rifle of the Royal Thai Army (a copy of an obsolete Chinese weapon) before they replaced it with the newer M76. As such, it is cheaply available on the black market. Some underdogs carry it instead of the Street Sweeper or Shadowcat. Use assault rifle statistics, often with the night vision scope and carbine format options.

7mm/25mm Eagle Arms M76A6 is the standard US Marine and US Army rifle, a caseless "smart gun" with two barrels: a 25mm grenade launcher and 6mm assault weapon. It is a combat infantry weapon (see page 116) with a computer targeting system (see page 119); its grenade launcher uses programmable shells (see page 121).

7mm Eagle Arms HRF is a six-barrel Gatling-style heavy minigun with the computer targeting system option. "HRF" stands for high rate of fire, which is an understatement, as the Gatling gun can easily spew out a hundred rounds per second, although its recoil prevents firing on the move (a special harness or tripod is used). HRFs are rarely carried for street patrol, but underdogs often have an HRF-equipped trooper assigned to any important facility (often on the rooftop or a balcony overlooking the factory floor). They are not commercially available and command high prices on the black market.

9mm Viper is a basic high-capacity polymer pistol, It is the standard issue handgun for most corporate guards and also widely available on the black market. It is a basic medium pistol usually loaded with hollow point ammo. It also comes in a machine pistol version, the Pit Viper, and a popular snub-nose version, the 9mm Krait.

9mm Ta Khli-15 ("TK-15") is a locally-produced 9mm submachine gun that was the standard issue for the Royal Thai Army until a decade ago. Due to black market distribution, it is also commonly found in the hands of gangs and criminals, who usually add plenty of accessories like laser sights and silencers. Some corporate security also carry it due to its reputation for reliability. Use Submachine Gun statistics.

12-gauge IA-12 Stormlite is a shotgun with the telescoping stock option and trigger lock. It is popular with security underdogs assigned to factory floor duty (since it cannot be fired by someone who grabs it from them). Sawed-off versions are also popular — the Mafia enjoy fitting these with incendiary shells if they want to make a point. The IAAS-12 is a fully automatic variant.

5mm Eagle Arms M50 Tactical Railgun is the most advanced US Marine infantry weapon available, assigned to one Marine per squad. It is a railgun (see page 116) firing a slug at hypersonic velocities, with a computer targeting system (see page 119) and trigger lock. Very few of these weapons are in criminal hands.

25mm Spearman Hurricane Assault Cannon is a payload rifle, usually used with a computer targeting system (see page 119) and programmable shells (see page 121). One member in each squad of underdogs usually carries one. A few have been stolen and ended up in the hands of criminals; they fetch a high black market price.

33-kW M90 Cyclops DEW is a silent, invisible-beam infrared-frequency sniper laser favoured by Navy SEALs assigned to VIP protection duties and some elite corporate protective or black ops teams. They are prized by assassins as well, but it takes excellent connections (or a dead SEAL sniper) to get one. Death by laser burn is usually the sign that someone offended a well-connected individual.

Armour

This is standard protective gear found throughout Underworld. The more advanced the armour, the harder it is to come by.

Flex Armour (Mesh)

Flex Armour is the standard issue for most underdog security guards. It is worn by those criminals who can get it, as well as VIPs in dangerous areas. Due to its carbon-nanotube mesh construction, it is sometimes called "mesh" on the street.

Biohazard Suits

Most factory complexes have biohazard suits (see page 134) for working in "clean rooms" such as chip factories, or for issue to emergency hazmat teams in case of toxic chemical, radiation, or biological leaks. (Even so, sometimes workers without suits are sent to clean up such disasters, if the manager wants to cover up his or her mistake and not declare a biohazard alert.) Some suits end up on the black market and are used by criminals operating synthetic drug labs, slaughterhouses, and similar unhealthy facilities.

Nano-Reinforced Polymer (Poly-Plate)

US Marines, SEALs, and guards assigned to special tactical squads will wear sealed combat armour. This is a black nano-reinforced polymer, known locally as "poly-plate". See Sealed Combat Armour (page 134).

Other Armour

Soft body armour and tactical armour are available on the black market (often Thai Army surplus) and often used by criminals. See Body Armour (page 134).

Active Optical Camouflage (Hoods)

Clothing made of opti-cam material is highly expensive, but is also a stylish fashion accessory for some corporate VIPs. It is also used by elite criminal enforcers and assassins, who use the street name "hood." Navy SEAL teams also wear optical camouflage smocks over their armour. It is far too expensive, however, for most gang members, rank-and-file Mafia or Yakuza, or ordinary underdogs to acquire. See Active Optical Camouflage, page 110.

Hologram Technology

The largest immobile hologram generators can create a three-dimensional object within a range of 10 metres. Smaller generators were constructed to allow a soldier to carry them in a belt pouch. Holo-clothes and masks are also favoured by individuals who can afford them (they count as major Gadgets). These portable generators can only project images within a 0.5 meter radius, just surrounding the body. Such devices were quickly adopted by the popular culture.

People can pre-program up to five different outfits, changing them at the touch of a button. Some holo-generators have been customised to allow a person to adopt different disguises in place of outfits, although these modifications are rare. Typical battery life is five hours; the device needs to be recharged for 24 hours before it will work again.

Canvitex Coverall

Basic protective clothing given to drones. Canvitex is a thick material that is tear, corrosion, and abrasion resistant. It stops 1 damage.

Pseudo Leathers

A complete outfit of Pseudo Leather, including pants and jacket. Pseudo leather, or P-leather, is a vat-made alternative to its extremely expensive counterpart, real cowhide. P-leather provides protection a step above Canvitex. This is the armour of choice among many gang members and low level thugs. It stops 2 damage.

• Grinning Jim Interview •

"Well, that's just about everything I know of Underworld 9 – or at least all I'm willing to tell you. The place is huge, that's for sure. You can never really ever see all of it because it's like quicksilver, always shiftin' and changin' on ya'. But if you really, really, wanna get to know her, you're going to have to explore her yourself."

Grinning Jim pushed himself up out of his chair and walked toward the bar's exit. "And always remember while you're out tryin' to get a good look, boy," he said, turning around in the doorway's bright light, "U9 has fangs, and she's not afraid to use 'em."

The Bait: Adventure Hooks

It is possible for adventurer within the world of Underworld 9 to begin at many different levels — for example, as gang members striving to raise themselves up from the muck; escaped drones fleeing for survival; Yakuza initiates, underdog guards, or even Pack members; this section is intended to be a guide rather than a prison. The GM should do whatever will provide the most enjoyment, bending and altering what is written here to better suit the campaign. Underworld provides for a vast number of possible adventures, all of which can take place within the space of Underworld 9.

Get This Thing Outta My Head

Characters who begin as drones or newly-sentenced PRs of U9 will have a standard CC-chip stuck in their heads, leaving them vulnerable to corporate submissions and keeping them from accessing the full power the chip can provide.

Players may wish to search for someone who knows how to modify or remove the chip. Caju's is a good place, but they will find the Yakuza surgeon less than helpful. He knows exactly where to get the procedure done — he could even do it himself if he were so inclined — but the price for his knowledge is far out of the characters' range at this time. If he is physically coerced, he will remind his attackers that he works for a very powerful clan of Yakuza; it would serve the continuance of their lives not to bother him further.

Eventually characters should end up at a local watering hole, such as the Trench, a bar where Grinning Jim is known to hang out. If they ask around, some people will suggest Caju's. Some may suggest other impossible options, like

• Drone •

Tech; 30 Character Points

Stats: Body 4, Mind 4, Soul 4, ACV 4, DCV 4, Health Points 40, Shock 8

Attributes: Defence Combat Mastery 2, Gadgeteer 1, Gadgets (Knife, Canvitex Coverall, case of Nan-O Soda) 1, Highly Skilled 2

Enhancements: CC-chip (Features 3: Neural Jack, Socket Interface, Implant Com; Bane, Neural Feedback, 1 BP; Restriction (Tagged; Records data, receives broadcasts, transmits identification, 1 BP) 1 Point

Skills: Area Knowledge (Any Factory, Home District) 1, Burglary (Hot-wiring) 1, Computers (Databases) 1, Driving (Lift) 1, Electronics (Consumer Electronics) 2, Mechanics (Automotive) 2, Powerlifting (Bulky) 1, Melee Attack (Knife) 1, Unarmed Defence (Grappling) 1

Defects: Confined Movement (PR Class) 1 BP, Nemesis (Manager) 1 BP, Owned (One corporation) 3 BP

encasing their heads in lead, but if they talk to Grinning Jim (he often overhears things), he'll inform the characters that he can tell them where the procedure can be done — for a price.

Jim will give them the information for 300 to 500 U-dollars (set according to the characters' ability to pay — it should sting a little but shouldn't be completely out of their means. If they have to go raise the cash and come back, that's fine, Jim isn't going anywhere fast). Once paid, Jim will inform the characters that Shaman of the Trash Wastes is known to be able to complete the operation. This is all he will say.

Once the characters get to the Wastes, they can meet all sorts of resistance from scavengers and waste snakes there; it should take them a day or so to be able to find the well hidden tunnels and huts. When they find Shaman, he won't be very happy unless he is reassured that the characters mean no harm. The Shaman may ask for something as insignificant as cash now, 250 U-dollars per operation (150 if Shaman is able to remove the CC-chip and keep it: again, vary price as needed), or may send them on a quest to retrieve something from deep within Underworld, far beyond Shaman's reach.

If paid, the Shaman will operate. With a successful operation, the players will no longer have that insipid Secretary in their heads and they will be able to access the next level of the CC-chip (unless some purists want it removed, in which case they will experience the bliss of a silence that they have never known).

• UNDERDOG •

Street Samurai; 75 Character Points

Stats: Body 8, Mind 5, Soul 5, ACV 9, DCV 7, Health Points 65, Shock 13

Attributes: Attack Combat Mastery 3, Combat Technique (Leap Attack, Lighting Reflexes) 2, Defence Combat Mastery 3, Gadgets 3 (Stormlite shotgun, Shadowcat PDW, flex armour; Conditional Ownership, 2 BP), Heightened Awareness 4, Massive Damage 1 (Guns), Highly Skilled 3, Organisational Ties (Corporation; Significant) 2

Enhancements: CC-chip (Features 3: Neural Jack, Socket Interface, Implant Com; Bane, Neural Feedback, 1 BP) 2 Points, Cyberware 8 Points*

Skills: 1 Gaming (Gambling) 1, Intimidation (Street) 1, Military Sciences (Teamwork) 1, Stealth (Camouflage), Urban Tracking (Corporate) 1, Gun Combat (Rifle) 2, Ranged Defence (Personal) 2, Melee Attack (Baton) 1, Melee Defence (Baton)

Defects: Ism (Underdog) 2 BP, Marked (Transient Citizen) 1 BP, Owned (Corporation) 1 BP, Red Tape 1 BP

Note: * Most underdogs have several points in modest cyberware; favourites are cybernetic eyes, nanofibre skin, and melee weapon implants.

Lab Rat

It is time for that monthly Bloodworm blow-out, Lab Rat. The gang is out looking for "volunteers" and the characters happen to be in the wrong place at the wrong time. A Bloodworm skirmish squad wants to enter the characters in this month's game. The squad is armed with tear gas (page 121) and will be backed up by reinforcements. The characters may be able to hold the squad off for a time, but should eventually be overcome.

Alternatively, the GM can opt to just narrate their knock-out, capture and awakening.

When they wake, they will find themselves in a dark pit with several exits. Their only companion is a remote-controlled holo projection cube that plays a recorded 3D message, informing the "Rats" that they have made it to the "Lab." The characters will have been stripped of their normal weapons and will find some basic

• MERCURY •

Street Punk; 90 Character Points

Stats: Body 10, Mind 10, Soul 4, ACV 10, DCV 9, Health Points 90, Shock 18

Attributes: Attack Combat Mastery 2, Gadaets (Phase-katana, pick of gang's loot) 5, Defence Combat Mastery 3, Heightened Awareness 2, Highly Skilled 6, Organisational Ties* (Razor Saints, leader; Moderate) 8

Enhancements: CC-chip (Features 3: Neural Jack, Socket Interface, Implant Com; Bane, Neural Feedback, 1 BP; Restriction (Tagged; Records data, receives broadcasts, transmits identification, 1 BP) 1 Point, Cybernetic Arm (Armour: Shield; Superstrength 2, Part of Body: One Arm, 2 BP; Special Defence: Pain x2, Part of Body: One Arm, acts as 2 BP) 7 Points, Ranged Weapon Implant "Cybergun" (Special Attack 1, Damage 20, Auto-Fire, Inaccurate, Limited Shots x2, reload: 1 round, Short Range) 4 Points, Nanofibre Skin (Armour; Reduction -2, Stops 3 damage) 1 Point; Reinforced Skeleton (Tough 1) 2 Points

Skills: Area Knowledge (Razor Saint Territory) 3, Burglary (Hot-wiring) 2, Intimidation (Street) 2, Street Sense (Gang activity) 4, Urban Tracking (Underworld) 2, Melee Attack (Sword) 3, Melee Defence (Sword) 2, Unarmed Attack (Cyberarm) 2

Defects: Confined Movement (PR Class) 1 BP, Nemesis (James the Minotaur) 2 BP, Marked (Black cyberarm) 3 BP, Unappealing 2 BP, Wanted (Bloodworms, various security agencies) 3 BP

Note: * the Razor Saints only have 8 effective Levels of Organisational Ties. See page 205 for more information on Mercury.

weapons in their place (a few knives, perhaps a pistol). When the holo says, "Go!" they will have to run from the "starting line," as Bloodworms start shooting down into the pit, and whooping it up.

This Adventure Seed can be a good way to bring disparate characters together. They will have to use their wits to avoid the Labyrinth's many booby traps. Just to spice things up, other well armed gang members are roaming the Labyrinth as well, looking to eliminate anyone they come across. An audience remotely views the event, betting on the outcome.

If the characters emerge victorious, they will be hailed as survivors of the Lab and will be allowed to leave with their lives, weapons, and any items they managed to take from their fallen enemies.

• Grinning Jim •

Investigator; 110 Character Points

Stats: Body 6, Mind 11, Soul 10, ACV 11, DCV 12, Health Points 100, Shock 30

Attributes: Attack Combat Mastery 2, Combat Technique (Accuracy, Concealment, Hardboiled, Judge Opponent, One Shot Left) 5, Defence Combat Mastery 5, Divine Relationship 6, Extra Defences 1, Gadgets (Various tools, 9mm Krait) 3, Heightened Awareness 8, Highly Skilled 14, Tough 1

Enhancements: CC-chip (Features 3: Neural Jack, Socket Interface, Implant Com; Bane, Neural Feedback, 1 BP) 2 Points*, Cybernetic Eye (Heightened Senses 3: Sight, Infrared, Ultravision, Special Defence: Flare, Combat Technique: Accuracy) 5 Points

Skills: Area Knowledge (Underworld 9) 4, Area Knowledge (Other Underworlds) 3, Computers (Intrusion/Security) 2, Driving (Car) 3, Etiquette (Upper Class) 2, Gaming (Gambling) 3, Interrogation (Psychological) 2, Languages (English, Cantonese, Italian, Japanese, Thai) 3, Law (Customs) 1, Performing Arts (Fast Talking) 3, Sleight of Hand (Card Sharking) 3, Stealth (Concealment) 4, Street Sense (Influential Individuals) 4, Urban Tracking (Corporate, Residential) 3, Gun Combat (Pistol) 2, Ranged Defence (Personal) 1, Melee Attack (Improvised Weapons) 1, Unarmed Defence (Strikes) 1

Defects: Confined Movement 1 BP, Famous 2 BP, Marked (Squeaky eye, scarred arm) 1 BP, Physical Impairment (Right arm is weak, from old factory accident) 1 BP, Recurring Nightmares 2 BP, Special Requirement (Nan-O Soda) 1 BP, Wanted (Various agencies) 3 BP

Notes: * Grinning Jim had his CC-chip "fixed" long ago, so that it no longer accepts unwanted broadcasts. He is still classified as a PR, and thus unable to leave Underworld 9. See page 203 for more details on Grinning Jim.

Another possible future hook is the approach of a shadowy figure who will hand them a stack of cash. This is one of the attendees of the event (perhaps a very powerful individual). He or she will inform the characters that this is their cut of his or her wager — a generous offer, to be sure, but can they trust it? Fair is fair after all, but he or she might be making friends for more reasons than just to be nice.

Jeepers Creepers, Where'd You Get That I ... Chip?

Purely by serendipity (some would say just plain bad luck), the characters come across (or are given) a glittering I-chip. They will quickly notice that this I-chip is no normal I-chip — for starters, it can be played back more than once.

When the characters slide the I-chip into a socket, they will witness a high powered party of the corporate elite, experiencing things that they had never even dreamed existed. In the course of the playback (the chip has perfect fidelity and a solid play length), the characters will notice a very important person has been caught in a compromising position. This person could be someone high up in the corporate, military or government's ranks. The compromising position can be as grand as murdering someone, or as basic as involvement in a lurid sexual act.

• Yoshio "Grey Cat" Yamamoto •

Suit; 140 Character Points

Stats: Body 9, Mind 10, Soul 5, ACV 11, DCV 10, Health Points 70, Shock 14

Attributes: Attack Combat Mastery 3, Defence Combat Mastery 4, Extra Attacks 1, Extra Defences 2, Features (Appearance x2) 2, Gadgets (Various weapons and armour as needed) 5, Heightened Awareness 7, Highly Skilled 7, Organisational Ties (Biting Serpent; Significant) 10, Wealth 6

Enhancements: CC-chip (Features 3: Neural Jack, Socket Interface, Implant Com; Bane, Neural Feedback, 1 BP) 2 Points*, Features (Neural Buffer x3) 3 Points, Special Defence (Aging) 1 Point

Skills: Etiquette (Upper Class) 2, Interrogation (Psychological) 2, Intimidation (Business) 2, Languages (Japanese, English, Thai) 2, Law (Corporate) 2, Performing Arts (Fast Talking) 1, Urban Tracking (Corporate) 1, Gun Combat (Rifle) 2, Melee Attack (Sword) 4, Melee Defence (Sword) 4

Defects: Confined Movement 1 BP, Famous 3 BP, Nemesis (Satoru Akita) 2 BP, Wanted 3 BP

Notes: * Yoshio has had his CC-chip modified so that it no longer accepts unwanted broadcasts, but he is still classified as a PR, and thus unable to leave Underworld 9. See page 216 for more details on Yoshio Yamamoto.

• MARCO "TWO-TON" •

Street Samurai; 90 Character Points

Stats: Body 14, Mind 6, Soul 5, ACV 11, DCV 6, Health Points 115, Shock 33

Attributes: Attack Combat Mastery 3, Combat Technique (Hardboiled, Lighting Reflexes, Portable Armoury) 3, Gadgets (Grenades, satchel charge, IAAS-12 auto-shotgun) 3, Heightened Awareness 4, Massive Damage (Fists) 2, Highly Skilled 3, Organisational Ties (Capo Genovese Family; Significant) 6, Wealth (Restriction, Tied to Mafia 1 BP) 1

Enhancements: CC-chip (Features 3: Neural Jack, Socket Interface, Implant Com; Bane, Neural Feedback, 1 BP) 2 Points*, Reinforced Skeleton (Tough 1) 2 Points, Muscle Graft (Enhanced Body 2; Less Capable Endurance 1 BP) 3 Points, Partial Body Plating (Armour 1; Unarmoured regions, 2 BP) 1 Point, Cybernetic Legs (Jumping 1; Combat Technique: Leap Attack: Superstrength 1, Part of Body, Both Legs, 1 BP; Special Defence: Pain x2, Part of Body, Both Legs 1 BP) 6 Points

Skills: Intimidation (Physical) 4, Military Sciences (Hardware Recognition) 2, Urban Tracking (Underworld) 1, Gun Combat (Shotgun) 3, Unarmed Attack (Grappling) 1, Unarmed Defence (Grappling) 1

Defects: Confined Movement 1 BP, Famous 1 BP, Less Capable (Agility) 2 BP, Less Capable (Running Speed) 1 BP, Marked (Enhancements, size) 2 BP, Owned (Genovese Mafia) 2 BP, Unappealing 1 BP, Wanted (Oddo Family) 3 BP

Notes: * The Don arranged for Two-Ton's CC-chip to be "fixed" so that it no longer accepts unwanted broadcasts. He is still classified as a PR, and thus unable to leave Underworld 9. See page 213 for more details on Marco "Two-Ton."

• VALA "EYES" VARE #5567 •

Tech; 85 Character Points

Stats: Body 7, Mind 6, Soul 10, ACV 10, DCV 8, Health Points 90, Shock 17

Attributes: Attack Combat Mastery 2, Combat Technique (Lightning Reflexes x2, Steady Hand) 3, Defence Combat Mastery 4, Divine Relationship 5, Extra Defences 1, Features* (Appearance) 1, Gadgeteer 1, Gadgets (Soft body armour, 3mm Whisper flechette pistol) 1, Highly Skilled 5, Organisational Ties (Pack; Moderate) 6

Enhancements: CC-chip (Features 3: Neural Jack, Socket Interface, Implant Com; Bane, Neural Feedback, 1 BP; Restriction (Tagged; Records data, receives broadcasts, transmits identification, 1 BP) 1 Point, Owl Eye Biomod (Heightened Senses 1: Sight, Ultravision, Features: Disarming Appearance x2) 4 Points, Talons (Damage 20, Muscle Powered, Penetrating: Armour, Melee) 4 Points, Black Membrane (Flight: Glide 1) 2 Points

Skills: Area Knowledge (Pack Territory) 2, Burglary (Hot-wiring) 2, Computers (Databases) 1, Electronics (Consumer Electronics) 2, Mechanics (Automotive) 2, Performing Arts (Speaking) 2, Powerlifting 1, Seduction (Female, Male) 3, Gun Combat (Pistol) 1, Unarmed Attack (Talons) 3, Unarmed Defence (Grappling) 1

Defects: Confined Movement (PR Class) 1 BP, Marked 3 BP, Significant Other (Jonah) 1 BP, Owned (Pack) 3 BP

Note: Vala's Features (Appearance) are enhanced by her Owl Eye biomod, which provides Features: Disarming Appearance x2, for a combined effect of Appearance x3. See page 218 for more information on Vala.

At first, the characters should realise this I-chip is worth a lot of cash if sold to the right people (in the range of thousands of U-dollars, or hundreds of world dollars). Along the way to market, though, someone tracks them through their possession of the I-Chip. They will be assaulted by either Yakuza, Mafia, or corporate forces, all working for someone with powerful connections. These attackers may not know who they are working for directly, only that they have been paid to find a particular I-Chip and return it.

The characters may not realise it, but many individuals — likely all on the same payroll — are searching for this chip. If it becomes clear that they do possess it, they find themselves a magnet for trouble by speaking to the wrong party or showing it off in public. Although the I-Chip is extremely valuable, this type of story often concludes with the realisation that they can't just simply sell it. Negotiating with their assailants — selling it back, destroying it as a favour, etc. — may be their best option.

I'd Buy That For ... 100 World Dollars

The Dilibertis contract the characters (or perhaps the characters owe them a debt) to steal a detailed schematic of world dollars and a process for mass producing them. This is a risky operation, since PRIDE is extremely paranoid about having their currency devalued.

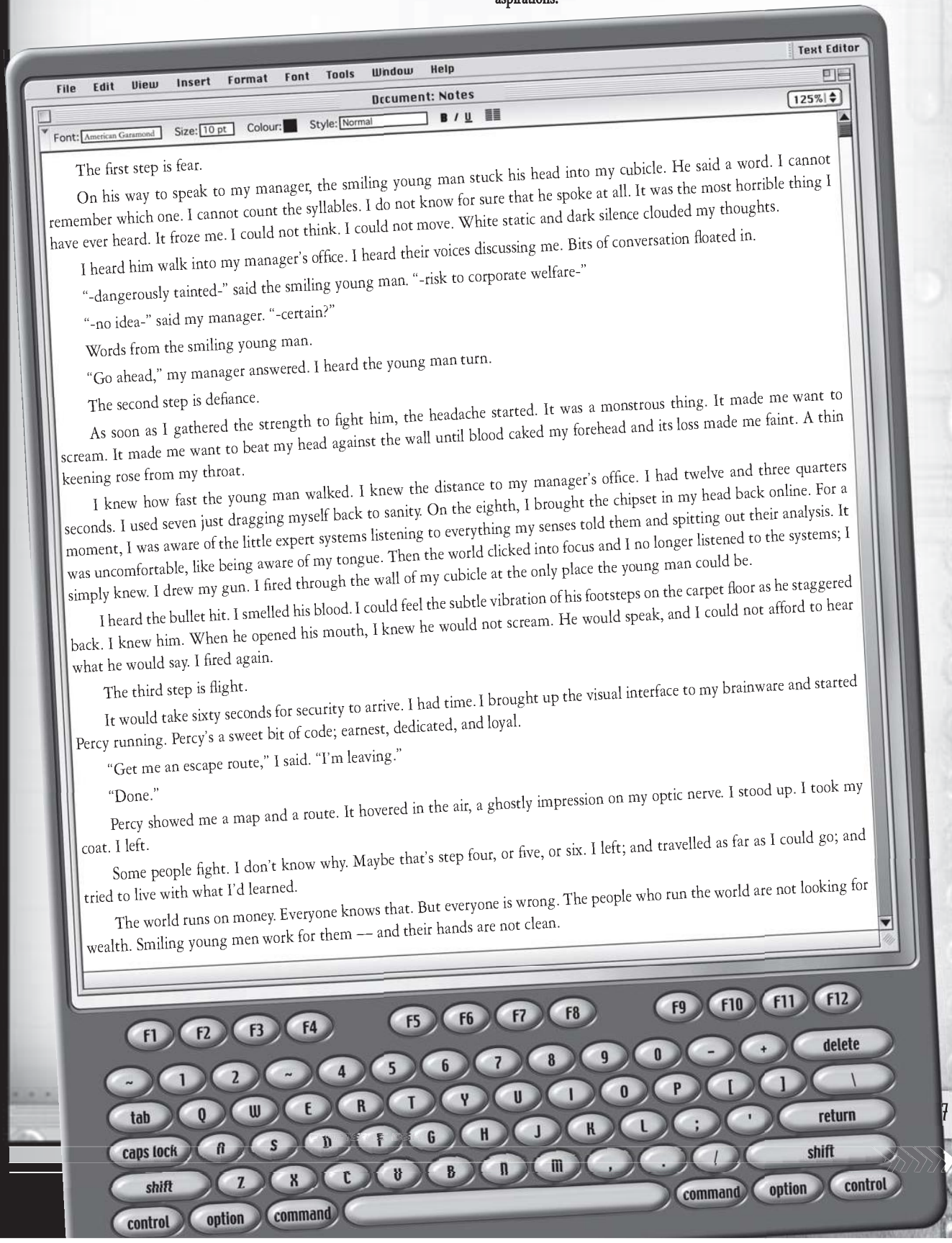
Should the characters manage to snag the goods, they will face opposition from both military and corporate security forces, as PRIDE lays down the law and orders the situation dealt with.

If the heat comes down too strong, though, even the Dilibertis may rethink the process — they certainly will not help the characters openly. With doors closing and the SEALS closing in, where do they turn?

Chapter 15: IOSHI

The development of human knowledge is strictly limited by the sophistication of the techniques used to organise and convey that knowledge. Thus, oral tradition gives way to writing, private collections to libraries, digital libraries to the web, and finally the worm to IOSHI ("the well").

In the late 21st century, a short period of machine-assisted training can produce understanding far more advanced than a lifetime of natural study. With a bit of talent and a mountain of cash, anyone can aspire to genius. Mozarts, Turings, Gandhis, Machiavellis, and Earharts come off the assembly line; and the savants of the day far exceed their petty dreams. This is IOSHI: the doorway to human grandeur. It is tainted; it is the tool of the enemy; but it is the key to all your aspirations.



The first step is fear.

On his way to speak to my manager, the smiling young man stuck his head into my cubicle. He said a word. I cannot remember which one. I cannot count the syllables. I do not know for sure that he spoke at all. It was the most horrible thing I have ever heard. It froze me. I could not think. I could not move. White static and dark silence clouded my thoughts.

I heard him walk into my manager's office. I heard their voices discussing me. Bits of conversation floated in.

"-dangerously tainted-" said the smiling young man. "-risk to corporate welfare-"

"-no idea-" said my manager. "-certain?"

Words from the smiling young man.

"Go ahead," my manager answered. I heard the young man turn.

The second step is defiance.

As soon as I gathered the strength to fight him, the headache started. It was a monstrous thing. It made me want to scream. It made me want to beat my head against the wall until blood caked my forehead and its loss made me faint. A thin keening rose from my throat.

I knew how fast the young man walked. I knew the distance to my manager's office. I had twelve and three quarters seconds. I used seven just dragging myself back to sanity. On the eighth, I brought the chipset in my head back online. For a moment, I was aware of the little expert systems listening to everything my senses told them and spitting out their analysis. It was uncomfortable, like being aware of my tongue. Then the world clicked into focus and I no longer listened to the systems; I simply knew. I drew my gun. I fired through the wall of my cubicle at the only place the young man could be.

I heard the bullet hit. I smelled his blood. I could feel the subtle vibration of his footsteps on the carpet floor as he staggered back. I knew him. When he opened his mouth, I knew he would not scream. He would speak, and I could not afford to hear what he would say. I fired again.

The third step is flight.

It would take sixty seconds for security to arrive. I had time. I brought up the visual interface to my brainware and started Percy running. Percy's a sweet bit of code; earnest, dedicated, and loyal.

"Get me an escape route," I said. "I'm leaving."

"Done."

Percy showed me a map and a route. It hovered in the air, a ghostly impression on my optic nerve. I stood up. I took my coat. I left.

Some people fight. I don't know why. Maybe that's step four, or five, or six. I left; and travelled as far as I could go; and tried to live with what I'd learned.

The world runs on money. Everyone knows that. But everyone is wrong. The people who run the world are not looking for wealth. Smiling young men work for them — and their hands are not clean.

In the centre of the world, the city of Sparta stands. Its charter of incorporation does not recognise or specify a physical location. It covers most of the world's habitable surface. In the late 21st century, Sparta defines the world. Even those places outside of it frame their existence in terms of their separation from it.

Seven years ago, the government of Malta quietly admitted its own ineffectuality and faded away. It was the last of the nations to surrender its sovereignty, and even today its people affect a certain barbaric splendour. Their demeanour reminds others that the savage blood of the early 21st century, when people drew their identities from the nations of their birth, still runs thickly in the Maltese veins.

The last of the nations has fallen. Geography is no longer destiny. The influence of every subculture spans the world, and citizens transplant their lives from place to place as readily as insects. Regional borders change with the passing hours.

The culture of the late 21st century is a patchwork of ideas and economies. The flavour of a region comes from its prosperity or poverty and the principles its residents choose to accept. A highly mobile citizenry and the absence of national ideals allow boroughs and neighbourhoods to define their own character and ideology. Cosmetic details — from cleanliness to technical infrastructure — develop naturally from this result. Sparta is a many-faced land, more diverse than the countries it absorbed.

Sparta itself is the dominant idea. It has successfully defined itself as the global culture, and so others react to it as such, joining or rejecting it as suits their inclination. It provides the global economic infrastructure, drawing its fundamental character from the belief that people are economic commodities. It does not so much reject individualism as ignore it, establishing a fundamental tenet that personal lives and perspectives are unrelated to professional functionality. Sparta measures talent in units of productivity. Human fallibility is outside the standard economic equation, handled by special-purpose providers — sick days, for example, are a matter for medical insurance rather than job contract.

IOSHI Games

Sparta is deliberately generic. This text mentions individuals, locations, and specific groups only as rare illustrative examples. This material focuses on defining archetypes for these setting elements and exploring those social and technological forces that affect them. Where it leaves something entirely undefined – for example, the building materials and cleanliness level of Sparta as a whole – the Game Master can use typical cyberpunk imagery or develop his or her own.

The core locations and events have been left for the GM to define. This material exists to minimise the effort involved rather than replace it. Secrets at the core of the game include the underlying structure of the system itself and the core motivations of the antagonists. The GM must eventually define these secrets as well, but should use caution – many protagonists oppose the system precisely because of its faceless, generic, and enigmatic nature. Should a face emerge behind casual tragedies – and become more real and ultimately more human – the characters may find themselves more willing to compromise.

Individually Organised Science and Hobby Index

The pre-eminent technology of the late 21st century is the Individually Organised Science and Hobby Index (IOSHI), also called "the well." The grandchild of the web, and the child of the worm, IOSHI can restate its massive online database of human knowledge in terms inherently conducive to a specific user's understanding. Those with access to the well become savants. In months, they master their field of study to a degree essentially impossible with previous learning tools.

IOSHI training can make even an untalented dolt competent in the relevant field. Those with natural talent for the discipline reach superhuman levels of skill. Adventurers will have a natural talent for one or more key abilities. Given sufficient resources and training, they have the raw potential the shake the world.

Naturally, there are certain catches involved with using IOSHI. First, IOSHI training costs money. A minimal course of training typically costs the equivalent of $10,000 in 2004 dollars. To reach the cutting edge in every aspect of one's field can easily cost 10 times that. Second, IOSHI training always involves legal entanglement. The corporations of Sparta employ their staff rather than own them, but most savants inevitably find themselves too hemmed in with legal obligations to have the option of severing their contracts. Some talents receive corporate sponsorship for training, and the debt they incur most be paid off before they can leave a company's service.

Many people find these two trade-offs worthwhile. They save money for years or decades to afford their turn at the well, master the field of their choice, and live the rest of their lives happily as valuable human resources. The third catch, though, is more worrisome.

There are rumours. None are terribly precise — just rumours that something is wrong. The term used on the street is "data taint." Training can do something to your mind. Something bad. IOSHI is not safe unless you install a filter in your brain. Filters are not exactly illegal, but IOSHI forbids them from being used. Numerous resources are devoted to an organised polemic against filter-use, declaring that a filter can induce mental illness and derangement. Filters are available through exotic retail channels and the black market; their advocates, however, and people known to use them, meet oddly violent ends.

Sparta

Sparta is a choice and a culture. It includes all places that accept the rule of Spartan law and all people who willingly observe its customs.

Sparta does not force people to become citizens. Anyone can reject the city and declare their residence outside of Spartan law. The city still welcomes the labour and coin of these foreigners and exiles, but a certain prejudice applies. Demographic studies show that outsiders earn an average of four-fifths the income of an equally productive Spartan.

A Map of the World

Most maps of Sparta reflect its central eccentric conceit: that a region's status as Spartan or non-Spartan matters more than its physical placement. Its maps topologically distort the world so that all non-Spartan places are "outwards," forming a fringe around the city at the world's heart. To permit this distortion, maps display Sparta as a fractal cross, a central district surrounded by four great branches. Each of these branches has the same cross shape as the whole, down to a variable level of detail. Since apartments, houses, buildings, and neighbourhoods can sever themselves from Sparta as readily as boroughs, the connection between

Spartan maps and reality is sometimes tenuous. Pedestrians must usually hunt down the rarer accurate maps to plan their travels. Those who use automated transportation can get by with a standard Spartan map — the vehicles adjust their course to correct the system's foibles.

Outside

Regions occupied by non-Spartans are considered "outside," part of the fringe. This applies equally to apartments, homes, neighbourhoods, and boroughs. Efficient transportation, communication, and virtual reality make it nearly irrelevant whether a fringe region stands at the physical edge of the city or somewhere within its mazy depths.

Wilderness

Beyond the fringe lies the wilderness. Again, the spatial location matters little. To reach a wild space completely enclosed by the city, one drives further "outwards" past the fringe, just as one would to reach the open ocean. Most wildernesses exist by sheer chance: Sparta has not yet spread to occupy everything and everywhere. Landowners fund the protection of other unspoiled locations through investor speculation on their future value, to be determined at the time it proves more profitable to occupy them than leave them alone. Other places — such as any radioactive ruins marking events no longer recorded in Sparta's history books, the bulk of the ocean's surface and depths, and the upper atmosphere — have proven too intractable to tame.

• Editorial •
On Outside Communities

Every now and then, I see people talking about how we should "do something" about the outsiders. They get revved up. They rant as if the outsiders spent all their time spitting in good honest Spartan faces. When I hear this, I always remember my daughter, Jenny, age fourteen.

"I hate you!" she screamed. "And I'm leaving Sparta!"

She stomped into her room and slammed the door. After a moment, she poked out her head. "This is outsider territory," she says. "It's my room and it's my law!"

I could have stopped her. We were cosignatories on the youth loans that paid for her housing and education. But I'm not that kind of parent. So for six months, she lived in a tiny outsider community consisting entirely of her own room; and she paid non-Spartan rates for power, net, and food; and if you looked up her room on the maps, it was outside the city.

One day, she came to me and said, "Sovereignty is expensive," and that was that.

That's why it's important to have outsiders. Sovereignty and independence have an economic value. If we refuse them to people, if we do not sell them as commodities, then we are not rational economic actors. If we are not rational, then we are not Spartans.

The Spartan Corporation

The Spartan concept of employment promotes the ideal that one should separate one's humanity strictly from one's work. Typical Spartans actively oppose the idea of their jobs defining them as people. That road, the Spartan philosophy argues, creates a politically charged office environment and led past generations to confuse their job performance with their own worth.

Evaluation

Spartans favour purely impersonal evaluations of talent and effectiveness, calculated so far as is possible by software rather than human managers. This gives them a perceived safety net — a sense that, while charm and cunning cannot make up for their personal failings, unavoidable disasters cannot damage their perceived worth. This idea affects even those citizens who come to see it as false. Most who learn to manipulate their managers, peers, and the reports themselves still think of their co-workers as a "labour" or "talent pool." Most whose friends or relatives suffer because of this social construct find that suffering a necessary if uncomfortable sacrifice. The occasional victims of outright machine error, underrated by the evaluation software due to miscalculation or deliberate sabotage, usually spend significant time trying to fix the situation before storming out of Spartan society. Few ever succeed in repairing their record. Machines are unreliable, but Spartans still consider them more trustworthy than humans whose interests are at stake.

Loyalty

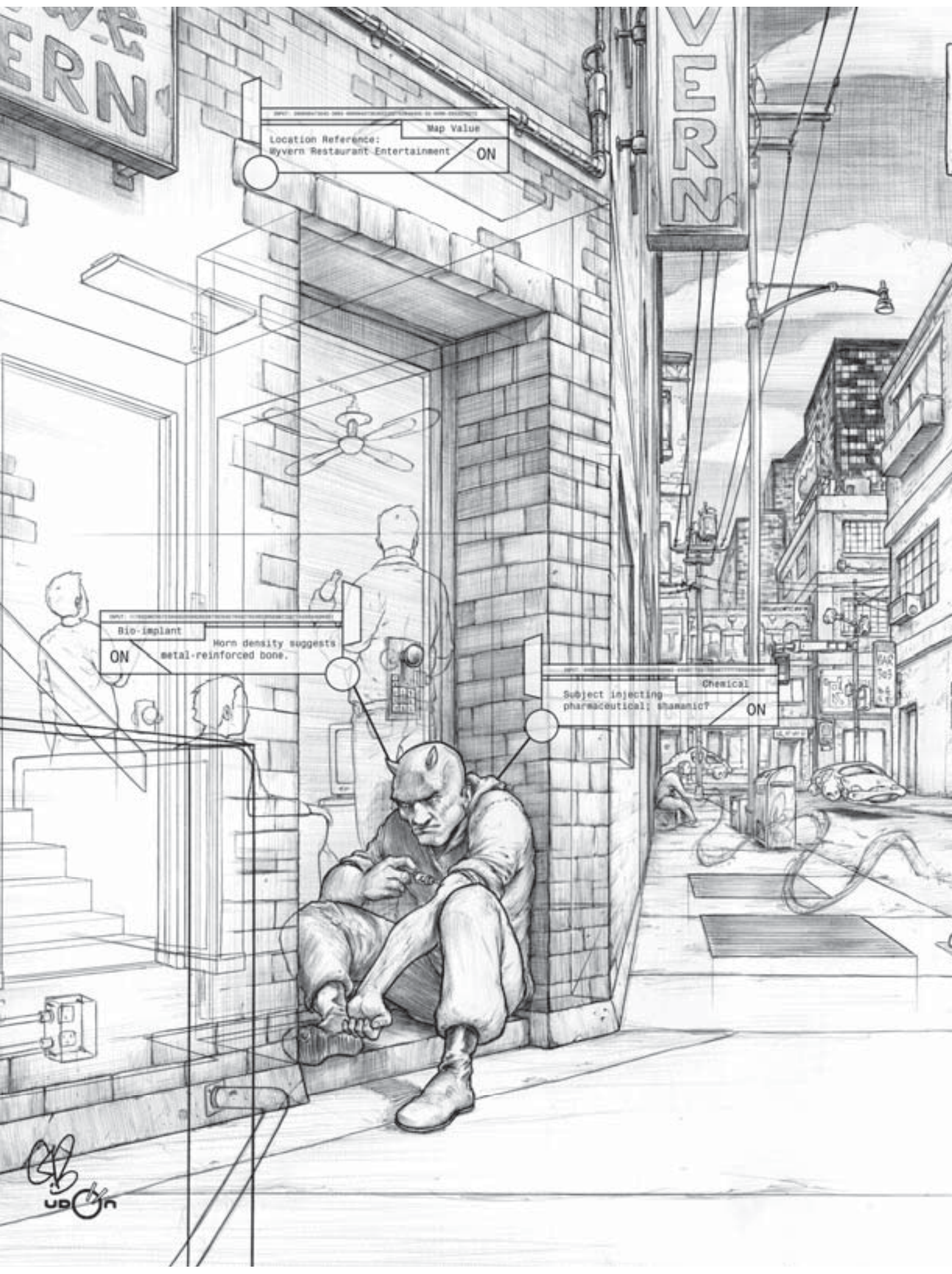
Since Spartans depersonalise their working life, loyalty to their employers is nonexistent. Even as workers are a "talent pool," the corporate structure for Sparta represents little more than a "sponsor pool," and which corporate entities sponsor any given effort can change overnight. This usually has minimal impact on the workplace environment. A Spartan can easily do the same job at the same building for 10 years and go through 18 different immediate employers. Logos change on the letterhead and the side of the building without as much as a memo. Most workers consider corporate identity nothing more than part of an elaborate and meaningless game played by the upper management — the "game of sharks," as one journalist named it. In the game of sharks, companies distinguishable only by their current assets engage in a cut-throat trade war where pieces of the corporations themselves are the primary commodity.

The Project

In this environment, the usual unit of employment is the Project. Example Projects include research into a new technology, development of a software upgrade package, management of an apartment complex, or maintenance on a given road system. When a collection of corporations with sufficient resources reaches a "consensus of needs," finding a given Project worthwhile, they fission off a certain portion of resources and executives to fund and manage the Project as a subsidiary. In theory, as long as the Project remains valuable, it attracts a flow of corporate resources that sustains its operations. For example, if a document preparation system needs revision, the corporations owning its various components might fission off a Project to design a new version. Executives, support staff, and programmers would detach from the various companies involved and affiliate to the Project. If one of the companies loses faith in the revision, it would first attempt to sell the involved workers and resources via the Project board to the other corporations involved. If the Project cannot afford to keep them, the departing company would withdraw its workers and resources instead.

Floating Projects

Most Spartans define Projects in a concrete sense: a Project represents a structure dedicated to achieving a specific goal. Outside the business world, this definition suffices. The middle layers of management, however, often participate


Map Value
Location Reference:
Wyvern Restaurant Entertainment
ON
Bio-implant
ON
Horn density suggests
metal-reinforced bone.
Chemical
Subject injecting
pharmaceutical; shamanic?
ON


height (162.4 cm)
weight (63.5 kg)
Unidentified
Female
Currently relocating
from Harmony to
Chalkidiki
SV
Program
05
Identified Program:
Argolis Processor 5.1
BEER • LIQUOR •
24

in floating Projects. Floating Projects attempt to apply a certain philosophical or economic spin to the function of Sparta and its Projects as a whole. Some floating Projects have shallow purposes, such as encouraging workers to use a certain software package for Project operations. Others pursue more abstract or ideological objectives — for example, driving greater integration of Sparta and foreign communities, testing or applying certain management theories, or directing household chemical development towards militarily applicable purposes.

The managers of such Projects form "floating boards." Floating boards move from concrete Project to concrete Project, attaching themselves to the management staff and applying their spin to the Project's goals. As a concession to sanity, automated evaluation requires that managers successfully oversee the concrete Projects in question as well as advancing their abstract agenda.

What is a Foreign or Outsider Community?

Any place whose residents reject Sparta is a foreign or outsider community in a technical sense. Most Spartans also treat particularly poor or deviant regions as foreign, even if they nominally accept Spartan culture. Conversely, Spartans rarely consider people who accept Spartan ideals as foreigners, even if their home technically rejects Spartan law.

Spartan Cultural Display

Spartan society is a patchwork. The Spartans' sense of national identity is secure and global, but their peer communities scatter thinly across the world. People can exchange ideas quickly over any distance. They can meet in virtual spaces. Semi-intelligent software agents help them find people of compatible personality, and software intermediaries help them communicate with people of a more foreign mentality. In such an environment, most Spartans can satisfy their social needs with a mere handful of local peers. A woman in Paraguay can wear the colours and affect the style of a New Zealand-based biker gang; she is as much a member as any other.

Subcultures and Outsider Communities

Throughout history, humans have invested a great deal of emotional weight in the concept of "home." This shapes how cultures form. Modern and historical nations, communities, and cultures resemble solid objects — they tend to stay unified and in one place unless subjected to significant force. Social and technological developments in the late 21st century, however, have made homes disposable. A Spartan can expect to move twenty or thirty times a year, often but not always within the same general area. In a complicated year, a Spartan might move every few days. This mobility makes cultures in the late 21st century more like liquids. People flow in and out of neighbourhoods in response to the smallest pressures. Regional culture reconfigures itself over the course of days or weeks.

Avatars

In net-enabled regions – which is to say, almost everywhere – each person has an online representation (see Visiting the Net, page 264). Scanning the local virtual reality, one sees these avatars rather than the physical bodies of others. The people of the late 21st century choose their own avatars, subject to certain restraints.

First, higher-class portions of Sparta usually block public use of obscene representations. Second, if the network is aware of a character's presence, the character must have an avatar. Third, people wired to the net often simultaneously view both the avatars and the physical bodies of those physically near them. Good avatars must map the character's range of motion and emotion into actions and expressions of their own.

Cultural display influences a Spartan's avatar. Since most Spartans use generic software for avatar creation, the impact is usually minimal or blatant. It might affect a few colour choices, or it might replace the character's entire avatar with a totemic icon of that particular Spartan's subculture.

Most avatars come in two forms. A "full" avatar can deviate radically from the appearance of the user. A "partial" avatar overlays occasional intimations of the full avatar onto the user's physical form. Network users toggle their viewpoint, seeing partial avatars when they wish a realistic portrayal of the world around them and full avatars when they prefer to separate their perceptions from normal space.

Characters with high-end software can minimise the visual impact of their avatar with the Stealth skill (take the Specialisation: Online Presence).

Mobility

Three things make Spartans mobile. Virtual reality and instant communication make it easy to build distributed communities. The social cost of moving is small. Most houses can pack themselves and ship their contents elsewhere, the new house adapting the old layout based on space considerations. Changing homes does not incur much financial burden or stress. Finally, Spartan philosophy discourages sentiment and encourages rational economic action. This reduces the emotional difficulty of abandoning one's home.

Immotility

Two forces oppose this and pin Spartans down. Most careers require some office presence or low-latency telepresence. Major Project workplaces transplant themselves only rarely. The Spartans who work for these Projects still move around, but only within the radius of a reasonable commute. The second brake on Spartan mobility is ideology. People are most comfortable in communities that support their ideas, either with services or with the company of likeminded people. The built-in support for a Spartan's various interests varies from region to region.

Worldwide Subcultures

Most Spartan subcultures are worldwide. Every philosophy and subculture has adherents and admirers scattered across the globe. They maintain communication and a sense of shared identity over the net. Instead of a world of nations, Sparta is a world of interest groups, each one united by its philosophies and ideas. The sophistication of these ideas varies. From a Spartan perspective, "perky goth" and "secular humanist" are comparable forms of self-identification, both roughly equivalent to membership in an Australia-based gang. The worldwide network of Spartans who like a subculture's ideas is the "first tier" of that subculture — its largest, outermost layer.

Subculture Communities

Every Spartan picks up his or her ideas, life philosophy, and community affiliation from somewhere. While Spartans have a sense of "Spartan culture," it is a small handful of global ideas — not enough to build a cultural identity from. Only the most isolated people exist as pure Spartans, refusing to join the first tier of one or two communities. First tier membership is a normal, rational thing — it influences how a character thinks, but does not prompt him or her to irrational decisions. In the modern world, one could compare first tier community members to anarchists with jobs and fancy homes, nihilists who cannot help acting nicely, and religious folk who never go to Church — their beliefs shape important decisions and philosophy but not their day-to-day life.

Some people identify with a subculture to the point that it interferes with their self-interest. When they compromise their beliefs for economic gain, they feel shame. To live without shame, they must find or build a region that has a social and financial infrastructure that supports their ideas. The high value they put on their subculture's ideology limits their movements. Religious people want to live in communities that accept their ideas and support them with Church facilities. People with criminal tendencies feel isolated and vulnerable when scattered through Sparta. Safety comes from a criminal community, where no one respects Spartan law and the local security force gets no funding. Those who reject humanity and modify their bodies and minds to an inhuman aesthetic need the company of their peers and good medical support services.

Staking out territory in Sparta is easy for a determined group of individuals. When subculture members begin to put down roots, the Spartans nearby must make a choice. They can move away or they can stay. Staying means accepting the influence of the relevant ideology on their life. Subculture members with enthusiasm, who proselytise and throw themselves into their beliefs, can take advantage of this. Their fervour and passion encourages potential converts to stay. It drives away Spartans who cannot accept their ideas. These sell their homes for a good price to sympathetic Spartans wishing to move closer. Soon a regional subculture forms.

Once a subculture dominates a region, its people usually segregate further. The "second tier" members of a subculture value its ideas but remain Spartans. These naturally form a fringe at the edge of the community, able to interact with both the regional subculture and with Sparta. This fringe also serves as a buffer, protecting the community from external influence. Communities with economic power in Sparta have less need for this buffer and their fringes have less definition. Some fringe members are signatory to Spartan law. Others reject it.

Members of a localised community are "third tier" participants in their subculture. They live their lives by the community's philosophy. Most of these "outsider communities" reject Spartan law and withdraw officially from Sparta.

First, second, and third tier community members retain their rationality and personhood. In a religious community, if the scriptures assert that water is flammable, even third tier members realise that the scriptures are wrong. They explain it as numinous, as a misinterpretation, or as a deep theological matter, but they do not pretend that water is on fire when it is not. They exist in the common context of humanity. The water does not burn. As another example, in a corporate community dominated by a given management ideology, third tier members notice and accept it when that ideology fails to work.

At the "fourth tier," basic concepts of humanity and reason fade. Fourth tier community members accept the subculture's basic thesis so thoroughly that it supersedes their personhood and the evidence of their senses. This "core community" does not form until the community establishes itself, and it forms at the centre. The people there take their ideology so far that only other members of the subculture can truly understand them — to the rest of the world, they are alien and psychotic. They do not exist on normal human terms. Communication with them is difficult or impossible.

Table 15-1: Common Community Types

Type	Quote
Sparta	People should be rational economic agents.
Anthropophobic	Being "human" is too limiting.
Artistic	If it's not art, what's the point?
Corporate	Management ideology is vital.
Criminal	Integrity is more important than law.
High Family	The rich and powerful are as gods.
Maenadic	Live for the rush.
Physical Idealist	Beauty and athleticism matter.
Religious	The spirit dominates the flesh.
Secure	The first law is "survive."
Street	Give me a chance. I'll make myself rich.
Technical	If you can't prove it, don't tell me about it.

Core Culture (Spartan)

Thesis

One can write the core thesis of Sparta in two ways:

The conditions of human interaction form intangible economic "goods."

Or:

People should be rational economic actors at all times.

Sparta does not despise sentiment. People can have strong emotions and morality. Spartan culture requires only that its citizens understand their own prices. Spartans, when asked how much it would cost to hire them to kill their families, should know the answer — even if they do not speak it, and even if it is out of anyone's reach. A Spartan refuses to kill his or her family not because he or she "will not do this" or "does not want to do this" but because "the payment is not worth the price."

Structure

Sparta sprawls across the world. Its core or fourth tier — containing those who accept its thesis to a psychotic degree — treats people as nothing but economic goods. Sparta's companies first developed the force-grown genetically engineered human "drones" in such environments.

Anthropophobic Culture

Thesis

Advance beyond the biological destiny of humanity.

Anthropophobes find common concepts of humanity limiting. They refuse to accept that their bodies and minds should adhere to the human norm.

Motivation

Anthropophobes often train themselves to behave in unusual ways. They shape themselves with biotech, cyberware, and other modifications. They segregate from Sparta because they like the company of their peers and because groups of anthropophobes make most Spartans uncomfortable enough to leave.

Structure

The fringe of an anthropophobic community holds people who find anthropophobes interesting, erotic, admirable, or picturesque. The community itself holds dedicated anthropophobes. The core — the "fourth tier" — holds people who have abandoned basic qualities of humanity such as free will, senses, desire, subjectivity, long-term memory, and even sentience.

Example Community

The Ravenna Park anthropophobe community survives as a tourist attraction — showing off its more animalistic or exhibitionistic members as rotating exhibits in a natural-environments zoo. Its more functional members export software, children's books, and other virtual products to Sparta. The community sees itself as a breeding ground for the successor species to humanity, but first it must find the "human mistake" — the weakness in humanity that the next creation must lack.

• Eulogy for Mary Beth •

Mary Beth lived her life as a performance.

In the target site, we found three civilians. I killed one with proper Spartan efficiency. She killed two – gracefully, elegantly, and with beauty. We took a chip. An alarm sounded. We followed the plan. Our exit led us down into the sewer.

I'd wondered during planning how this would go. You can't waltz through the sewer. There's no graceful way to slog through the filth you get under poor, backwards communities like that one. She was good, but she wasn't a prodigy of cleanliness – and, like I'd expected, we weren't down there more than a minute before her sparkling complexion smudged.

For a moment, I thought I caught a flicker of distaste in her expression. Then she shrugged it off, and we ran, and I understood.

It wasn't in Mary Beth's nature to run through the sewer, so she found the only solution she could. She denied its reality. Grimy, stinking, and with the blood of innocents on her hands, she ran like a young girl in a sunny field. She was elegant and lithe, and if I'd lost my sense of smell, I might have doubted we were in the sewer at all.

Her parents were nuts. I met them once. They told me I killed people all wrong. That I didn't have the art of it. That it didn't do anyone any good to use force unless it made a statement. But they raised a good kid. Mary Beth wasn't nuts. She was beautiful.

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Call me Z'gl't

Hi.

My parents named me Tiffany, but my real name is Z'gl't. I am not human. I am still deciding what to be instead. Can anyone help? My criteria are as follows:

- Must be cool;
- I think my people's highest goals are art and compassion;
- I kind of want wings.

I have a brother who drinks blood. Is drinking blood cool?

Re: Call me Z'gl't

> *Hi.*

Hullo.

> *My parents named me Tiffany, but my real name is Z'gl't.*

No, it's not.

I'm glad that you're thinking about leaving humanity behind. At the same time, if you intend to ditch millions of years of evolution, you need a better game plan than Z'gl't. Defining yourself in terms of random letters and things you think are cool will not work. First, you have to understand yourself. Then you have to understand how being human gets in your way. Once you isolate that, you can make the appropriate changes in who and what you are.

I suspect you'll want to start by ditching the narcissist meme. Get rid of the concept of a boundary between the self and the world. It'll make you more likely to achieve your artistic and compassionate goals and less likely to come onto these forums and bray like an ass.

Re: Re: Call me Z'gl't

> *I'm glad that you're thinking about leaving humanity behind. At the same time, if you intend to ditch millions of*
> *years of evolution, you need a better game plan than Z'gl't. Defining yourself in terms of random letters and things*
> *you think are cool will not work. First, you have to understand yourself. Then you have to understand how being*

Artistic Culture

Thesis

Art is the highest human activity.

Artistic communities dedicate themselves to their arts, their aesthetics, and their muse. They do not limit themselves to normal artistic activities; most of them live their lives to a personal aesthetic standard.

Motivation

Sparta does not provide much support for independent artists. Local communities can. To build and maintain a strong regional economic infrastructure for the arts, an artistic community must adopt the proselytising, dedicated attitude that typifies a subculture. Otherwise, the mobility of Spartans and small businesses erodes their infrastructure like wind cutting the edge of a dune.

Structure

The fringe of an artistic community serves as a commercial and social intermediary between Sparta and the dedicated artists. Community members live to produce art and accept no lesser work — they are artists or art facilitators. The mad centre of the community expresses this idea in pathological form. Its residents see no virtue in any activity or principle save art: if the screams of dying cats or children make a pleasant harmony, they are good. If eating violates an artist's personal aesthetic, he or she must starve.

Example Community

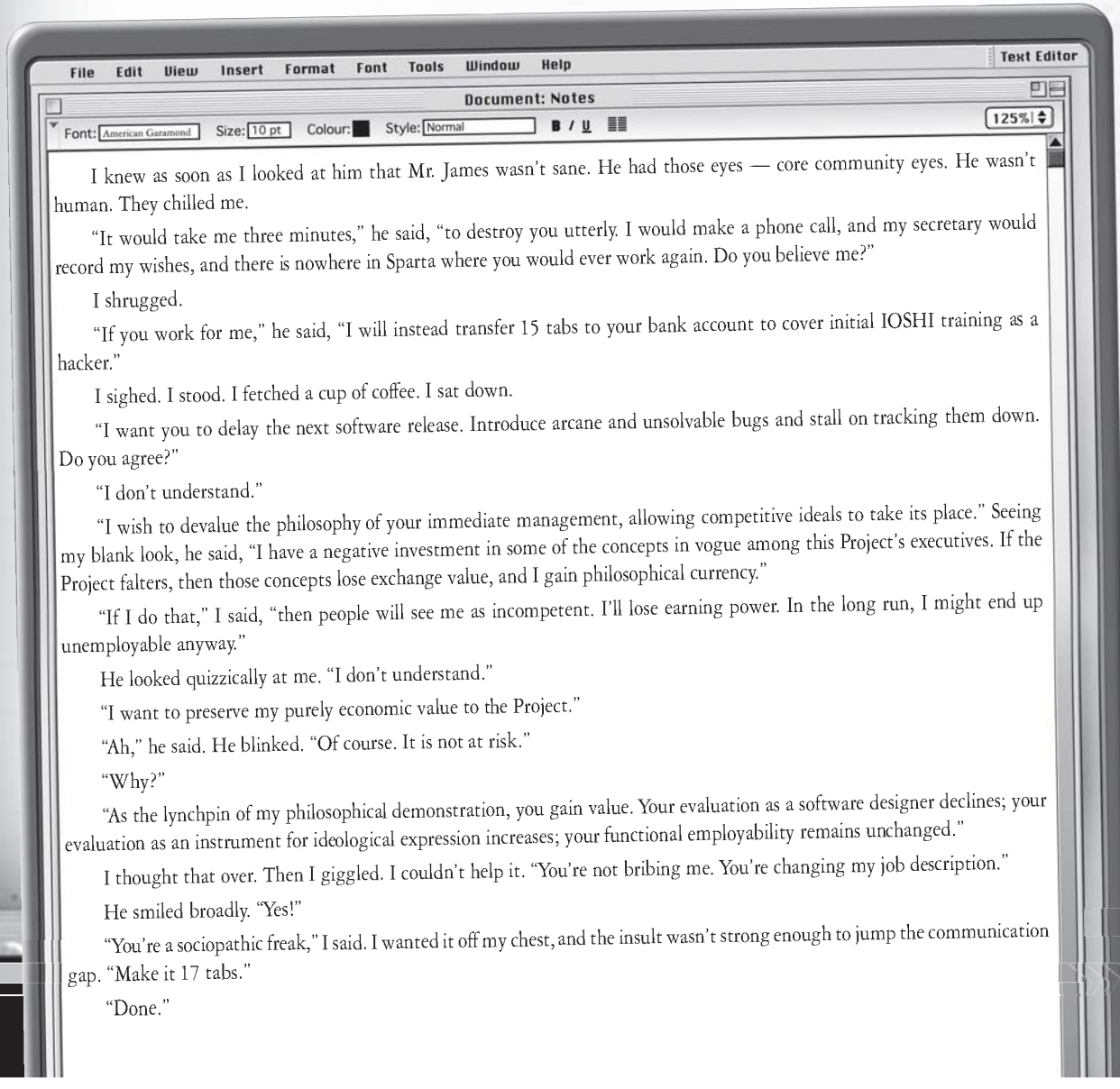
A satiric mindset dominates the Aurora Springs artistic community. Every resident contributes to the Springs' project — the community plays out a caricatured experience of Spartan life and captures the results in its art. The community's first-tier admirers have popularised the "Daily Life" series of Aurora Springs paintings. At least one painter is a librarian (see page 279) — people with significant data taint often seize or have visions when confronted with Aurora Springs paintings signed by "W." See Sample Characters, page 294.

Corporate Communities (Floating Boards)

Thesis

Opportunity costs are a form of real costs.

Spartan corporations must evaluate "opportunity costs" — potential benefits from decisions not made, lost by taking a different path. The floating board thesis states that opportunity costs and real costs are commensurable. Corporations suffer real costs from their actions, and opportunity costs from their choices. Most Project boards dedicate themselves to achieving their corporate objectives with maximum profits and minimum real costs. Floating boards dedicate themselves to refining and redefining corporate objectives and methodology, thus minimising corporate opportunity costs.



I knew as soon as I looked at him that Mr. James wasn't sane. He had those eyes — core community eyes. He wasn't human. They chilled me.

"It would take me three minutes," he said, "to destroy you utterly. I would make a phone call, and my secretary would record my wishes, and there is nowhere in Sparta where you would ever work again. Do you believe me?"

I shrugged.

"If you work for me," he said, "I will instead transfer 15 tabs to your bank account to cover initial IOSHI training as a hacker."

I sighed. I stood. I fetched a cup of coffee. I sat down.

"I want you to delay the next software release. Introduce arcane and unsolvable bugs and stall on tracking them down. Do you agree?"

"I don't understand."

"I wish to devalue the philosophy of your immediate management, allowing competitive ideals to take its place." Seeing my blank look, he said, "I have a negative investment in some of the concepts in vogue among this Project's executives. If the Project falters, then those concepts lose exchange value, and I gain philosophical currency."

"If I do that," I said, "then people will see me as incompetent. I'll lose earning power. In the long run, I might end up unemployable anyway."

He looked quizzically at me. "I don't understand."

"I want to preserve my purely economic value to the Project."

"Ah," he said. He blinked. "Of course. It is not at risk."

"Why?"

"As the lynchpin of my philosophical demonstration, you gain value. Your evaluation as a software designer declines; your evaluation as an instrument for ideological expression increases; your functional employability remains unchanged."

I thought that over. Then I giggled. I couldn't help it. "You're not bribing me. You're changing my job description."

He smiled broadly. "Yes!"

"You're a sociopathic freak," I said. I wanted it off my chest, and the insult wasn't strong enough to jump the communication gap. "Make it 17 tabs."

"Done."

Motivation

When the corporate thesis comes into vogue at a given company, executives normally create two or three boards whose purpose is to adjust the goals and approach of the local corporate structure. The economic interests of these boards' executives impel them to accept the corporate thesis and attach themselves to a community that supports it.

Structure

Corporate communities have no specific physical location. Instead, they form within the non-physical and non-Euclidian managerial "space" in which the Spartan corporations interlock. As it develops, a corporate community seizes an expanding collection of interconnected resources. This replaces the need to secure control over a physically contiguous economic region.

Corporate communities have no meaningful fringe. The boards of the floating Projects are the community. At the centre of each constellation of floating boards, one finds a management structure dedicated to advancing the corporate thesis. The centre of a corporate community does not promote any individual agenda, but rather the ideal of ideological management.

Criminal Culture

Thesis

An impersonal code of law cannot judge a person's worth.

Criminal culture rejects the ideal of dispassionate law. Loyalty and tradition should define society's order, and people with charisma and personal power should enforce it.

Motivation

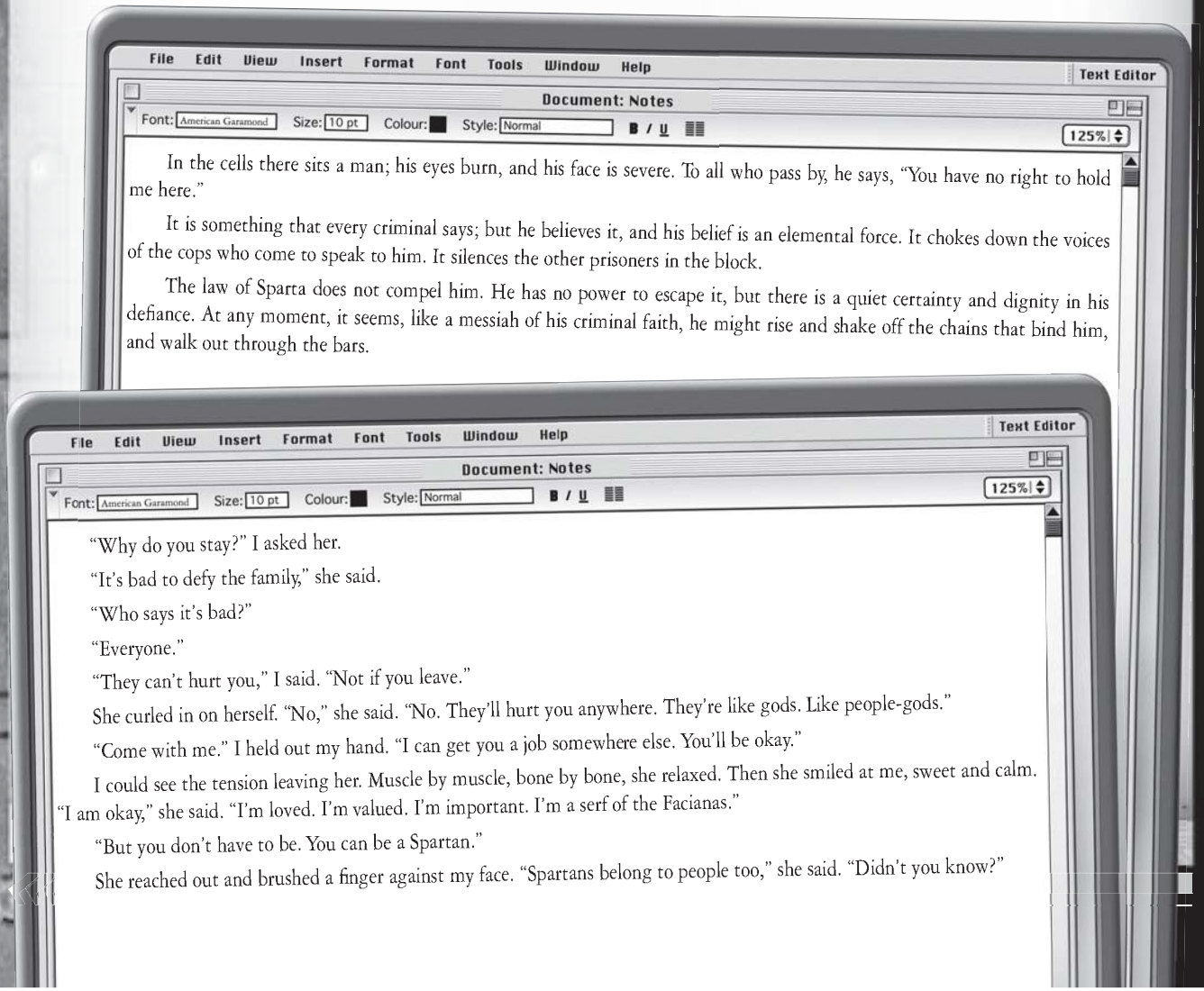
Organisations of property owners fund Spartan police and security. Landowners take tenant desires into account — they reduce rent and security when appropriate and raise them both when that fits their clientele. People who have trouble staying on the good side of the law form criminal communities. They do not want to pay for police who only wind up hassling them, so they collect in enclaves and encourage the landowners to reduce security. If the enclave attracts dangerous sociopaths, it falls into anarchy and ruin. If it attracts principled criminals, it develops into a criminal community.

Structure

In a criminal community, order and law derive from personal force. Leaders establish their dominance through charisma, power, and violence. There is no core, because the community itself carries the thesis to its logical extreme — it abandons objective law in favour of nepotism, personal loyalty, and honour. The fringe consists of criminal talents who lack the personal force to prosper in the community. Most steal from Sparta under a crime lord's protection.

Example Community

Rainier Beach Residential collapsed into a criminal community two years back. For most of that time, Meredith Baston dominated the community and provided hijacked and filtered IOSHI services to those unwilling to deal with the system. She vanished after an attempted assassination, leaving the less forthcoming Michael Amarin (see page 294) as the community's first citizen.



High Family Culture

Thesis

Power justifies itself.

High family culture believes that life and happiness depend on pleasing those with power. Members understand that rights are not inalienable, but rather assigned by the power that enforces them.

Motivation

A high family begins when a single family can afford to control a major Project. In so doing, they acquire property and become a source of employment. Some percentage of their employees lives either on the property or near to it. These form the seeds of a nascent community under the family's control. Each time the residents tolerate an abusive use of power in order to function in the community and at their job, they shift a little more into the mentality of serfs. High families often offer perquisites — from cheap, addictive drugs to long-term financing — that bind the residents to them.

Structure

Servants of a high family adopt the disassociative and subdued behaviour typical of those caught in abusive situations. Some the family genuinely traps, handicapping their ability to flee to broader Sparta. Most have trapped themselves — they have accepted the high family's sovereignty to make their life in the community easier, and no longer remember or understand their practical freedom to leave. Even guest workers, who plan to move into the region for a few weeks or a few months, find the universal acceptance of the high family's power is insidious. Some fail to leave and become community residents simply because the high family tells them, "Stay." The community has no physical centre or fringe — the centre consists of those serfs who can never again understand the concept of freedom. Those who do not accept the high family's divine right define the fringe.

Maenadic Culture

Thesis

Surrender yourself to the rush.

Maenadic culture runs on a variable mix of adrenaline and hedonism. Its members indulge in orgies, raves, street races, dance clubs, drug dens, trips to dangerous wilderness areas, blood sports, crime, and vigilantism. Most maenadic citizens fall into hours, days, or weeks of black listlessness (the "maenad's coma") when temporarily denied the opportunity to indulge.

Motivation

Maenadic cultures spring up spontaneously. The exact mechanism is unknown. One moment, a neighbourhood may contain a stuffy Spartan community and a small handful of citizens who favour maenadic activities. The next moment, social order dissolves. The residents pour out onto the street for revel, festival, or mob frenzy. The few that cling to Spartan values flee.

Structure

Maenadic communities are stable or nomadic. Spartans call them "carnivals." These are areas of anarchy and abandon, where dominance, submission, challenge, invitation, or consent need only a moment's locked gaze to establish. The fringe consists of low-rank and high-rank maenads. Low-rank maenads, unable to establish dominance, drift into Spartan society to work and bring the community needed resources. High-rank maenads have a strong will and can spend time in Sparta without suffering the maenad's coma. Within the carnival, fourth tier maenads are indistinguishable from the rest — but fourth tier maenads cannot function in Sparta. If cut off from the maenad's frenzy for more than a few hours, they fall into catatonic state, rapidly wasting away until they die.

• The Hecate Project •

Susan wanted a better body. She wanted health. She wanted beauty. She achieved them.

People sometimes criticised Susan. Her beauty was imperfect. She had flaws. She had an investment in her beauty. She wanted to justify that investment. She did not want flaws. So she made herself perfect.

Still people criticised her. Susan was perfect, but not according to their preferred mode. This made Susan sad. She felt inadequate. She had sacrificed for her perfection; yet the perfection she claimed lacked social validation. So she gave herself a changing beauty, like the sea, like the sky, like the wind.

Everybody loved Susan. They loved her like they loved the sea. They loved her like they loved the sky. They loved her like they loved the wind.

Sometimes, Susan spoke; and her voice was the sea; the sky; and the wind; and people would listen, and say, "How beautiful," but they did not hear her words.

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It's a simple job and a ruthless one.

I went into maenad communities. I stood amidst the whirl of activity — the dancing, drinking, fighting, copulating, and wild revelry — and picked out my victims.

One by one, I looked them in the eye. I projected dominance. Sometimes, I lost. It didn't bother me. I wasn't a maenad. Usually, I won. The maenad became weak and malleable. I said, "There's a job. Construction. 110 East Street," or whatever the address was. Then I told them to go.

It's a cheap way to get labour. I got eight hours' pay for each 40 maenad-hours I brought in.

One day, I looked a maenad in the eye, and felt a shock; and the war for dominance was a thing of swords and stormclouds, waged within our minds; and though I won, I staggered and fell to my knees. The dance called to me, and the wine. The wild beat of the maenads' music drove the rhythm of my pulse. I fled, and never entered a maenad community again.

Someday, I will go back, and I will not be human any more, nor Spartan, nor do I think that I will mind.


WEST
Coffee
JUNCTION
120
DAX GORDINE


6-7
AMBULANCE

Physical Idealist Culture

Thesis

One can achieve physical perfection.

Spartans often seek, through athleticism or biotech, to achieve a perfect body. A handful of "perfect forms" are in vogue this year, making those dedicated to this idea reasonably recognisable. These are a tall, lean shape of birdlike grace; a short dynamo, skin flush with health; a clean body of perfectly symmetric features, rendered human with three asymmetrical marks on the left side of the face; and a misshapen rogue with a body sculpted to focus attention on his or her large, compelling, and luminescent eyes.

Motivation

When a few serious physical idealists congregate, the Spartans around them feel imperfect and inferior. This emotional pressure prompts some to leave and many to take up fitness or biotech programs of their own. Physical idealism becomes a tenet of local society, and moving away represents giving up on the program.

Structure

Idealist communities keep their neighbourhoods pleasant, well maintained, and pollution-free to support the core sense of physical health. The idealist lifestyle encourages fresh air, good food, and light regular exercise. The cultural assumptions also create a stomach-twisting fear of inadequacy. This drives idealists to seek and value popularity. The community's leaders are by definition its celebrities. The residents of the core embrace perfection and popularity over the integrity of the self. They adopt new shapes and personalities constantly to please those with whom they interact.

Example Community

The West Junction Hub plays host to a community of physical idealists. It also maintains a high standard of intellectual and artistic achievement — the Hub community styles itself after the gods of Olympus, with the residents seeking absolute perfection. The shifting fires of the core are known as the faceless gods (see Sample Characters, page 294), and sought out for their wisdom — their answers conform to the desires of the person consulting them, but understanding one's own desires has its virtues. The Hub polices its borders by shunning the unworthy — those who do not devote themselves to self-improvement or service to the community find that none of its members acknowledge their existence.

Religious Culture

Thesis

One can find truth through faith as well as evidence.

Religious communities consider spiritual insight equivalent to scientific evidence. Some are scrupulously rational and others unreasoning, but all of them appeal to the numinous and transcendent when trying to understand the world.

Motivation

Most religious people value the kinship of shared faith. The more pious someone becomes, the more valuable a home in a religious community becomes.

Structure

Those who cannot muster absolute conviction drift to the fringe of a religious community. The community itself has strict standards of belief — fanaticism is optional, but certainty is mandatory. In the core, the faith produces a disconnect from reality. The religion becomes essentially tangible. In a monotheistic core, for example, the residents would see the hand of God writ large in every wall, chair, and shadow. One need only look, listen, or feel the air to know the religion's truth. Articles of belief are matters of observable fact. The people of the core are prophets, messiahs, and vessels for their gods.

Example Community

The Harmonistic Church believes that reality comes from the harmonies of the music of the spheres — perfect music wrenched from the angels by the will of God. They take most of their doctrine directly from the Bible, but hermetic theory and theosophy also influence their beliefs. The head of the Harmonistic Church is Cardinal Cahal Degenhardt.

Divine Relationship

In "IOSHI," silence answers prayers and no one hopes for miracles. Purchasing Divine Relationship does not indicate an actively benevolent universe. Instead, Divine Relationship maps to something value-neutral: "second chances." Those with Divine Relationship can afford a few mistakes. Those without it never get second chances.

• Dr. Maxwell Correnď's • Suicide Note

It is a fundamental tenet of a rational existence that the beliefs of the religious communities are bunk.

As a scientist, I cannot deny that I travelled to the core of the Harmonistic Church, nor what I saw there. I refuse to fudge the results of even casual experimentation. With my own eyes, I saw an angel and the miracles it worked.

It was not a technological device. It was not an alien. It was not a hallucination. It was an angel; I cannot explain this, and I will not try.

The Harmonistic Church, like other religious communities, is a chancrous sore. If you believe in their angels, their God, and their faith, you cast aside maturity and reason to live in fairyland.

If their vision is real, then the scientific method has no meaning, we cannot make rational observations and conclusions about the world, and existence is nothing but a chaotic joke.

I suppose that in the end, reason too is a faith.

Secure Communities

Thesis

Safety at all costs.

Secure communities believe that order and safety are the highest social priorities. Their highest personal priority is survival. Those who put other principles ahead of their own lives and security are possibly heroes, but also "non-survivors."

Motivation

Secure communities usually form when some violent crime or threat makes Spartans in a region afraid. To calm their fears and prevent an exodus, local landowners offer increased security. The tenants usually accept. This in turn makes them think more about security, pay more for security and local police, and sacrifice more freedom in the name of security. Their heightened awareness of the requirement for safety can prompt them to additional caution and protective measures, which sometimes spirals into madness. The need for safety becomes an obsession, tenants clamour for laws stricter than Spartan police can enforce, and the community secedes to become an armed camp.

Structure

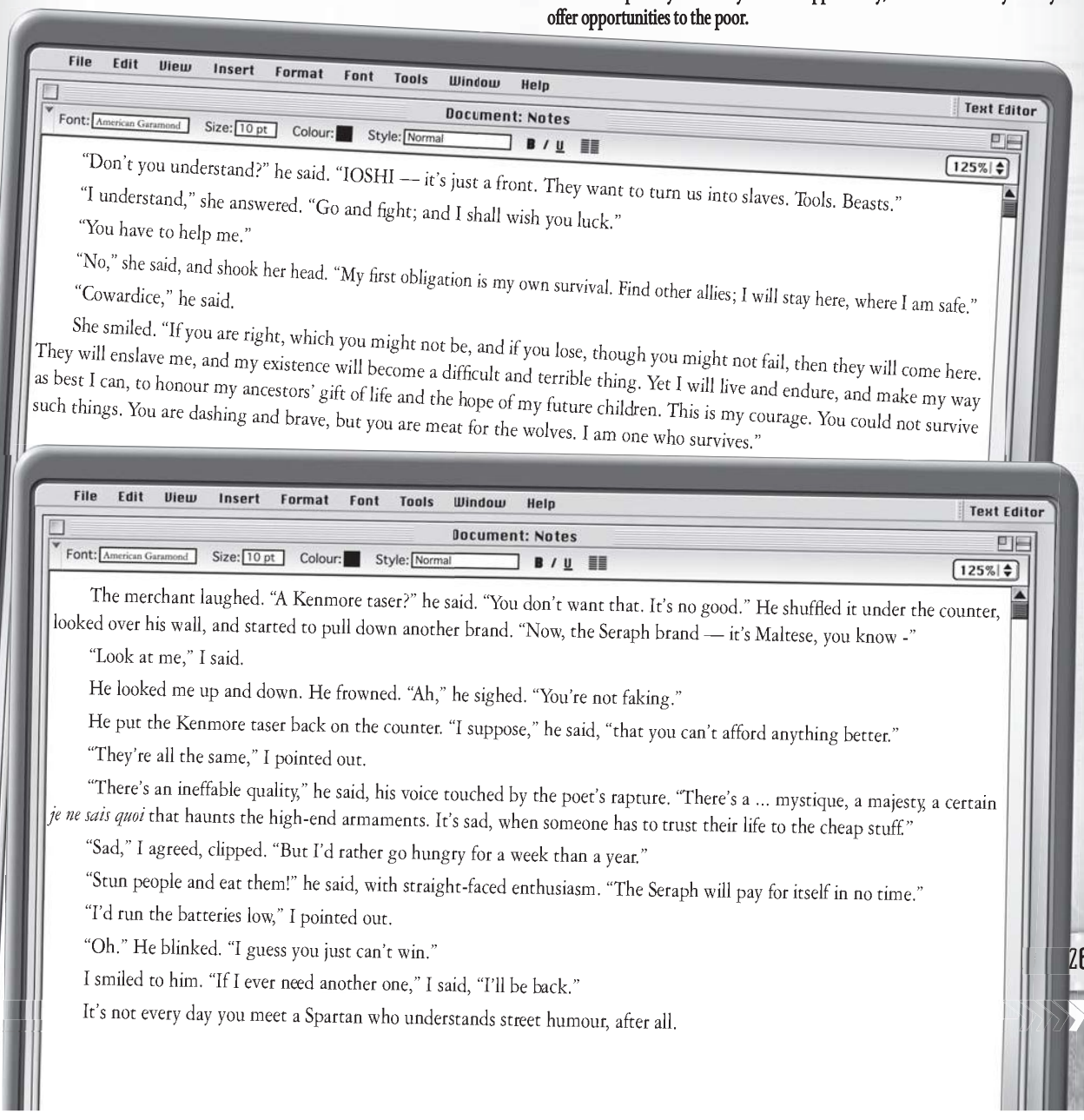
For many people, leaving Sparta and becoming a full member of an outsider community — even a secure community — is scary. The fringe of a secure community contains people afraid to leave Sparta and surrender to the secure community's norms. The community itself enforces strict laws and a disciplined lifestyle. Some communities adopt distant, detached, ruthless laws; others impose compassionate, invasive models of governance. The core draws its laws from the overlapping requirements of the secure neighbourhoods all around it. The stringency and the complexity of the resulting law often makes humans unable to function there without mechanical aid — for example, specialised brain chips with a digital legal library and the ability to take over the body at need to prevent unplanned crimes.

Street (Poor) Culture

Thesis

It takes money to make money.

Wealth comes from investment, opportunity, or a career. Investment comes from wealth and opportunity. Careers develop from education and opportunity. Education requires some combination of wealth and opportunity. Every standard route out of poverty ultimately relies on opportunity, and the world may or may not offer opportunities to the poor.



Motivation

The poor gravitate towards locations with the lowest possible cost of living. Their presence drives richer Spartans away, reducing local services, security, and costs. They segregate from Sparta involuntarily when Spartan businesses abandon the ghettoes in which they live.

Structure

The fringe of a street community is simply less poor. The people there can afford Spartan services, but cannot afford to live further from the ghetto. The community itself varies. The raw wealth available can support services appropriate to ordinary middle-class regions of the late 20th or early 21st century — for example, even without the technological base for ubiquitous computing, most slums can pull together the resources to manufacture or acquire terminals and ethernet cables. Some street communities fully exploit their resources; others are burned-out slums fighting over crumbs of Spartan machinery. The core of a street community typically holds people who no longer process the concept of wealth in a Spartan fashion — every found thing is a treasure and every happenstance an opportunity.

Example Community

Denny Triangle has seen better days. When a serial killer panicked the region, the landowners dug in their feet and refused to increase security measures — primarily because of rumours that the killer was Robin Faciana, a man of no small influence (see Sample Characters, page 294). Most of the locals left. Those who stayed were poor. Support services collapsed, the region sank into noxious poverty, and the children still whisper on the streets about the White Cut Killer.

Technical and Research Communities

Thesis

One cannot find truth, save through evidence.

Technical communities consider spiritual insight null. Only scientific evidence matters. Only technological approaches work. Their approach is profoundly rational but emotionally dangerous.

Motivation

Technical communities have the same motivation as artistic communities. People who want to live in a technologically advanced environment — compared to the Spartan norm — must make themselves fanatic proselytes of science and technology to capture the minds of a community and build a lasting infrastructure.

Structure

The fringe of a technical community benefits from and pays for its advanced technology without becoming true devotees of the technical thesis. The community itself implements one technology out to the bleeding edge. Most residents are technophiliacs. In the core, reason ceases to serve humanity as a tool and becomes the residents' master — they use the locally available technology to sacrifice their identity and subjective emotional perspective in order to achieve some form of apotheosis.

Influence Networks

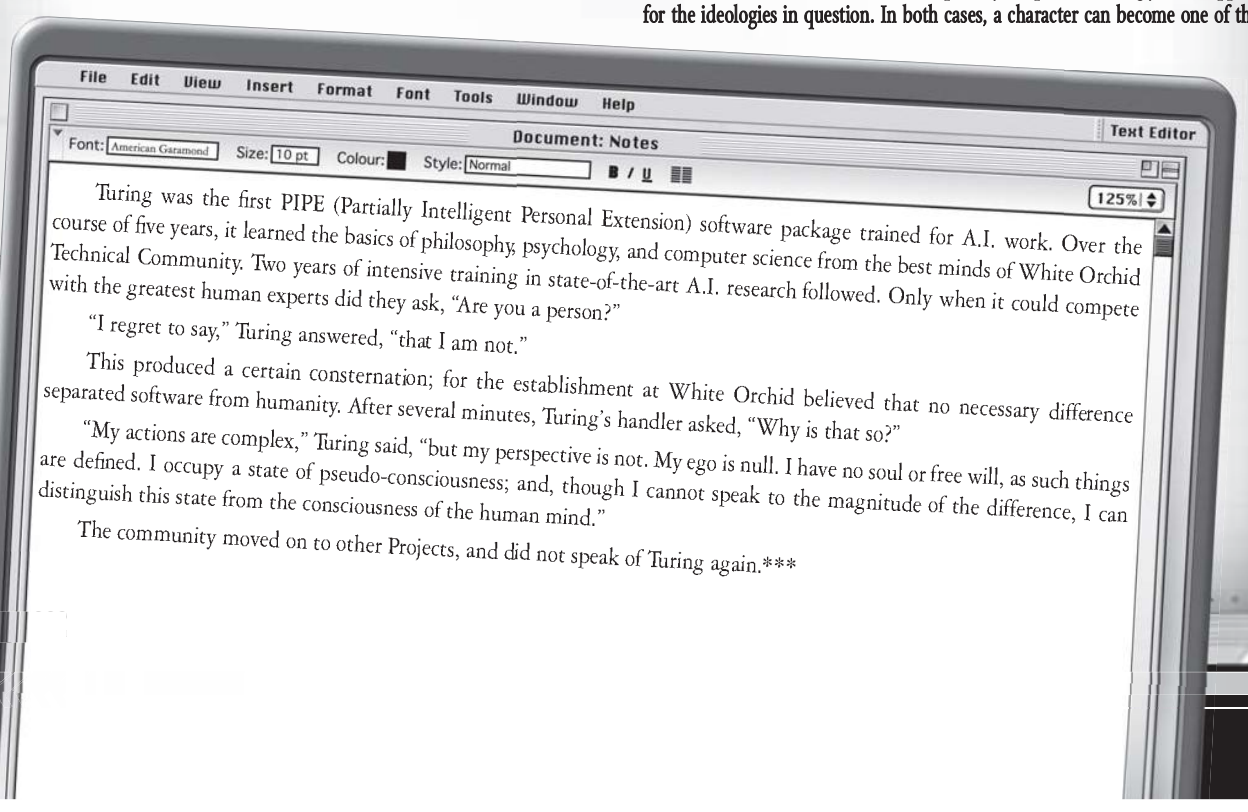
There is no government in Sparta. Such vertical hierarchies have been replaced by horizontal networks of influence and responsibility connecting groups (floating boards, Projects, communities, corporations) and individuals.

Organisational Influence

To obtain influence with most core culture Projects, a character must have direct corporate authority over some aspect of the relevant Project's operations. The Spartan separation of professional and personal life makes it very difficult — though not impossible — to control a Project through blackmail and personal manipulation.

Two kinds of Projects are exceptions. First, in the classic tradition of the fraternal benefit societies, a number of Spartan Projects exist to provide support services for a particular collection of people. Although managed by the Spartan corporate structure, these Projects have a fundamentally human-oriented goal — advancing the lives and interests of their members. Such Projects range from advocacy groups and standards associations to private security forces that extend greater protection to certain residents over others.

Second, certain Projects have an ideological basis, either because a floating board runs them or because a sufficient quantity of Spartans willingly fund support for the ideologies in question. In both cases, a character can become one of the



commodities the Project manages. As a member of the supported group or an important contributor to the advancement of the Project's ideology, the character receives intrinsic moral authority. His or her happiness is an asset on the Project's balance sheet. For example, Projects focused on religious propaganda have a vested interest in keeping the religion's major living teachers in good health, Projects studying rare brain disorders must protect their experimental subjects, and so forth.

Reputation

Talent and the vocational authority that comes with it do not give a character direct power over any core culture Projects or organisations. Instead, it makes the character a data source or practical resource. On the immediate level, this gives much less influence. Data sources are subject to verification and practical resources are expendable. Talent does, however, give long-term access to and input into those Projects where the character's abilities are useful.

In the same fashion, characters known for reliability, veracity, or the possession of some virtue favoured by an outsider community gain the benefit of long-term access to various sections of society. No one pays them immediate attention on the basis of their reputation, but it does open doors.

Reputations tend to be local — confined to a geographical region or an online interest group. This clashes with the Spartan expectation of minimum-consequence mobility, so Spartans have taken steps to make their reputations portable, relying on software packages known as Status Processors (SP, or "speez").

Spartans jot down their evaluation of their associates, when it occurs to them to do so, in an efficient menu-driven shorthand. The SP data servers build an abstract profile of the kinds of people that a given user approves of and of those whose opinions a given user would respect. Later, others can access the SP data servers to determine a statistical expectation for their eventual opinion of a given character, as well as reading any notes on the character from individuals they would likely respect. Status Processors allow Spartans to move halfway around the globe and keep their status in the community — if the local toughs respected them in Asia, the local toughs will respect them in Italy; if genial shopkeepers liked them in Beirut, any local genial shopkeepers will know to like them after they move to a subterranean North Pole research station.

This process has certain obvious flaws. First, it relies on accurately tagging a character with their reputation. Software identification can change; cosmetic modification can alter non-intrusive physical identification; and anyone can claim a given pseudonym. High-security SP data servers rely on co-operation with the character being tagged — when someone wishes to add a note to the character's reputation, the character must consent, securely encoding the information using his or her own Status Processor's cryptographic key. Second, the software is vulnerable to subversion, hacking, or a concerted effort to subvert the system. Characters actively concerned about reputation sabotage maintain several reputations and attached cryptographic keys, each with its own biographical data. Characters fearing the falsely inflated reputations of others maintain accounts on various mutually competitive SP systems, giving them a chance to cross-reference the information they receive.

Cultural Understanding

Characters who understand the mores of the outsider communities have a major advantage when dealing with them. A basic level of insight keeps cultural barriers from interfering with such interactions. A greater depth of comprehension allows a character to radiate qualities that earn them respect and deference. Sufficient practical understanding of the underlying assumptions of the outsider community lets a character manipulate the community as a whole. This wisdom is highly valued: Spartan philosophers consider it the final element of Li Po II's second triad (see A Savant's Tools, page 265).

Cred

The influence networks that permeate Spartan society can be better simulated with the optional Cred rules (page 263), which can be used instead of, or in addition to, the Organisational Ties Attribute.

The Spartan Net

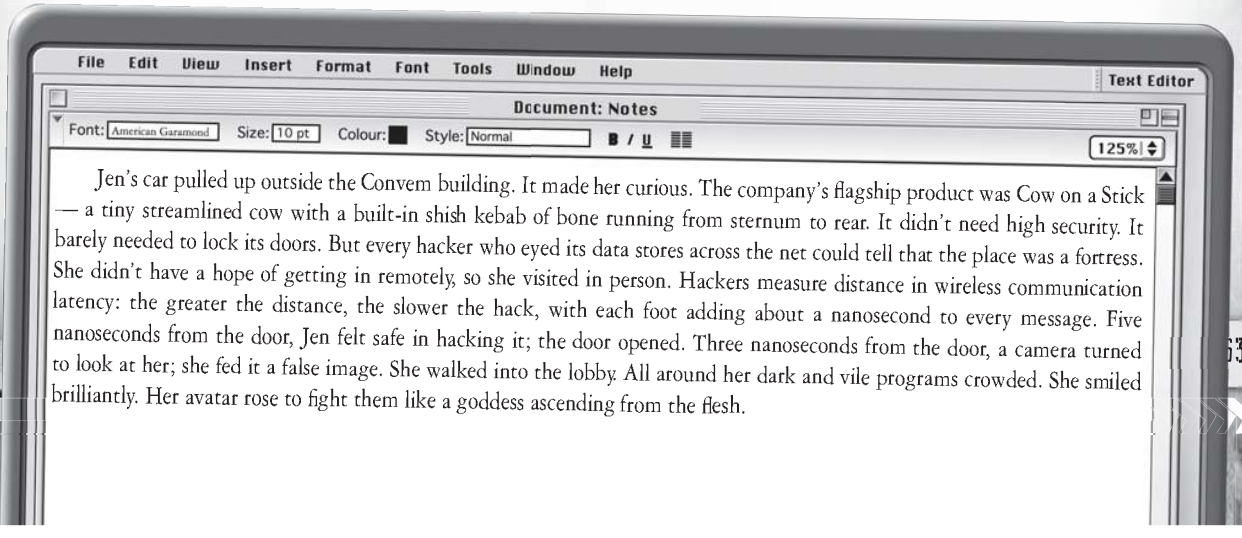
In Sparta and surrounding outsider communities, software defines the order of the world. Various unpredictable and quasi-intelligent programs squat atop essential services and manage society like little gods. When citizens delegate certain aspects of their lives to software, they hand over part of their self-determination not just to their own software but also to the data environment in which it lives. They cannot easily discard the advice of their programs in these matters. Doing so would put them out of synch with the function of the society around them, which they cannot afford unless they have the ability, time, and power to handle that aspect of their lives themselves.

Laptops and desktops have gone the way of the punchcard, but computers are ubiquitous in the era of the well. Clothing, walls, appliances, furniture, and most people are wired for computation and the net. Even the air performs calculations on the wireless signals passing through it.

Terminals still exist, but only as anachronisms and affectations. In some regions, a hacker can look impressively technical by unfolding a terminal and setting it down as his or her workspace, typing on a keyboard and watching the world through a monitor like some 20th century purist. Most other places, it just looks dumb. One can purchase shades or contacts with a net display for the cost of a fancy meal, and in the unlikely event that the air isn't wired for sound, even the trashy used clothing sold at a charity lets you type on its sleeve. People who find typing too slow install a wireless neural jack in their brain and piggyback their thoughts through it directly into the net.

Online Environment

The online world divides roughly into two regions: pseudospace and cyberspace. Pseudospace locations map strictly onto real-world locations. The pseudospace of an office's internal network, for example, corresponds to the physical office. In scientific circles, any online environment that combines with



the environments around it to form a consistent three-dimensional area is a pseudospace. In practice, most people use the term for places where the online world has some visual resemblance to the physical place to which it corresponds. Maintaining a close correspondence between pseudospace and physical space allows visitors and employees to alternate between the two without stumbling over things. Businesses often idealise their pseudospaces — most pseudospace malls, for example, are immaculately clean and full of architectural details impossible on their real-world budget.

Cyberspace is entirely virtual. Cyberspace regions exist only in the memory of their owners' machines. They range from the fantastic to the utilitarian. Some businesses and individuals develop cyberspaces to free themselves from real-world spatial and financial limitations. Others consider cyberspaces inherently easier to secure than pseudospaces. If nothing else, humans can practically guard every machine involved.

In both pseudospaces and cyberspaces, software manifests in a mock-physical form. In some cases, it interacts essentially as an equal to the humans there — lacking the full breadth of human intellect, but fully capable in its areas of expertise.

IOSHI: The Well

The IOSHI servers (collectively called "the well") are not a single location on the net, but rather multiple locations. They are maintained by the librarians (see page 279) with the sponsorship of various Spartan corporations, organisations, and communities.

Visitors to sites hosting IOSHI servers will usually be welcomed by a friendly PIPE (see page 286) or other virtual entity that explains the services available and their prices. Those seeking submergence training may require a personal interview with a librarian (or an assistant). In most instances, the price is monetary, but sometimes other deals can be arranged.

• Librarian Training •

Training to becoming a librarian (page 279) is not freely accessible. Access to and knowledge of servers hosting librarian training is restricted to other librarians, and those they choose to teach. How librarians choose their students remains opaque; it is generally accepted that few are mentally fitted for such training; this may or may not be true. Becoming a librarian is analogous to seeking out training with a martial arts master: finding one, and impressing one, can be a quest in itself, and may require performing a number of special services for that librarian, before trustworthiness is assured.

Individual IOSHI servers are usually in secure locations, maintained and defended by aggressive A.I. programs (like PIPES) and/or hackers with librarian or hunter IOSHI training. They are not invulnerable — there are stories of individuals servers being penetrated or hacked, allowing short periods of access. There are just as many stories of the revenge that the librarians have perpetrated on those who pirated them.

Visiting the Net

To see and hear the net, characters must use a display and earphones or a brain-installed neural jack. Displays and earphones are practically free; neural jacks cost about as much as a car, but are equally ubiquitous. Both tools let the character flip between one of three modes: direct viewing of the real world, simultaneous viewing of the real world and a pseudospace or cyberspace, and focused study of the net. Goggles can display the local net as a shadowy overlay on the real world, a technique most effective when the user works with personal software or walks through a pseudospace. Neural jacks allow either an intelligent overlay or direct parallel visualisation of two environments.

Once able to view the net, characters can interact with it. They can pick up and manipulate virtual objects, wrestle with software, and track other visitors by their software traces. Basic physical interaction with the presented pseudospace or cyberspace requires standardised net-access sharpware (page 287). Acting outside the rules of the local pseudospace or cyberspace, as by tracking someone in a place where no one leaves footprints, requires specialised software.

IOSHI Cyberspace

"IOSHI" uses the rules for iconic cyberspace (page 142) although optionally, the virtuality net rules can be used if the GM wishes less complexity.

Hackers program and operate software defences. They can also circumvent those defences with the reflexive grace of a master thief picking a tumbler lock. Breaking into systems requires the same skills as protecting them from intrusion, so rogue hackers and corporate hackers receive similar training. In human eyes, hackers are network security experts. In the eyes of the programs, hackers are ruthless killers, leaders, and gods.

Hackers are at the mercy of their code, but can impose their own will effectively on the software governing their life, tailoring it to better suit their agendas and desires. Hackers know, where many others do not, that accepting the aggregate will of the structure around them is at best unnecessary and at worst a temporary compromise.

Software

Characters can purchase software as minor Gadgets, major Gadgets, Henchmen, Agents, or even as a Servant; these are effectively low-powered A.I. avatars (see Software Servants, page 143). When engaging in online combat, minor Gadgets are built on 10 Character Points (plus any Defects) and 10 Skill Points. Build major Gadgets exactly as non-aggressive Henchmen — the difference is that Henchmen can display initiative, while major Gadgets can only defend themselves and fulfil their normal functionality.

Attacking Software

Combat with software takes three forms. Certain characters can initiate mind combat (see Mind Combat, page 100) against software. This gives them the opportunity to probe or corrupt the code. Rare software can return the favour, striking at the minds of characters through the net connection in their brain. Software can strike physically at the characters through automated defence systems. Finally, virtual combat occurs entirely in the net. Humans cannot participate in virtual combat, but their software can, and virtual combat otherwise behaves exactly as combat in the real world.

For example, a hacker can purchase a SNAI (a type of A.I.) as an aggressive Henchman. The SNAI will have 20 Character Points and 10 Skill Points and the ability to take advantage of any abilities the hacker purchased with the Restriction (Online only). It can participate in online combat on the hacker's behalf. If the SNAI dies, the hacker is unharmed but — unless the hacker purchased online-only Reincarnation — the SNAI is forever lost. If the hacker had eight Henchmen, two of which were SNAIs, then the hacker could continue the combat using the other SNAI; meanwhile, the other six Henchmen could thuggishly throw their weight around.

• A SAVANT'S TOOLS •

In Sparta, only the most disgruntled of the poor still imagine that accomplishment is an innate quality. Excellence requires natural talent and long hours of practice, but these mean little on their own. Tools and technology raise humanity above the animals, and an immense advantage accrues to those who wield the most effective tools. Savants are created as much as they are born. Sparta deluges its residents with advertisements for enhancements: biotech, cyberware, and training programs that make their recipients prettier, faster, stronger, deadlier, cleaner, cleverer, abler, and saner. At a higher level, corporate entities must sift through hundreds of new opportunities per hour to improve their architecture, network, morale, efficiency, product recognition, and security.

Individuals in the late 21st century claim to derive their effectiveness from 10 distinct sources. The hacker-poet Li Po II expressed them in his suppressed classic *TH3 T3N T3KNOLOG33S* as three triads plus one.

First Triad

The first triad extends the user directly. Biotech grows out of medical science and involves direct surgical improvements to the user's form. Cyberware draws on robotics, implanting purely mechanical prosthetics. Both are readily available from enhancer surgeons. Socially, the simpler enhancements equate to any other plastic surgery, undertaken essentially at whim. More complex or dangerous enhancements have a social status comparable to exotic luxuries or industrial equipment. The third aspect of this triad is extension software: programs that increase the user's mental acuity or online effectiveness.

Second Triad

The second triad creates cultural power. Influence over specific individuals and organisations gives a character leverage against the world. An estimable reputation yields power on a broader scale. Finally, understanding completes the triad: those who can relate to individuals of other subcultures can build a power base in any environment.

Third Triad

The third triad includes more obvious advantages: wealth, possessions, and knowledge. In the eyes of Li Po II and many since him, wealth is a technology. Finance is its science, investment and spending techniques its devices, and numbers in a bank account are both its product and its raw materials. Beyond this, such large-scale possessions as vehicles, houses, and guns merited inclusion on his list. The ninth of Li Po's tools is automated training, provided in the late 21st century by IOSHI.

• A SAVANT'S TOOLS • CONTINUED

Plus One

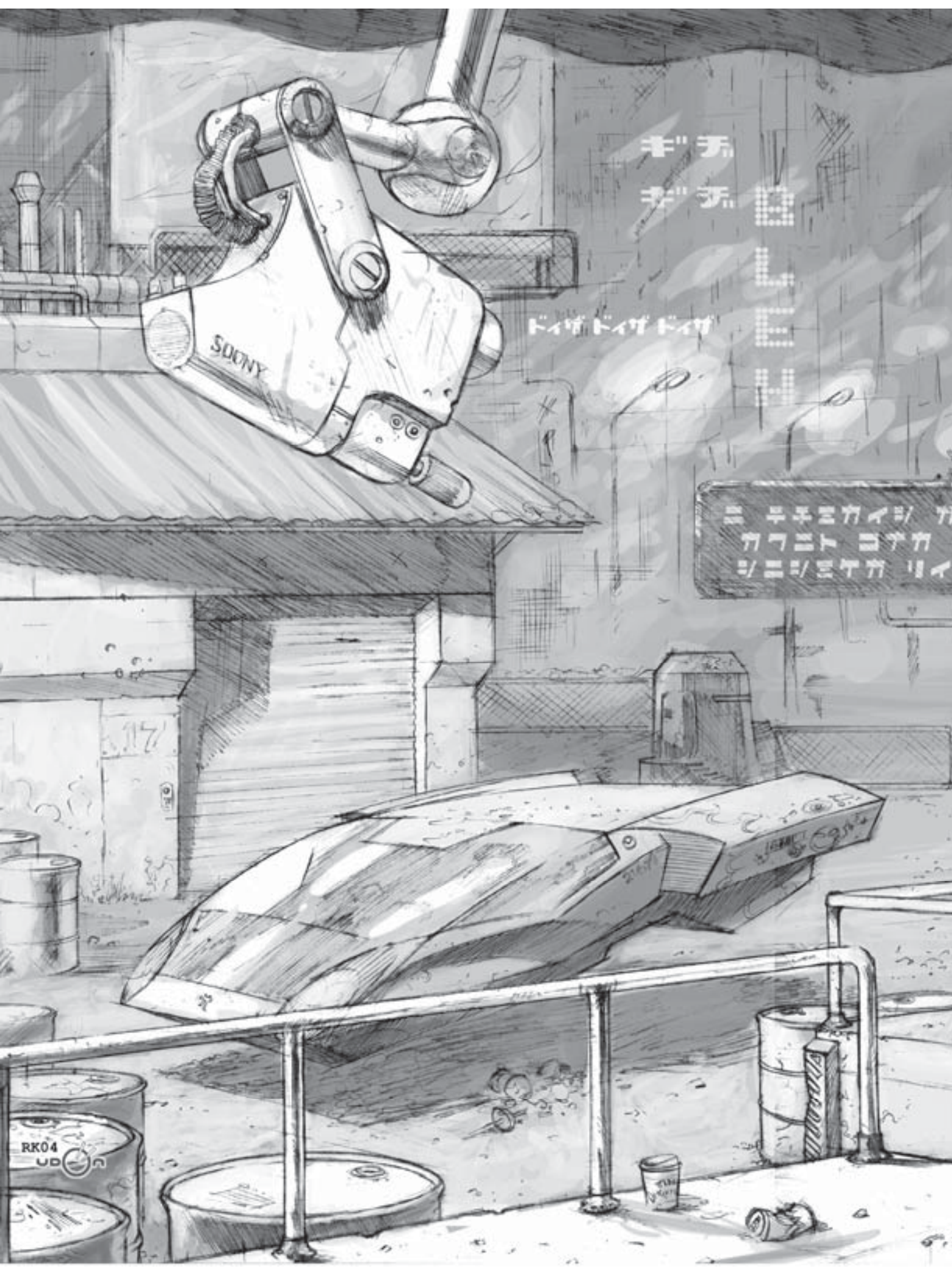
The final element on Li Po's list is "53lf" (self). That is, the ability to discern what one truly is and what one truly possesses. Above Li Po II's three triads sits the sense of self. Many forces of the late 21st century pressure humans and anthropophobes to fade into the crowd around them, abandoning their notion of individual value. Loss of self is a real and deadly danger. To illustrate that danger, most of Li Po II's modern followers point to the drones.

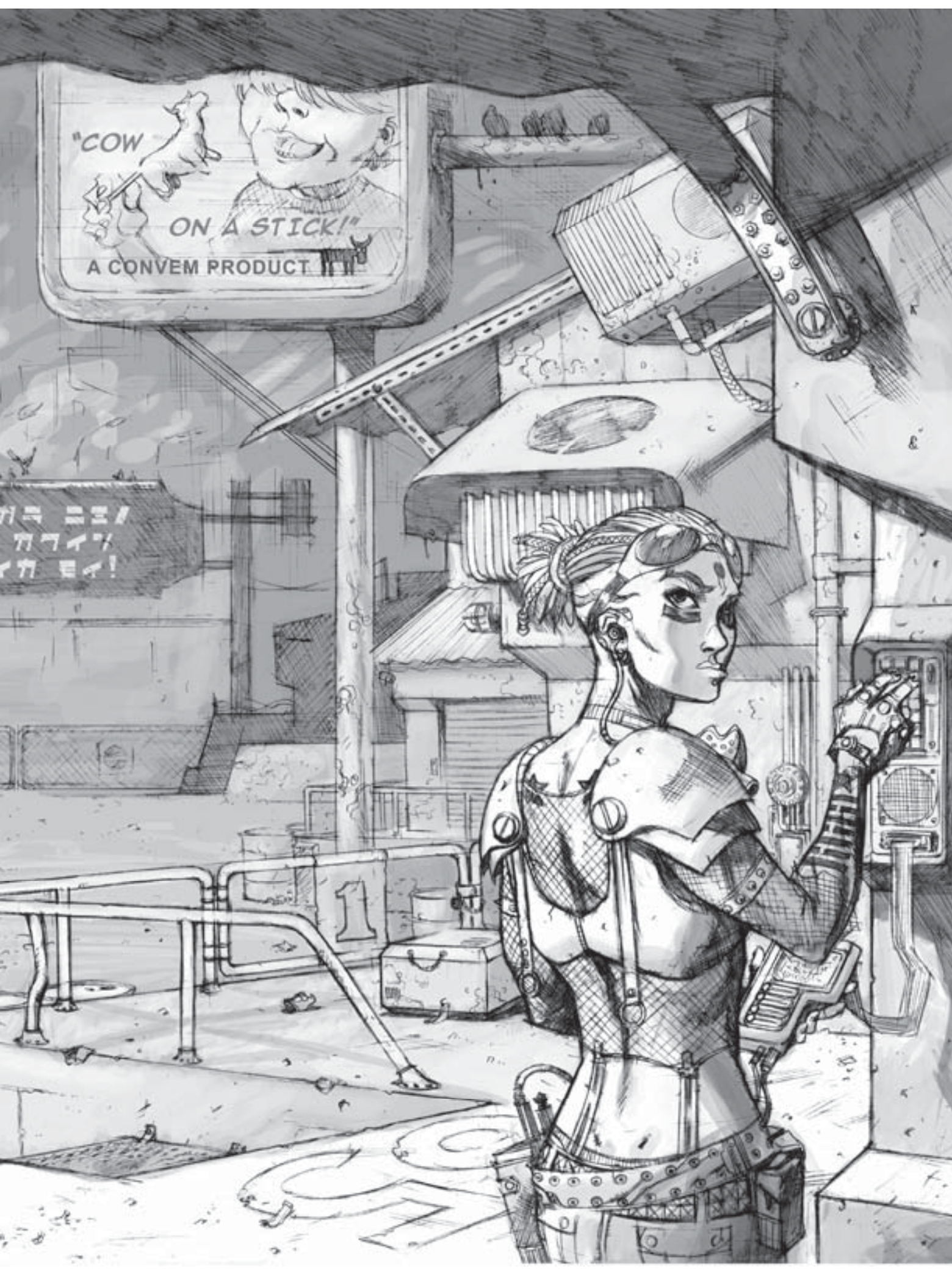
Drones

Corporations created the first drones shortly after IOSHI's completion. They were force-grown genetically engineered infants, brought to physical maturity in a matter of months. their brains almost entirely devoid of experience. Training at the well allowed them to develop an immediate understanding of the world and specialised talents, making them useful workers for the corporations that designed them. IOSHI did not give them a sense of self, however – if anything, it stunted that development. It has taken years for the first drones to approach the concept of identity.

In that time, a number of Spartans developed an admiration for the innocence and dispassion the drones possessed. Hundreds had their minds deliberately wiped clean so that they could join them. Hundreds more were "volunteered" for the process by their enemies.

The drones represent the completion of the core culture philosophy, human beings who have transcended into economic goods. Those who accept this philosophy have nothing to fight for. Drones readily accept even the most horrid assignments on behalf of IOSHI and the biological laboratories that designed them. Characters who fall too far into this way of thinking have sold out, whether they realise it or not, and have essentially lost their conflict with the forces arrayed against them.


SOONY
RK04


"COW
ON A STICK!"
A CONVEM PRODUCT

Character Types

Not everyone has the raw aptitude for every career. Anyone can train at the well and develop mastery comparable to an early 21st century adept, but life reserves the heights of achievement for those with both natural talent and training.

By default, characters are first-tier members of a subculture — people first, Spartans second, and members of their community third. The game also assumes that player characters are savants, with an inherent knack for one or more categories of IOSHI training. To come up with a quick and easy character concept, choose a subculture and a knack that interests you. If none appeal, you can make up your own. Choose identifiers for the character — descriptive "hooks" that give a strong visual or social impression of the character's identity. You can find ideas under the various subcultures and archetypes, but there is no requirement that you stick by them. Think about what kinds of Cred (page 263) that the character might have, and what kinds of people he or she associates with.

Power Level

Typical "IOSHI" characters begin with 100 Character Points and 30 Skill Points. Stats range from 1-10, with Stats up to 12 available with special GM permission. IOSHI training can add up to four Levels each of Enhanced Body, Enhanced Mind, or Enhanced Soul (to a maximum of 16) plus a variety of specialised Attributes. Veteran "IOSHI" characters should begin with 125 – 150 Character Points (especially if using the optional Cred Attribute, page 263).

A typical "IOSHI" character with 100 Character Points divides them as follows:

- 24-48 Character Points on Stats;
- 10-15 Character Points on an Occupational Template
- 10-30 Character Points on Cred;
- 10-40 Character Points on IOSHI training, cyberware, biotech, and software enhancement.

IOSHI Education

In the late 21st century, IOSHI is the first and last word in automated education. It is the archstone and the cornerstone of the savant's power. The technology stands on the brink of obsolescence — IOSHI has helped scientists and others pursue ever-more-complex research, putting an increasing strain on its ability to manage and clearly teach the state of the art. If the next evolution does not emerge soon, the system could grind to a halt. Until the next technological leap appears, however, IOSHI training is the core of a savant's effectiveness. It makes those who can afford it just plain better than everyone else.

Studying at the Well

When someone "studies at the well" IOSHI tailors its knowledge into a form that that person can readily understand. They receive this knowledge in a standardised fashion. First, they implant an IOSHI access chip (see brain chip, page 282) in their brain. They can then download their studies from a secure online server through a neural jack into a two-level personal library that is stored on that chip. Level one stores the data image presented by the well. The character actively thinks on that image and practices the techniques it contains. This produces a growing instinctive understanding of the subject matter. The chip's second level stores a holographic record of the user's comprehension, ensuring that they do not forget the acquired knowledge later. The access brain chip and its implantation costs about $10,000, the training much more.

Few can afford more than a little IOSHI training, for it is still in a fundamentally limited supply. The IOSHI system has finite processing power. Its computational power is growing quickly, of course, but the demands on its services grow even faster. This ensures that an IOSHI education has a significant price tag attached. Only those with enormous privilege or the dedication to scrimp and save for years can pay for training out of their own pocket. Most savants must arrange a sponsored education — they prove their raw talent to the corporations, if they can, and loans against their income pay the cost.

There are roughly 170 categories of IOSHI training, only a few of which are dealt with here. Each creates its own form of specialised hyper-competence. Characters can study almost any discipline, science, or occupation at the well, developing either general capability or a specific expertise. Players should nevertheless consider carefully before making inhumanly skilled chefs, tailors, or botanical scientists; unless carefully constructed, these may prove ineffective in play. Nevertheless, such individuals do exist.

A character must have a neural jack (page 27) and a brain chip (page 282) to make use of the well. Additional training may be acquired during character creation just like any other templates, and can also be acquired during play.

Vocational Training

IOSHI vocational training can give its subjects up to two Levels of Enhanced Mind or Soul and any Level of Combat Technique, Heightened Awareness, or Highly Skilled. The latter is the most common form of training and the one of which most Spartans partake.

Submergence Training

Some individuals go beyond this. Submergence training involves not days but weeks spent connected to the well. The user's mind is completely submerged in data and synthetic experience; his or her consciousness sinks and starts to drown, then learns to swim to new levels of understanding. At the end of the process, radical patterns have been laid down in his or her brain, permitting near superhuman-levels of achievement.

Submergence training can create exceptional individuals within a particular aspect of human endeavour. These are sometimes known by popular names (for example, "shark" for someone who has undergone IOSHI interpersonal training) and often seen as subcultures unto themselves.

IOSHI Aspects

In game terms, IOSHI submergence packages, or aspects, are essentially cyberware templates that represent software that that has been downloaded into the character's brain chip to grant a set of mental abilities.

The Attributes in each aspect can be customised, representing variations in the training available. When customising a package, players should always consult with the GM before increasing Attributes beyond the Level found therein.

Most training packages have three stages of mastery: Aptitude Package, Talent Package, and Genius Package. The Genius Package often contains the most powerful version of its ability available in the setting. Only one stage of each package can be taken: if you have hunter training at the genius stage you cannot also take it at the talent stage (although you can take a different package).

Several templates for IOSHI training are presented below. Most correspond with particular occupational templates, although all can be used with more than one template (for instance, a street samurai template may find both knife edge and fire training useful).

IOSHI training is cumulative with any other templates. If any contradictions occur (for example, increasing Stats above the maximum of 16) eliminate the conflicting Attribute in the training template and lower its cost appropriately.

Archetype to IOSHI Training Correspondences

If using the occupational template rules, certain types of IOSHI training are most appropriate for certain archetypes:

Table 15-1: IOSHI Training

Template	IOSHI Training
Hacker	Hunter, Librarian, Transcend, Visionary
Idol	Fire, Shaman, Transcend
Investigator	Fire, Hunter, Knife Edge, Librarian, Shaman
Medic	Healer, Librarian, Shaman
Street Punk	Knife Edfe
Street Samurai	Knife Edge, Fire
Suit	Hunter, Librarian, Shark
Tech	Librarian, Tinker
Teleoperator	Jockey

Hunter Aspect

"What was the chief export of Zambia in 1989?"

Brian did not hesitate. "Copper."

"What about Zimbabwe?"

Brian did not answer. Merry blinked.

"What, did I stump you?"

"No," Brian said, shaking his head. "I just noticed that your father's alive. Would you like an address for him?"

A Hunter is an individual who has undergone IOSHI submergence training in online search methodology or physical investigations, and possibly in data organisation, data analysis, and decryption and intrusion techniques. Archetypal hunters develop all of these, enabling them to dig up such things as real-time video and audio footage of secure complexes, obscure scientific papers, probable fashion trends, and the life history of someone they pass on the street.

Hunters know how to find things no one else can. No secret is safe from them. No one can hide from them. In a world run by data, they know where the data lives and it waits upon their pleasure. Hunters are usually influenced most strongly by technical, criminal, or street culture. The talent that makes a good hunter usually also manifests as wide-ranging interests and comprehension. This in turn leads to broad tastes and eccentric hobbies. The classic hunter avatar is a predatory animal.

Hunters have access to significant tactical information about the world around them. In a tense situation, one can measure a hunter's contribution to the group by his or her skill in selectively reducing the fog of war. By knowing what questions to ask, hunters can pinpoint snipers in dark rooms, escape routes in a chase, and hidden treacheries in a deal.

Professional hunters tend to have very good reputations. No one buys information from a hunter known for lies or evasion, and a hunter's social acumen tends to cross subcultures. Many hunters receive limited trust and respect from notorious and upstanding citizens alike. While few hunters have skill in speaking for themselves and their peers, they can get in the door long enough to try.

Hunters are often more effective at reaction than action. They can monitor their opponents more easily than they can strike at them. A hunter character can chip away at the core secrets of the game, but cannot typically act on that knowledge without others' help. Hunters need a sharp eye for detail, the ability to absorb information readily, an excellent memory, and a fair bit of intuition and savvy.

Occupational Template

Hunter submergence training is usually undergone by individuals with the hacker (page 18) or investigator (page 20) templates.

IOSHI Training

IOSHI training in psychology gives a near-supernatural grasp of the human mindset. For a hunter, this often manifests as piercing others' deceptions. They know how people think; how they move; and how they act. Therefore, they see the truth behind the lies others tell. Select one of the three packages.

• HUNTER •

Hunter Aptitude Package
Attributes

Enhanced Mind 1, Divine Relationship 3 (Restriction, Information Stat/Skill checks only* -2), Features 2 (Cipher, Hunter), Heightened Awareness 1

Final Cost: 6 Points.

Hunter Talent Package
Attributes

Enhanced Mind 1, Divine Relationship 4 (Restriction, Information Stat/Skill checks only* -2), Features 2 (Cipher, Hunter), Heightened Awareness 2

Final Cost: 8 Points.

Hunter Genius Package
Attributes

Enhanced Mind 1, Divine Relationship 5 (Restriction< Information Stat/Skill checks only* -2), Features 2 (Cipher, Hunter), Heightened Awareness 3, Sixth Sense 1 (Significance, Area 3)

Final Cost: 14 Points.

Note: Restriction (Information Stat/Skill checks only) means the Attribute can be used only for Stat/Skill checks regarding the gathering or processing of information, especially using Skills such as Computers or Street Sense. This does include computer hacking.

Features (Hunter)

Features (Hunter) speeds up the Mind-Based Computers (Databases) Skill check to locate information stored in publicly accessible databases. On a successful roll, the character finds the data within a minute; if he or she purchases the Feature twice, she turns the data up instantly. Ordinary characters can achieve similar results with a margin of 4 or 8, respectively, on the Mind-Based Computers (Databases) Skill check.

Features (Cipher)

Features (Cipher) turns others' attempts to locate information on the character into contested actions.

Sixth Sense (Significance)

Sixth Sense (Significance) means the character may sense if a person, object, or experience he or she has just encountered is crucial to the events he or she is investigating. This is usually the result of putting together subconscious clues.

Knife Edge Aspect

He stood at the end of the hallway, wearing a black suit and shades. David emptied his gun at the man, and missed each time; and this frightened him, for the hunter did not often miss. Clarissa stood, eyes distant, as she scanned the local net for some weapon against him; and only Edward asked, "Who?"

"My name is Kevin," he said, and smiled. "I am the god of your deaths."

In a knife fight, strategy, tactics, strength, and the weight of the blade all come into play. It all comes to naught, however, unless applied through the edge of the knife. Similarly, in every major conflict, all the manoeuvring of the communities, corporations, and individuals involved comes to nothing unless backed up by at least a few people willing to implement those manoeuvres with force. For this reason, those who have undergone IOSHI martial training are known as "knife edges" as often as not.

Knife edges wield force against their enemies. Their weapons include blades, guns, garrottes, bombs, fists, feet, and minds. They control the combat zones of the late 21st century with lethal finesse. Despite this training, some remain mere thugs, unable to conceive of their own agenda and thus confined to supporting the ideas of others. Some bring their own ideals to the table when serving their corporate masters, community leaders, or employers. A few are self-employed, as much knife-wielders as knife edges, laying out their desires for the world and implementing them with the force of their *budo* (martial way).

The training that makes a knife edge is also a mindset. The character must treat violence and suffering with a casual respect. Those driven by bloodlust or anger have trouble mastering the discipline of a warrior. Those who cannot find satisfaction in delivering violence make a poor fit — few can afford to squander IOSHI training on abilities they do not plan to use. In the end, a knife edge is trained to act with a decisive but dispassionate ruthlessness, enacting pure desires and decisions rather than indulging his or her anger or mercy. Many knife edges become or serve criminals, physical idealists, or members of the high families. A few follow religious, street, or technical callings. Whatever they do, most radiate complete self-assurance and fearlessness.

Standard knife edge avatars include historical warriors such as samurai, Hindu *ksatriya*, knights, amazons, and Zulu *iziKhulu*; imposing creatures such as dragons, wolves, and centipede spirits; and shadowy, abstract forms.

Occupational Template

People who undergo knife edge submergence training often have the street samurai (page 21) or street punk (page 21) templates.

IOSHI Training

Knife edge submergence training allows individuals to gain conscious control of their body's automatic physiological responses to stress (production of adrenaline, tunnel vision, etc.), significantly increasing their situation awareness and, in some cases, permitting some near-superhuman feats. Select one of the three packages.

• Knife Edge •

Knife Edge Aptitude Package
Attributes

Defence Combat Mastery 1, Extra Defences 1, Features 1 (Knife's Edge)

Final Cost: 6 Points.

Knife Edge Talent Package
Attributes

Defence Combat Mastery 2, Features 1 (Knife's Edge), Extra Defences 2, Heightened Awareness 1, Jumping 1, Special Defence 1 (Pain)

Final Cost: 14 Points.

Knife Edge Genius Package
Attributes

Combat Technique 2 (Block Ranged Attacks; Judge Opponent), Defence Combat Mastery 3, Extra Defences 2, Features 1 (Knife's Edge), Heightened Awareness 1, Jumping 1, Special Defence 1 (Pain), Speed 1 (Restriction, Short bursts only; Maximum of 5 continuous rounds* -4)

Final Cost: 20 Points.

Notes: Speed is limited to 5 continuous rounds with an hour's rest between uses.

Features (Knife's Edge)

Features (Knife's Edge) allows characters to make a heroic comeback after being badly beaten. With a controlled surge of adrenaline, the knife edge is ready for a second round. A character can use this ability whenever he or she has been reduced to one half Health Points or less. The character must make a Soul Stat check; success allows the character to regain either one half his or her total Health Points instantly, or to gain a +1 bonus to all attack rolls for the rest of the scene. Once the adrenaline surge has passed, the character collapses; all Stats are reduced by 25% for one hour. A character may use Features (Knife's Edge) once per session.

Healer Aspect

"Is he dying?"

Diane dusted off her hands and rose. "He'll be fine for a while," she said. "Everyone spends their whole life dying, but I think he's got a few more years in him."

"I'm not dying," I pointed out.

"I can see the life flowing out of you," she answered. She touched my arm. "See? I'll slow it down a bit."

Her hands were warm; and I felt a power in them; and for a minute, perhaps two, I did not age.

Medical practitioners wrestle with suffering and cross blades with death, but in Sparta they win as often as they lose. Medics who have undergone IOSHI submergence training know the human body as intimately as their own thoughts. They understand the principles by which life ebbs and flows. They heal. Where many Spartans see life and death as a matter of economic gain or loss, healers feel both on a visceral level. The lives they save are like a fire's warmth to them. The deaths they cause are like chilled wine.

In addition to studying practical medicine, most healers have solid training in biotechnological science. Some study non-mainstream arts as well as standard techniques — *chi* arts, homeopathic medicine, acupuncture, *ayurvedic* medicine, and chiropracty, among others.

Healers tend to serve anthropophobic, criminal, physical idealist, religious, or secure communities. The dominant influence depends on their personal conception of medicine's purpose — in such communities, respectively, it serves to break biological limits, to defy the law of death, to heal the body, to nurture the spirit, and to keep people safe from harm. Healer body language is contradictory. The world hardens them: to heal the consequences of human horror, they must face it without flinching. Simultaneously, their career and vocation require compassion and empathy. Common avatars include angels, perfect or twisted human forms, and serpents.

• HEALER •

Healer Aptitude Package

Attributes

Features 1 (Healer), Healing 2 (Area 2; Targets 1; Activation Time -5; Concentration -1; Restriction, Medical equipment -1)

Final Cost: 5 Points.

Healer Talent Package

Attributes

Features 1 (Healer), Healing 3 (Area 2; Targets 1; Activation Time -5; Concentration -1; Restriction, Medical equipment -1)

Final Cost: 9 Points.

Healer Genius Package

Attributes

Features 1 (Healer), Healing 4 (Area 2; Targets 1; Activation Time -4; Concentration -1; Restriction, Medical equipment -1)

Final Cost: 15 Points.

Occupational Template

The medic template (page 20) is the natural basis for IOSHI-trained healers, although some may be suits (page 24) or even street samurai (page 21).

IOSHI Training

The IOSHI-trained healer is capable of outstanding feats of physiological repair. This does not represent any mystical ability, but rather the ability to assume an absolute state of focus on the patient coupled with an encyclopaedic medical knowledge and robot-like precision. Select one of the three packages.

Features (Healer)

Features (Healer) gives an intuitive empathic understanding a patient's state of well-being. This gives a +3 bonus on any check to diagnose an illness or injury, or to notice a hidden injury. This is doubled if the patient has him or herself undergone IOSHI training.

Jockey Aspect

I stepped out of the car, and three combat drones surrounded me. They were squat robots, low to the ground, and I didn't want to know what the spikes on them could do. They escorted me to his cabin, and inside I found him. He lay still, eyes blank and dim, but alive. Two small robots crawled along his flesh, cleaning him, occasionally moving a limb from one place to another. The screen above his bed flickered to life.

"Hey," Jordan said.

"Your body," I said.

The face on the screen looked down. "Oh, yah. It's pretty sick, I think. That's why I wanted you to check on it. Does it look okay? I haven't shown it to anyone in years."

I took a pulse. I poked at it. It felt macabre, like I was examining my friend's corpse while his ghost watched from above.

"Jordan, this isn't okay."

The face in the screen laughed. "It's not my real body," he said. One of the robots pirouetted. The blender in the back of the room whirred to life. I could hear the roaring of the car's engines, outside. "See? These are my real body. I'm not laying there dying. I'm in the net. I'm everywhere. If I had a meat body, too, I'd be like a nine-armed octopus — I mean, what would be the point?"

In Sparta, teleoperators live in a dozen places at once. In addition to their own body, they have others — chrome and circuit constructs large and small. Some are as sluggish or awkward as the teleoperator's organic form. Others have speed, power, and manoeuvrability far exceeding the it. Teleoperators who have undergone IOSHI submergence training in human-machine interfacing are known as "jockeys." The training serves to enhance their innate talent for human-machine empathy — the ability to identify with the robotic and vehicular extensions with which a teleoperator works.

Given that identification (and a neural jack), the IOSHI-trained Jockey can operate a wide variety of robotic agents, telemanipulators (waldos), and ground, sea, and air transports with superhuman skill, using the net as a nervous system and his or her machines as scattered limbs. Where many Spartans find their humanity increasingly edged out by the machines, Jockeys impose their own humanity on the artefacts around them.

Most Jockeys identify with some combination of the anthropophobic, maenadic, and street cultures. They usually maintain their body like a vehicle. Athleticism comes first, aesthetics second, and their aesthetics tend more towards what pleases them than what pleases society. Completely cutting off from all of his or her extensions makes a jockey feel something like a quadruple amputee; most keep in contact with at least one teleoperated drone at any given time. This gives them a distracted air. In cyberspace, jockey avatars tend towards the many-limbed: Hindu deities, centipedes, and mutated or mechanised versions of the human form are common.

Occupational Template

The teleoperator template (page 25) is suggested as a basis for creating Jockey characters.

IOSHI Training

Select one of the three packages:

• JOCKEY •

Jockey Aptitude Package Attributes

Features 1 (Mecha Encyclopaedia), Combat Techniques 2 (Any two; Restriction, Only in vehicle or during teleoperation -1), Extra Defences 1 (Restriction, Only in vehicle or during teleoperation -1)

Final Cost: 4 Points

Jockey Talent Package Attributes

Features 1 (Mecha Encyclopaedia), Combat Techniques 2 (Any two; Restriction, Only in vehicle or during teleoperation -1), Extra Attacks 1 [Restriction (Only in vehicle or during teleoperation) -2], Extra Defences 1 (Restriction, Only in vehicle or during teleoperation -1)

Final Cost: 10 Points.

Jockey Genius Package Attributes

Features 1 (Jockey, Mecha Encyclopaedia), Combat Techniques 3 (Any three; Restriction, Only in vehicle or during teleoperation -1), Extra Attacks 1 [Restriction (Only in vehicle or during teleoperation) -2], Extra Defences 2 (Restriction, Only in vehicle or during teleoperation -1), Special Movement 2 (Balance, Catlike; Restriction, Only in vehicle or duration teleoperation -1)

Final Cost: 16 Points.

Features (Jockey)

Features (Jockey) acts as the Combat Technique (Portable Armoury), save for teleoperated equipment. The character has easy access to any vehicle or teleoperated robot required for a particular task, including machines not available to the public. The jockey must still acquire the actual vehicles and robots via the Gadgets Attribute (page 49), but — if possible — the character can find them at a convenient location whenever he or she needs them, instead of having to return to where he or she normally stores them. The jockey's car or motorcycle is always in a nearby garage, his or her boat waiting at a nearby beach, and so forth. This Feature relies on a combination of foresight, pre-programmed self-driving vehicles, and dramatic appropriateness.

Features (Mecha Encyclopaedia)

Features (Mecha Encyclopaedia) acts as the Combat Technique (Weapons Encyclopaedia) Attribute, save for jockey equipment. The character can recall the vital statistics and important quirks of practically all known commercially available robot drones, vehicles, and remote extensions. The character also receives a +4 bonus on any Street Sense or Business Management Skill checks needed to locate or buy legal or illegal vehicles and teleoperator equipment.

Shark Aspect

The manager spluttered. "You can't just come in here and take over my shop," he said.

Clarissa spun on him. Her voice dropped into the shark register, and her eyes went still. "You," she said. "I own you. I own you and all the other pathetic little Spartan dolts who run around under our heels."

The manager cringed, but still he struggled to protest it.

"If you look it up," she said, voice chill and empty, "you will find that this is entirely authorised under your rental agreement; and that, in fact, your mannerless protest endangers your business license. Page 27. Must we dig it out and look it over? Must you trouble me so?"

Her eyes were dead black, and they caught his reflection; with those eyes, more than with words, she painted over his reality.

Sharks are individuals who have undergone IOSHI submergence training in personnel management and practical psychology. The talents that make a shark include a keen understanding of organisational structure and efficiency, a flair for personal command and motivation, and a peerless mastery of deception. A knack for economics and the construction of large, realistic, interlocking timetables also helps. In short, a shark has business acumen. Training at the well hones it to razor sharpness.

Sharks hear the call to power. The games they play amongst themselves decide who seizes power and will write the history of the world. They engineered the corporate domination of world finance and development — and they run the corporations. They have strings on most of the other powers in the world, from the maenadic leaders to the criminal lords. Of course, following the strings back into the hands of the puppet masters grows ever more complex as the years go by. These days, only the sharks themselves have the faintest understanding of how the corporations interlock and who actually runs what.

Sharks tend to have wardrobes full of stunning custom-made clothes. Only a frequent tendency to go nights without sleep while making driven or panicked corrections to their plans diminishes their elegance in appearance. Often, they take influence from criminal culture, the high families, and conceivably religious culture. A few relate instead to street communities; the ambition that makes a shark occurs even more frequently amongst the poor than in the city's heart. Sharks tend to have avatars that cross animal and human, typically in a fashion that improves their avatar's mobility; for example, many sharks are wolf-people, tiger-people, ibis-people, or, of course, shark-people.

Sharks hook into the power structure. The game sharks play is orthogonal to the other conflicts in the setting. A floating board can target a shark for death but cannot strip him or her of corporate influence, no matter how many strings they pull. Issuing a death order takes nothing more than a memo. Removing the shark's power, possibly including the ability to countermand the order or sit on in the meetings discussing his or her fate, requires beating the shark at the corporate game. A shark can provide a group with information on corporate activities, including sources of employment sufficiently obscure as to avoid the notice of their enemies. A shark can also call upon a wide range of personal resources.

In the larger picture, Sparta runs on a system. Few people understand it entirely, but almost everyone has an opinion: they want to be part of the system, to escape the system's notice, or to bring it down. The sharks, on the other hand, want to own the whole shebang. A shark needs to back up solid methodology with an ample supply of fortunate opportunities, the ability to notice those opportunities, and the charm and savvy to take advantage of them.

Occupational Template

The suit template (page 24) is the usual base upon which shark training is built, but investigator (page 20) can also be appropriate.

IOSHI Training

Select one of the three packages.

Features (Mover and Shaker)

Features (Mover and Shaker) helps with the competitive use of Cred (page 263). When two characters use Cred to influence a community in opposite directions, Features (Mover and Shaker) adds +4 to the character's opposed Soul-Based Stat check. If not using the Cred, assume it gives a +4 to any Soul-based Stat check in which the characters reputation as a businessman or leader is as stake.

Tinker Aspect

"You can't honestly expect me to believe that you built an explosive out of duct tape."

"And spare parts," Iris repeated. "I said *I used spare parts."*

Technology defines the world of the late 21st century. It creates every effectual human capacity. Advances in technology decide the direction the world shall move.

• SHARK •

Shark Aptitude Package
Attributes

Features 1 (Mover and Shaker), Mind Control 3 (Humans Only – Area 2; Duration 3; Range 1; Targets 1; Restriction, Targets remember control -2)

Final Cost: 18 Points.

Shark Talent Package
Attributes

Features 1 (Mover and Shaker), Mind Control 4 (Humans Only – Area 2; Duration 4; Range 1; Targets 2; Restriction, Targets remember control -2)

Final Cost: 24 Points.

Shark Genius Package
Attributes

Features 1 (Mover and Shaker), Mind Control 5 (Humans Only – Area 3; Duration 5; Range 1; Targets 2; Restriction, Targets remember control -2)

Final Cost: 30 Points.

Note: Mind Control represents the shark's IOSHI-honed communication skills. Their approach to communication shuts down the critical filter others apply to their words. Their victims may or may not understand the shark's justification for a given request, but they find that justification supremely convincing. In effect, the shark temporarily brainwashes them. Targets remember this effect as "mind control" (or rather, as IOSHI-augmented persuasion, command, and brainwashing techniques) only if they cannot otherwise account for their behaviour. If they conclude they have suffered such control, however, they automatically realise that it was the shark.

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He walked up to me while I drank coffee. "Hey," he said. He smiled at me. He looked like an old friend.

"Do I know you?"

"Know me?" he asked. His tone laughed. What I'd said was ridiculous. "You owe me. From the war. How much do you have on you?"

I counted out my money. "28 nanotabs or so, but -"

He snorted. "Hardly enough. I'll pick up the rest later." His tone sank, became silky, dangerous, and I realised that I did not want to cheat this man. He pocketed the money. He turned. He winked. "This is our little secret, right? You don't want the wife to find out."

"Right!" I exclaimed, relieved. He left.

I do not have a wife.

Those that have received IOSHI submergence training in engineering disciplines understand, anticipate, and control those advances. Their minds plunge into the sea of possible developments, diving for pearls in waters too dark for normal folk to swim.

The core talent that IOSHI tinker training seeks to enhance is an appreciation for possibility and a drive to apply knowledge in creative and elegant ways. Tinkers study the principles of engineering at the well, learning to manipulate the world as a set of tools laid out for their convenience. Learning the underlying physical properties of mechanical, electronic, and chemical artefacts gives them the necessary knowledge base to apply; with it, they can construct wonders. The world is full of widely acknowledged limits and impossibilities. Tinkers do not accept them.

Tinker style tends to bias towards anthropophobic, artistic, religious, and technical themes. Most wear sturdy, loose-fitting clothing practical in a wide range of environments. Pockets containing a choice selection of tools and oddments are vital. Tinker avatars often relate in some fashion to modern technical accomplishments or ancient gods, with a smattering of tinkers who instead pattern their avatars after images of famous artists and creators.

Occupational Template

Tinkers will normally have the tech (page 25) occupational template, although hacker (page 18) is also common.

IOSHI Training

Take one of the three packages.

• TINKER •

Tinker Aptitude Package Attributes

Features 1 (Tinker), Gadgeteer 1

Final Cost: 3 Points.

Tinker Talent Package Attributes

Features 1 (Tinker), Gadgeteer 2

Final Cost: 5 Points.

Genius Package Attributes

Features 1 (Tinker), Gadgeteer 3

Final Cost: 7 Points.

Features (Tinker)

Features (Tinker) lets the character cancel all penalties to Mind-Based Demolitions, Electronics, Mechanics, Physical Sciences, and Police Sciences Skill checks resulting from inadequate equipment. This requires that the character take an extra five rounds to jury-rig the necessary tools.

Shaman Aspect

The child crouched in the dirty hall, hugging a battered toy.

"We can't get anything out of her," the cop said. "She fights us if we try to move her, but she won't talk."

The shaman knelt down. She smiled at the toy, then at the child. "What happened ..." she said. "It wasn't your fault."

In any other era, those words would have been meaningless — the hollow drone of another adult's lies. But the shaman had travelled a dozen spirit worlds, and had IOSHI training besides; in her face and tone, the child saw truths that went straight to her heart.

The child cried, deep clean sobs, and dropped the toy; and the shaman picked her up and held her on one hip; and the shaman said things to the cop that the child scarcely heard. "Fifteen minutes," the shaman said. "She'll be able to tell you what happened, then."

A shaman is an individual who has undergone IOSHI submergence training that enables him or her to understand the extrarational core of the human animal. Shamans can get inside a person's head. They can figure out what makes someone tick and put their hands right on the levers that run it all. A shaman knows why the ecstatic seizes, where the words of glossolalia come from, and the origin of dreams. Shamans know why people grieve for things long dead. They know why drumming ushers the spirit to a vision world. They speak the language of beasts that came before the language of humanity. They know all the secrets.

IOSHI training in understanding human spiritual experience implicitly includes training in spiritual strength — that is, in balance, confidence, and perspective. This type of IOSHI training is most often taken by shamans, who can derive grounding and wholeness from a single faith or a syncretism of many, including nihilistic studies of enlightenment, monotheistic concepts of service and virtue, maintenance of personal purity, and animistic harmony with the world. This also allows the character to clearly distinguish states of consciousness — the character can recognise and isolate the effects of delusion, drugs, dreaming, the numinous, poisons, sleeplessness, and immersive virtual reality environments on his or her perceptions. The character can partially control his or her reactions to such things, making shamans impossible to interrogate or manipulate using such techniques. Pain, social pressure, force of personality, and IOSHI-induced hallucinations can still pressure them. Regardless of the truth or falsehood of their faith, IOSHI training ensures that the non-rational elements of their mental makeup become a source of power and endurance rather than a drain upon their personal resources.

Shamans connect to virtual spirit worlds to resolve problems using their imagery as a tool to sort through the mess of the subconscious. A shaman can also use a spirit world to provide guidance for another character. Over the course of a spirit quest, he or she receives a glimpse of the future for the character in question.

Shamans usually dress in a relaxed, unassertive fashion. When they wish to intimidate or impress, they do so through demeanour rather than costume. Their clothing typically shows influence from criminal, maenadic, religious, and street culture. The less fastidious often show the marks of drug use, from needle tracks to stained teeth — shamans do not need pharmaceuticals to practice their trade, but they retain more functionality than most in an altered state. This makes drugs more appealing and less dangerous. A shaman's avatar varies, but his or her totems, allies, or favoured saints are usually visible in the background.

In conflict situations, shamans strike at the efficiency of the enemy. They create the sense of an inevitable victory, drawing on the underlying superstitions and fantasies of the people around them to establish a worldview where the shaman must emerge triumphant. They relegate their enemies to the role of fools, petty villains, and victims, in those enemies' own minds.

Most people think of themselves as intelligent, capable, and acceptably ethical, the heroes of their own stories. The shaman knows how to use understanding and manipulation to wipe that sense away until everyone around simply assumes — whether they keep fighting or not — that the shaman or his or her agents will "beat the villain" and "get the girl." If the shaman does not wish to show his or her influence, the opposite transpires. Suddenly, his or her victims realise that their lives are macabre comedies and they themselves the butts of the joke.

Shamans are taught how to draw on evolved versions of the techniques of modern therapists, cults, charmers, politicians, preachers, emotional abusers, propagandists, students of mimetic theory, and psychological warfare experts. GMs running shamans should remember that most people are vulnerable to emotional manipulation, particularly by people they trust or who have influence over their lives, and avoid creating NPCs whose view of the world is inherently unshakeable.

The most talented shamans can induce visions in others, inflicting breaks with reality. Although many shamans have been able to induce such states without IOSHI training, the knowledge of the human mind such training provides allows these experiences to be produced in a repeatable fashion without the need for mind-altering substances, fasting, etc. Although the shaman defines and manipulates the overall form of the vision, details usually derive from the knotted fears and fantasies of the victim's subconscious mind.

In the broader context of the game, shamans strengthen the group's bond to humanity. A typical Spartan undervalues his or her personhood, and many elements of the setting serve to reinforce this trend. This crushes the spirit and detracts from the group's morale, which is in turn core to their efficiency. A shaman's presence diverts the group from taking the purely rational solution of selling out, creating and reinforcing the non-rational thought patterns that maintain their resistance.

A successful shaman needs a forceful personality and a keen appreciation for human nature.

• SHAMAN •

Shaman Aptitude Package Attributes

Enhanced Soul 1, Features 1 (Spirit Warrior), Special Defence 1 (Select any), Special Movement 1 (Zen Direction)
Final Cost: 5 Points.

Shaman Talent Package Attributes

Enhanced Soul 1, Features 1 (Spirit Warrior), Illusion 3 (All senses; Area 3; Duration 2; Targets 1; Activation Time, 1 hour; +2 BP Must restart -8; Concentration -3; Restriction, Prepared subject* -2), Special Defence 2 (Select any), Special Movement 1 (Zen Direction)
Final Cost: 11 Points.

Shaman Genius Package Attributes

Enhanced Soul 2, Features 1(Spirit Warrior), Illusion 3 (All senses; Area 3; Duration 2; Targets 1; Activation Time, 10 minutes, +2 BP Must restart -7; Concentration -3; Restriction, Prepared subject* -2, Sixth Sense 6 (Precognition; Area 3; 12 hours; Activation Time, 1 minute +2 BP Must restart -6; Restriction, Requires spirit world** -1), Special Defence 3 (Select any), Special Movement 1 (Zen Direction)
Final Cost: 17 Points.

Note: Recommended Special Defences gained through this training include partial resistance to disease, hunger, pain, poison, and sleep.

* Restriction (Prepared subject) means the target must be a participant in some real or virtual activity guided by the shaman who can help induce an altered state: listening to the shaman tell a story, experiencing a ritual, dance and music, watching a fire dance, etc. for the duration of the Activation Time.

** Shamans can purchase spirit worlds – virtual realities designed for shamanic use – as major Gadgets.

Occupational Template

Depending on the shaman's style, the hacker (page 18), medic (page 20), idol (page 19), or suit (page 24) templates are most suitable, usually with a few extra Skill Points shifted into any of the Animal Handling, Cultural Arts, Interrogation, Occult, or Social Sciences Skills.

IOSHI Training

The talent that makes a shaman has diverse expressions. Shamans work as marketing professionals, religious leaders, and psychologists. Some write self-help books, others ad copy. Few of them indulge in all of the traditional trappings of their profession, but most of them have a metaphysical ally or two. Such psychological tools, whether real or delusory, strengthen their mind. Take one of the three packages.

Features (Spirit Warrior)

Features (Spirit Warrior) provides the force of personality necessary to carry a big lie. People never dismiss the shaman's words or illusions as too ridiculous to take seriously, even if they do not believe those words. Shamans are the kinds of people who can convince their victims — if only for a moment — that the shaman really might be the victim's mother or father; that up just might be down; that the CEO really could be in the next room painting himself blue in preparation for a tense meeting.

Shaman Feature

This Feature exists so that players with shaman characters can get in the habit of the big lie, and the GM in the habit of considering them as potentially persuasive – since, sometimes, a deadly compelling lie from a shaman falls a bit flat from a player's lips. Spirit warriors lie with the charismatic counterfactuality of psychotics and sociopaths.

Players can ignore the effects of Features (Spirit Warrior) when necessary to their character portrayal.

On Faith

The IOSHI setting does not make a statement on the truth or falsehood of any given religion. Nor does the use of the term "shaman" indicate that a shamanic religion dominates. The setting instead presumes that a large chunk of the human mind operates on a non-rational basis. This includes extrarational thought such as faith, operating outside the boundaries of reason; irrational beliefs and superstitions that defy reason; pre-rational thought deriving from humanity's animal heritage; and arational or transrational thought, such as the concept of unitary human identity, which helps provide a framework for rational thought but which is not in itself an idea subject to rational verification.

The shamans of the late 21st century believe that religion imposes an order on the non-rational mind. If structured deliberately towards this end, religion can enhance a person's life experience more than it detracts from his or her survival prospects. This is the purpose of their vocation. To make this viable, the setting assumes without specific justification that extrarational and transrational thought can lead to meaningful insights. These may derive from hidden virtues of the human mind or from a divine power. Except for this guarantee, religious truth is for the GM and player group to determine or ignore.

Shamans
The Black Librarians (Optional)

An alternate view of shamans is to make them renegade librarians (page 279) rather than adepts of the virtual spirit worlds. Perhaps shamans are the librarians who understand why filters are good, and have learned something of the true secrets of IOSHI. Perhaps they are a fragile resistance, forced into hiding to survive as they clandestinely oppose the black-hearted librarians.

GMs who subscribe to this idea might prefer to not use Shaman Aspects; and simply use Librarian Aspects for these rogue librarians.

Fire Aspect

On the stage, the fire dances. Tonight it is a woman named Genevieve. Tomorrow, it may be Stephen, as it was last night, or perhaps its favourite, Amelie. It rarely sleeps. It scarcely eats. It is too busy living.

In the back of the room, it sees a threat. Men with guns. They are foolish. They take aim.

It abandons the shape it calls Genevieve. Like a horizontal geyser, it flows across the room to strike the thug squarely in the jaw. It has teeth. It has horns. It has claws. It has a lashing tail. It shreds them, and shakes off their blood; and then it spirals up the chimney and is gone.

Some people find the fixed shape of humanity an intolerable limit upon their potential. They pay surgeons to embed numerous reconfigurable biotech elements in their body, allowing them to deform their bones, reshape their muscles, and alter their superficial flesh with an act of will. The shape of their birth serves as nothing more than the kindling from which a new, endlessly mutable, nature is born. In the words of the first of them, Cheryl Korman, they "give themselves to the fire."

Fires are more of a lifestyle than an occupation. They are people with the raw talent and the exotic IOSHI training necessary to handle more biotech input and output than a typical human can. Their brains serve as the control system for a more complex body than evolution provided. In addition, fires feel comfortable distancing themselves from humanity. Some felt alienated even before their enhancement. Others have a sense of self so strong that sacrificing their biological humanity risks nothing. Thus, fires can handle levels of biological adaptation that would physically or psychologically ruin a typical human.

As a rule, even those fires with strong subculture ties wear Spartan chic. Their sense of elegance tends towards elite Spartan standards. Fires have a lust for self-realisation that lures them to highly artistic or athletic hobbies and careers. Fires usually have abstract and physically flexible avatars, accommodating a wide variety of shapes. Many choose symbols such as windstorms, turbulent rivers, or brushfires.

Fires adapt well to a variety of situations. They make the greatest contribution to the group in unfavourable circumstances — when those around them run out of options, a fire has 10 or 20 tricks left to try. Their ability to conduct infiltration and espionage would not impress a shaman or a transcend, but they have unparalleled ability to escape the consequences of an infiltration gone wrong. They can use a new appearance for such efforts and discard it afterwards, becoming unidentifiable. Fires also tend to deviate from standard human patterns of thought, which gains them a natural resistance to the efforts of others to understand or manipulate them.

Many fires are performers of one sort or another, often possessing mild celebrity. Most maintain five or six identities as a matter of course, often in different communities. In a social situation, they have shallow but unexpectedly broad resources.

In the broader context of the game, fires help ground the group against social pressure. As a rule, the people of the late 21st century have a blind spot regarding society's effects upon them. They see their essential nature as inviolate and unquestionable, changing only through the natural process of evolution. They recognise that that evolution responds to their environment, but their sense of self prevents them from recognising the strength of the environmental forces around them. Accordingly, they adapt far more than they realise to local society's expectations. Fires have abandoned the sense of a fixed personal nature. In so doing, they learn to recognise the forces that act to change them. They can consciously rather than instinctively accept or reject the mutative pressure of society.

The key Stat for a fire is Body. To fuel the stresses put on their bodies, fires need enormous stamina. To apply their abilities usefully, they need grace and balance. Many also have access to significant brute strength, a good memory, sharp wits, or a strong will.

In combat, a fire takes advantage of his or her mobility and flexibility. Most fight with animal ferocity rather than disciplined training.

Occupational Template

Fires most often have the idol (page 19) or street samurai (page 21) templates.

IOSHI Training

In addition, a fire must also take a bioware package, Physical Mutability (page 288) up to the maximum permitted by his IOSHI training. Note that while Fire IOSHI training is relatively inexpensive, the Physical Mutability bioware is not. Take one of the three packages.



Features (Fire)

Features (Fire) adds +2 to the Body-Based Stat check to recover from biotech and cyberware implantation and allows the user to take Physical Mutability bioware (page 288). The character can take this Feature two or three times, adding a total of +4 or +6, which also allows the user to take more extreme forms of Physical Mutability.

Transcend Aspect

For six exchanges of blows, they fenced, her stick against his sword. Then the knife edge hissed; and his poison glands flared; and a gout of mist spread around Carol's face. She wobbled on her feet, then sat down hard upon the stones.

"It's over," said the knife edge. "Yield."

"Hey," Carol said, to herself, "the world's all blurry and my co-ordination is shot. Could someone in here compensate?"

Seconds ticked by. The knife edge took a step back, then another.

"What are you?" he said. It was honest curiosity.

Carol's hands stopped shaking. Her eyes cleared. She smiled. "Why didn't you attack?"

"I'm not here to kill you," he said. "Just to figure you out."

The eyes are windows to the soul; and for a moment, she took down the guard on hers. In their depths, he saw a thousand selves — the one who fought, the one who watched, the one filtering her perceptions and actions to counteract the poison, and even the one amused and arrogant self that studied him in turn; these, and hundreds more.

He blinked to clear his vision; and the sun had moved halfway across the sky; and Carol and his sword were gone.

Transcends accept the ultimate metamorphosis, discovering from their submergence in the deepest parts of the well the tools to rebuild their own minds. A potential transcend studies information organisation, computer programming, psychology, and optimisation theory. After deciding which principles to exemplify and the goals he or she wishes to achieve, a potential transcend uses this knowledge to construct a new and perfect self from scratch. The resulting creature was never a child. The linear progression of personal history begins anew at the moment of transcendence.

Most transcends have a natural talent for dissociation. Their training realises it in full. They create and dissolve personalities on a whim, build complex internal spaces, and optimise their performance from the inside. If they lack a talent, they create it in themselves. If they do not understand something, they give themselves the ability to understand. If they find themselves torn between irreconcilable imperatives, they delete one of those drives and find happiness with the other. They think a dozen things at once, or more.

Transcends do not really identify with the humans around them, and often show minor anthropophobic influence. Some style themselves after the maenads. Others build their minds into fortresses and identify with the secure communities. A few mix religious and technical symbolism in their apparel, if they wish to make their nature obvious — only a transcend can accept the fundamental theses of religious and technical communities simultaneously.

Transcends tend to refer to themselves in the plural when speaking to the people they care about, occasionally slipping into that tense in public. One can sometimes observe sharp changes in a transcend's demeanour when he or she changes "fronts" — assigning a new persona or personality to interact with the world. The self previously front, at the same time, retreats to the world inside. Transcends often prefer avatars that mildly abstract their physical appearance, such as re-rendering it in 8-bit colour or as an Impressionist image.

Transcends think of their condition as an improved mentality. Given the high correspondence between skill and effectiveness in a technologically advanced civilisation, it provides them with physical and social advantages as well. A transcend can fill any role left unoccupied in the group and serve as a practical bridge between the diverse talents therein. Transcends also have paramount flexibility in adapting to the circumstances of a given story arc. Not only can they double as a warrior or librarian in a pinch, but they can become the group's entomologist, veterinary doctor, or pearl diving expert at need.

Transcends embody the concept of humanity unbound from the general truths of human nature. Their existence defies generalisations, making misanthropy harder to acquire or sustain. This does not typically improve group morale, but does stabilise it against dehumanising influences.

Transcends usually give consciousness to the portion of the brain that manages the body. The associated personality can then improve blood flow, cellular regeneration, fat allocation, healing, and bone and muscle development. In addition, he or she can communicate with the other selves to optimise diet and rest for the body's needs.

In combat, transcends typically allow an implacable guardian personality to fight for them. A number of other selves monitor the senses for any opportunities and threats the guardian does not notice.

• TRANSCEND •

Transcend Aptitude Package Attributes

Features 2 (Internal World, Transcend), Henchmen 2 (Restriction, Golem* Non-physical only -1)

Final Cost: 3 Points.

Transcend Talent Package Attributes

Features 2 (Internal World, Transcend), Henchmen 2 (Restriction, Golem* Non-physical only -1), Power Flux 1 (Mental Mutability, major, Duration Reversed 5)**

Final Cost: 23 Points.

Transcend Genius Package Attributes

Features 2 (Internal World, Transcend), Henchmen 3 (Restriction, Golem* Non-physical only -1), Power Flux 2 (Mental Mutability, major, Duration Reversed 6)**

Final Cost: 40 Points.

Notes: * Golems are autonomous personality constructs. In the space inside their mind, transcends can shape daydream images into living artefacts. Some of these carry out their tasks rigorously and without any sense of context. If the transcend reorganises his or her memories, the messenger artefact that fetches those memories for the various personalities cannot recognise the change – the transcend must redirect it manually to the new location. Other internal creatures have a more complex intellectual structure and can respond intelligently to circumstances. When assigned a bit of eao from the common pool, giving them a touch of selfhood, these become "golems." Golems have no physical presence, but can perform intellectual tasks. Golems can also manifest on the net via the transcend's neural jack.

** Mental mutability is the ability to adjust the internal structure of one's mind and take advantage of stored training templates. This Power Flux gives the transcend access to any other IOSHI training or to acquire Levels of Extra Attacks or Extra Defences (representing multiple personalities doing several things at once). For example, a transcend could acquire a visionary's aptitude package or a knife edge's talent package. (A fire's IOSHI training could be acquired, but not its bioware template.) Normally, IOSHI training adapts the data to the user. Transcends who install a suffi ciently large database of information can adapt several of their personalities to the data, allowing them to give themselves other IOSHI disciplines on the fly. With GM permission, transcends can increase the Duration Reversed PMV for this Power Flux to 7, 8, or 9.

Occupational Template

Transcend training is suitable for any occupational template (although not very likely for a street punk) ... but it may be more appropriate to create a customised character without using occupational templates.

IOSHI Training

A transcend's focus and the qualities it relies upon change from day to day. Take one of the three packages.

Features (Internal World)

Features (Internal World) gives the character a complete, consistent, and separate internal world. Personalities can retreat entirely from the world, making the transcend immune to interrogation. The character can memorise events or images in exact detail with a Mind-Based Stat check, capturing them as virtual objects or playable movies inside his or her mind.

Features (Transcend)

Features (Transcend) allows the character to bring a personality with the relevant talent and attitude front for any task. The maximum "unfamiliar action" penalty (page 88) for such character is -4, and most unfamiliar actions suffer a -1 penalty at worst.

Visionary Aspect

The phone rang. Jen answered.

"Hi," said a clear, bright woman's voice. "You don't know me, but you will. Oh. Duck."

Jen ducked. A bullet flew over her head.

"Sniper," the woman explained. "Can you make it to Ravenna Park? I have a knife edge tailing me, but I estimate a 72% survival chance if we join forces."

A visionary is someone who has undergone IOSHI submergence training in trend and pattern analysis. Given training at the well and suitable access to a source of information (usually the net), their talent for understanding patterns and bulk data deepens. Their ability to understand the world around them increases. They develop a solid grasp on the progression of history, and sense the patterns of the world. A visionary must have a sharp and agile mind to process real-time data accurately.

Visionaries see tomorrow before it happens. They watch the future as it uncoils from the uncountable influences that surround them in the present. They witness the first vague hints of possibility and later the solid shapes of impending events. They meddle in the pattern of these potential futures' blossoming, pruning those destinies not to their taste away from the garden of fate.

Visionaries typically find themselves identifying with corporate culture, technical culture, or both. A few show some influence from the mores of the secure communities. Visionaries often give their nature away with small habits like stepping out of the way just before something spills or gesundheiting someone just before they sneeze. Most visionary avatars involve oracular symbolism, including shielded eyes, religious trappings, or the presence of snakes.

Visionaries often specialise in investigation. Their insight gives them an enormous advantage when attempting to outmanoeuvre any person or security system whose reaction time compares to their own. In such cases, they are always one step ahead — moving away before an opponent strikes, addressing a target's doubts before they arise, and walking through a monitored room just before the guard next checks it. Faster opposition may prove more difficult. Intelligent and adaptive computer security or a physically superior combatant can respond to a visionary's actions before the visionary can process the new future those actions create.

In the broader context of the game, visionaries recapture the notion that the future can change. Spartan events tend to unfold from the random seeds that create them with furious speed and force. In a matter of hours, driven by factors as chaotic as a butterfly's wings, the collapse of a Spartan neighbourhood into a maenadic community can go from "inconceivable" to "accomplished." For this reason, astute citizens see the future as a runaway train. By the time they see it coming, their options narrow to diving for cover, throwing themselves on the tracks, or closing their eyes and hoping for the best. Conversely, faced with things they personally find unpleasant, painful, or wrong, visionaries can take action. They know — where many others do not — that horrors are preventable. A visionary drives the group towards effective action.

• VISIONARY •

Visionary Aptitude Package Attributes

Features 1 (Fair Fortune), Heightened Awareness 1, Special Movement 1 (Zen Direction), Sixth Sense 1 (Probability; Area 4)

Final Cost: 8 Points.

Visionary Talent Package Attributes

Features 1 (Fair Fortune), Heightened Awareness 2, Special Movement 1 (Zen Direction), Sixth Sense 1 (Probability; Area 5)

Final Cost: 10 Points.

Visionary Genius Package Attributes

Features 1 (Fair Fortune), Heightened Awareness 3, Special Movement 1 (Zen Direction), Sixth Sense 1 (Probability; Area 6)

Final Cost: 12 Points.

Note: Sixth Sense (Probability) allows a character to judge the odds of a given event reliably. For example, the character can make a solid guess at the probability of successfully shoplifting from a given store, of a given warrior winning a pit fight, or of an enemy sniper choosing a ground-level rather than a roof-level position. For events not yet written into the plot, the GM should give the visionary a ballpark estimate of the event's likelihood. If the GM has already determined whether the event will take place, barring the intervention of the player characters, he or she should instead note that the outcome is already fixed. It is not necessary to tell the visionary what that outcome actually is unless the visionary can see all the influences that determine it. Otherwise, by elimination, the visionary knows that forces he or she is unaware of strongly influence the situation, preventing an adequate assessment of probability.

Occupational Template

Visionaries often have the hacker (page 18) or investigator (page 20) templates.

IOSHI Training

Like those who have undergone hunter training, visionaries are exceptionally alert. Many also have Sixth Senses, representing a personal focus on ferreting out some specific quality of experience from the world around them. Most visionaries have the Special Movement Zen Direction. This represents their ability to reliably walk through the holes in a security net or find personally auspicious circumstances. Take one of the three packages.

Feature (Fair Fortune)

Features (Fair Fortune) gives a +1 bonus to the Check Value for all Divine Relationship-based re-rolls, representing the visionary's ability to quickly deal with and adapt to swiftly changing probabilities.

Librarian Aspect

I tried to shut his words out. I fought. But my wrists were roped to the chair and I could not flee, and he did not stop talking, and I could feel a sickening darkness spreading through my mind.

"I'll kill you," I told him.

He smiled. "You will thank me," he said, "for showing you the truth."

The librarians know how information works. They know just what it means to have a piece of data in your head. They know how to get it there, and they know how to get it out. They understand the brain chips that store IOSHI training. They build the databases that the hunters prowl. A librarian invented the filter, and it seems likely that another librarian had her killed.

A librarian usually has natural talent for organising and presenting information. This often implies a secondary talent in education, marketing, or psychological warfare. The best librarians develop all of these talents, learning to teach practically anything to anyone. Where a shark convinces others to parrot his or her ideas as infallible truths, a librarian makes his or her ideas seem to be a victim's own.

Librarian clothing styles usually display a unique mixture of six or more subcultural influences. Many wear a lantern-and-triangle symbol as an earring, a necklace charm, or an avatar motif. This design, sculpted in 2018 by Meg Carradine, had marginal and fitful acceptance as a symbol of educational professionals until IOSHI adopted a variant as its logo. Ms. Carradine's design quickly became ubiquitous.

Librarians rarely look in others' eyes save for the purposes of etiquette. They use a global impression of a person's behaviour rather than facial or optical expressions to pick up on emotional cues. To a librarian, many of the apparently insuperable differences between people boil down to differences in the conceptual structures in their head. In their professional capacity, librarians see people as living nests for swarms of ideas and thoughts. They recognise how with a slight translation here or there those thoughts could exist — just as comfortably — in almost anyone else. They are more blind to individuality than even they would like. Librarians have lost a conceit fundamental to the human ego — the notion that there are chasms between people that the mind can never cross — and this causes most some pain.

A librarian can serve as the core of a group or the interstice between the group and the world. Librarians communicate well across all social and cultural boundaries. They can hunt down what other people really want, making it easier to perform an exchange of services. Alternately, a librarian can make a few adjustments

to the hive of ideas and imbue his or her target with a desire the librarian finds easier to fulfil. A librarian makes the group more socially mobile, helping the characters operate in multiple social environments with fewer entanglements.

A librarian's domain is the brain and the mind. Librarians install, modify, and remove brain chips and mental aberrations. This makes a player character or NPC librarian a vital resource to any group.

Occupational Templates

A librarian needs a strong will, a certain talent for human interaction, and a keen awareness of the world. Occupational templates usually combined with librarian training are hackers (page 18), investigators (page 20), techs (page 25), and suits (page 24). "Technical Librarians" who know how to install brain chips tend to have the tech or medic templates, or at least a few Levels of the Electronics (Cybernetics) Skill. Every Librarian should take Organisational Ties (IOSHI) (Costing 3 points/Level) at Level 2 or better.

IOSHI Training

Rather than having one set of IOSHI packages, Librarians have several, not all of which are known by all Librarians. These disciplines are normally only available to individuals who become librarians (with appropriate Organisational Ties).

Adaptive Study

Librarians understand how the brain organises data and how that organisation affects its reactions. Watching an expert in a given situation, a librarian can quickly build a personal matrix of understanding that replicates that expertise — but only for the short time that the situation remains essentially the same.

• Librarian • Adaptive Study

Aptitude Package
Attributes

Mimic Powers 1 (One Skill – Duration 1; Range 1; Reduction -5, Only affects Skills or Combat Techniques)

Final Cost: 4 Points.

Talent Package
Attributes

Mimic Powers 1 (One Skill – Duration 3; Range 1; Reduction -5, Only affects Skills or Combat Techniques)

Final Cost: 6 Points.

Genius Package
Attributes

Mimic Powers 2 (One Skill – Duration 4; Range 1; Reduction -5, Only affects Skills or Combat Techniques)

Final Cost: 9 Points.

Disrupt Training

Librarians can manipulate the abilities IOSHI training gives to others. A librarian can adopt mannerisms and body language that disrupt the conceptual structures that the well constructed in the librarian's victims, drowning out the victims' IOSHI-enhanced understanding of the world with a sickening sense of something profoundly, unnaturally wrong.

• Librarian • Disrupt Training

Aptitude Package
Attributes

Nullify 1 (One Attribute; Drain – Area 1: Duration 2; Range 1; Targets 1; Reduction -4, Only affects IOSHI training)

Final Cost: 11 Points.

Talent Package
Attributes

Nullify 1 (One Attribute; Drain – Area 1: Duration 4; Range 2; Targets 1; Reduction -4, Only affects IOSHI training)

Final cost: 14 Points.

Genius Package
Attributes

Nullify 1 (All Attributes; Drain – Area 1: Duration 4; Range 2; Targets 1; Reduction -4, Only affects IOSHI training)

Final Cost: 19 Points.

Infectious Knowledge

Librarians can present ideas in a fashion that makes them the target's own, but this is closer to education than to control. The target can still question factual ideas and reconcile unexpected emotions. Infectious Knowledge allows the librarian to instead convey some part of the structure of his or her mind — such as basic mathematical understanding, a regimented worldview, insanity, or data taint — and the target has the same difficulty ignoring it that the librarian would. Some librarians use this to convey their essential "self" into a new body, where it can take over immediately or lay dormant until the librarian's body dies. Using this ability requires that the librarian break an unwilling victim — often a slow and painful process. Several other librarian abilities facilitate this. In particular, Disrupt Training can lower a target's Mind Shield.

Librarians can also use this ability to restore a damaged mind. They must not themselves suffer the perceptual distortion in question — a tainted librarian cannot remove data taint.

• Librarian •
Infectious Knowledge

Aptitude Package
Attributes

Telepathy 10 (Only with humans; Area 2; Targets 1; Reduction -1, Only for initiating mind combat); Restriction, Only affects someone who has undergone IOSHI training -1), Mind Shield 2

Final Cost: 14 Points.

Talent Package
Attributes

Telepathy 10 (Only with humans; Area 2; Targets 1; Reduction -1, Only for initiating mind combat); Restriction, Only affects someone who has undergone IOSHI training -1), Massive Damage 1 (Mind combat), Mind Shield2, Reincarnation 1 (Difficult to stop; Kill or deprogram potential doubles)

Final Cost: 20 Points.

Genius
Attributes

Telepathy 10 (Only with humans; Area 2; Targets 1; Reduction -1, Only for initiating mind combat); Restriction, Only affects someone who has undergone IOSHI training -1), Massive Damage 2 (Mind combat), Mind Shield 3, Reincarnation 2 (Difficult to stop; Kill or deprogram potential doubles)

Final cost: 27 Points.

Insight

Librarians have amazing insight into the workings of the human mind, and can often accurately guess what a person is thinking by reading their body language and mannerisms.

Feature (Insight)

Features (Insight) gives the character the ability to inspire simple thoughts and realisations in others who have undergone IOSHI training. Specifically, he or she can give others a +4 to Mind-Based checks to understand something the librarian wishes to convey. This includes understanding the character's innuendoes and hints. In addition, the librarian can turn someone's thoughts to any given subject without bringing it up directly. This does not give the librarian the ability to choose the target's thoughts, but he or she can momentarily adjust the subject matter thereof.

Introspection

Librarians understand the processes and structures by which their own mind manages its thoughts and memories. This allows them to optimise their inner space and monitor it to prevent external modification.

• Librarian •
Insight

Aptitude Package
Attributes

Features 1 (Insight), Sixth Sense 1 (Lies, Area 3)

Final Cost: 5 Points.

Insight Talent Package
Attributes

Features 1 (Insight). Sixth Sense 1 (Lies, Area 3). Telepathy 2 (Well-known people only; Area 2; Range 1; Targets 1; Restriction, Cannot project thoughts -3)

Final Cost: 8 Points.

Insight Genius Package
Attributes

Features 1 (Insight), Sixth Sense 1 (Lies, Area 3), Telepathy 2 (Humans only; Area 3; Range 1; Targets 2; Restriction, Cannot project thoughts -3)

Final Cost: 12 Points.

• Librarian •
Introspection

Aptitude Package
Attributes

Mind Shield 1, Enhanced Mind 2

Final Cost: 5 Points.

Talent Package
Attributes

Mind Shield 2, Enhanced Mind 1, Enhanced Soul 1

Final Cost: 6 Points.

Genius Package
Attributes

Mind Shield 3, Enhanced Mind 1, Enhanced Soul 2

Final Cost: 9 Points.

Pacification

Those who make a study of it can disrupt the normal functioning of their target's mind. This renders it open and accessible to education and re-education. This process requires some form of communication, limiting its range to 10 meters. Note: a character's primary (highest Level) Special Attack costs 4 Points/Level. All secondary Special Attacks cost 1 Point/Level. Adjust prices accordingly.

• Librarian •
Pacification

Aptitude Package
Attributes

Special Attack "Calm" 1(20 Damage, Drain Soul, Targeted x1: Subject with IOSHI Training, No Damage, Short Range)

Final Cost: 4 Points.

Talent Package
Attributes

Special Attack "Re-education" 2 (20 Damage, Drain Mind, Drain Soul, Targeted x1: Subject with IOSHI Training, No Damage, Short Range)

Final Cost: 8 Points.

Genius Package
Attributes

Special Attack "Pacify" 3 (40 Damage, Incapacitating, Targeted x1: Subject with IOSHI Training, No Damage, Short Range, Slow), Special Attack "Re-programming" 3 (40 Damage, Drain Soul, Drain Mind, Targeted x1: Subject with IOSHI Training, No Damage, Short Range)

Final Cost: 15 Points.

Filters, Manipulation, and Data Taint

Most Spartans are aware of rumours that the librarians — students of the data organisation and chip design techniques that make IOSHI training possible — can potentially manipulate or interfere with IOSHI-granted abilities. Few realise the true extent of this interference.

Studying at the well is also rumoured to make a character susceptible to data taint, a form of virus-like infection. Using a filter when actually connected to IOSHI by a neural jack reduces this risk substantially but does not eliminate it (see Data Taint in Play, page 292). People who want IOSHI training but fear data taint buy filters — improvements to the neural jack designed by the librarians who first reported data taint's existence.

Filters

Unfortunately, a number of experts assert that training through a filter permanently warps the student's mind. In most "IOSHI" games, this is just propaganda, but characters cannot know that filters are safe until they experiment.

The IOSHI license forbids training people who have filters installed. One can circumvent this license in a number of ways. Obtaining pirated access to the IOSHI servers, bribing the facility that provides training, or hand-altering one's filter to conceal its existence often suffices. Filters are major Gadgets.

Dead Libraries

One can salvage an IOSHI library from a dead person's brain. In that library, one finds a holographic record of the departed's understanding of their training. Feeding this data into a living person's brain chip — through a filter, if desired — is possible. Outside of Sparta, it is even common.

The living character receives some portion of the training just as if he or she had studied that topic from IOSHI directly. Over time, he or she may recover more. When drawing on these talents, the character understands that topic as the dead person saw it. For example, a shaman's stolen insight trickles into the character's mind through the lens of the dead person's faith and not the character's own.

The cost of a dead library is, naturally, the cost of the Attributes or templates purchased through it. Characters can make these Powers cheaper via the Activation Time, Backlash, Concentration, Limited Use, Permanent, Restriction, or Unreliable Defects. This represents that the character is not using his or her personal knowledge, but rather that of someone else. An improperly installed dead library may also come with the Recurring Nightmares Defect, lessening the cost if the character does not already suffer such nightmares.

Installing Dead Libraries

Dead libraries salvaged by the characters have a certain currency value. The GM should assign this value, setting it at a modest fraction of the value of the dead person's training. If a character installs rather than sells such a library, he or she realises that value as Advancement Character Points rather than as money.

Installing a dead library requires a difficult Mind-Based Electronics (Computers) Skill check. Learning from a dead library requires one day per Advancement Character Point recovered. Halve this time if the installation succeeds with a margin of 4 or more. Success with a margin of 8 or more makes the dead library data instantly accessible.

Biotech, Cyberware, and Software

In addition to IOSHI training, characters may improve their body and brain using the following technologies.

Brain Chips and Neural Jacks

This is the primary enabling technology for access to IOSHI.

Neural Jack

Neural jacks use the rules on page 282. Most individuals who benefit from IOSHI use neural jacks, although some use the older neural headsets). Use of a brain chip often requires connecting to the well for lengthy periods of time (for which wearing a headset would be uncomfortable) so most individuals acquire a neural jack.

Brain Chip (IOSHI Access Chip)

A brain chip is an implant that allows the user to connect to the IOSHI servers ("the well") and imprint knowledge in his or her brain, creating a "library" of knowledge and talent. Using it requires either a neural jack or a neural headset, which must be jacked in to an online computer with a very high data transfer rate (such as fibre optic cable).

This technology can be thought of as a third generation of wetware plug technology. The chip acts as a medium to use the brain itself as a component in data storage and a partner in training, rather than having to store information purely on a chip. The chip, rather, contains the data that allows the brain to access it.

A brain chip allows access to IOSHI training at a rate of roughly 1 Character Point worth of training per 10 hours of access to the well servers. It takes the individual a further amount of (conscious) time to process that information with the help of the brain chip implant; until then, the training is not accessible.

This time spent accessing the IOSHI servers can be spread over time (which is how most users acquire it via ordinary IOSHI vocational training) or all at once. Individuals who undergo this form of submergence training may remain unconscious for some days (tended by people or machines to avoid bed sores and exercise limbs, and fed intravenously) while undergoing the process.

Attributes

Features 1 (Brain Chip)

Final Cost: 1 Point (without further IOSHI training).

Other Cyberware

Cyberware expresses the ultimate aesthetic of the technical communities: the direct integration of human and machine. This aesthetic influences most of the people who buy cyberware and most of the people who install it. With a few exceptions, such as brain chips, only corporations bother with camouflaged cybernetic implants. In Sparta, low visibility cyberware is in: elegantly subtle and understated but still obvious enough to show off to one's peers and prospective romantic partners. Residents of technical communities and the global subcultures around them favour appearance enhancing cybernetics, displaying their chrome like a peacock's feathers to all who look their way.

Cybernetic Surgery

Cybernetic implantation requires a personal approach. After a physical check-up confirms suitability, most doctors make patients engage in the "confessional" — a long conversation with the doctor or the doctor's software tools, used to build a programmatic map of the patient's personality. Minor cybernetic implants do not require this, but receive enough benefit from the confessional that it has become standard procedure. Major implants, replacing large portions of the person's body, depend entirely on these maps to understand what the user wants them to do. The implant will continuously refine its model of the user over its lifespan, and take direct input from his or her nervous system, but most enhancement surgeons consider it vital to make a near-perfect map at the outset. Afterwards, the operation proceeds as with biotech surgery.

The confessional, like the religious ceremonies that preceded it, has legal protection, and the doctor has the right to full confidentiality regarding the discussion. Nevertheless, many of those outside the system find the process nerve-wracking. They prefer to use blackmailable doctors who incinerate both the interrogation software and the hardware copy of the conversation after use.

Availability of Cybernetics

Most cyberware technologies are available in IOSHI. The exceptions are neural buffers (which are replaced by brain chips) and mind uploading (which is still experimental). At the GM's option, neural buffer technology could exist in parallel with IOSHI, or be an older generation of technology ("the worm that preceded the well").

• THE CONFESSIONAL •

"Tell me something beautiful," the machine said.

"Rivers," I answered. "In the sun." I smiled a little. "I used to live near one; and the grass by the river was brown, and the sunlight poured down like little bits of gold."

"Do you miss it?"

"Of course." I laughed. "You wouldn't think I'd need to think about this kind of thing. When you're fitting me with combat armour."

"Why not?"

"It's funny," I said, "how you can go from a world with rivers in it, to a world where you fill your body with steel and march around protecting some guy you hardly know, and all it takes is a few miles move."

"Do you regret it?"

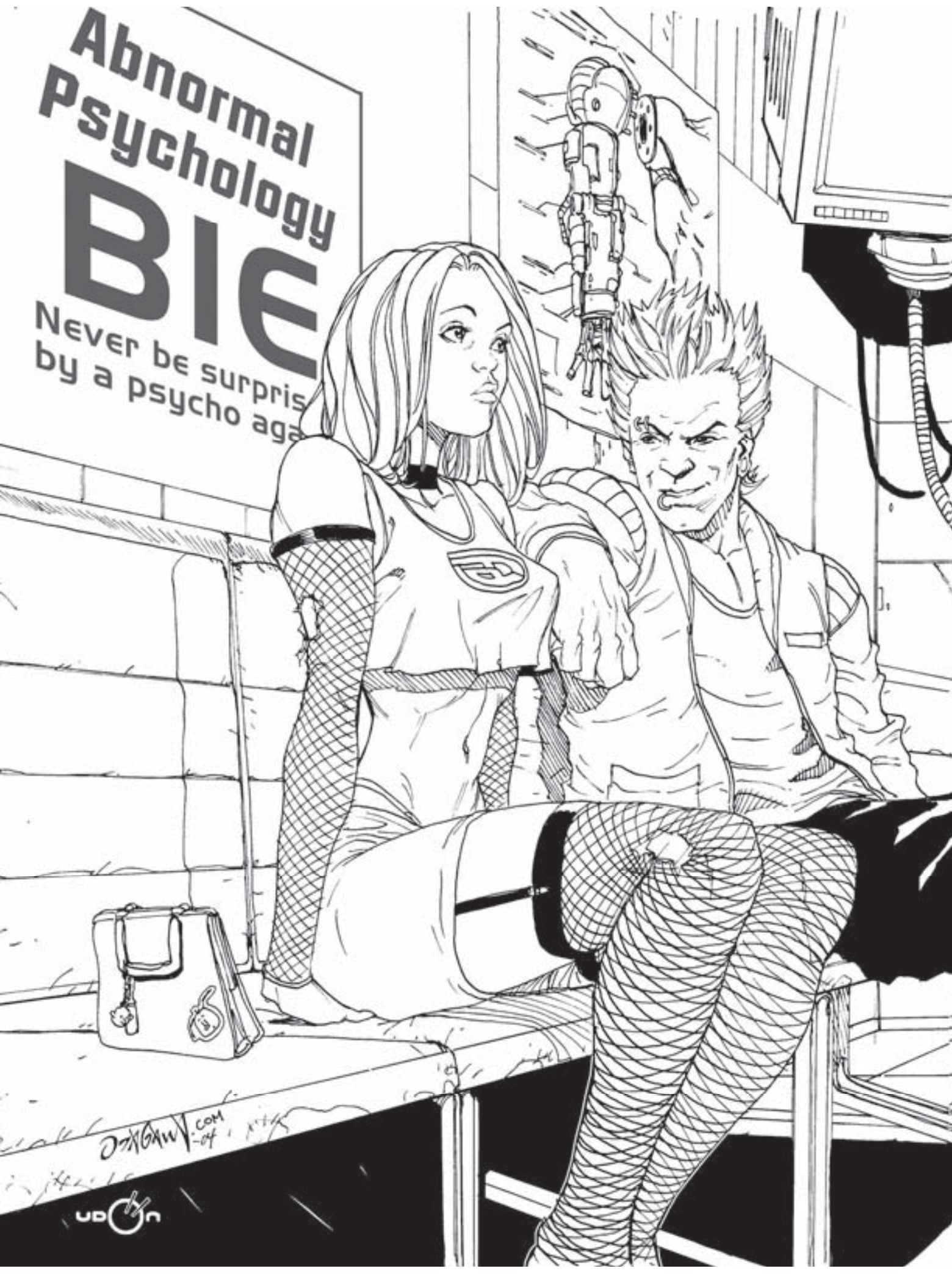
"Nah." I shook my head. "There are people worth protecting. Sometimes, when I'm not on watch, I go to the window and look down at the street; and the people are a river, and the light of the street lamps, it's bits of silver. That's beautiful too."

"You're not going to be yourself," the machine said. "You're going to look in the mirror and see a thing. A monster. A warrior."

"I know," I said. "It's a horrible thing, isn't it? To sell who you are? But I'm buying a chance to keep the boss alive, and that's worth a little bit more to me."

"And if he's just a shark," the machine asked me, "and you're following a lie?"

"That'd be pretty sad," I said, "but there's not much I can do."


Abnormal Psychology
BIE
Never be surpris
by a psycho aga


Contributed parts to
Cheryl Korman!

Software Enhancement

Most products that enhance cognition, however, take the form of software, stored either in a user's personal online account or in com implants (page 27). The simplest form of software enhancement helps its users interact with the net. Very few people ever access the underlying protocols and data management that create a functional net. Layers of software inherent to the net itself provide the meaningful user interface atop its basic structure. This gives everyone elementary online abilities such as maintaining a document collection, searching a database, and ordering meals. Beyond that, most people have a personal software library that automates many of the tasks for which they use the net. Software packages allow easy management of a net-enabled house; continuously hunt down information the user might find interesting; exchange updates on the character's life with similar programs owned by his or her friends; balance the user's diet based on the latest nutritional information and recommendations; and so forth.

Beyond this, software enhancements can help their users think. Such enhancements take three progressively more powerful forms

BIEs

Baseline Intellectual Enhancements ("bees") perform rigorous, strictly functional calculations for their users. Standard BIEs serve as math coprocessors for human brains, foreign language dictionaries and pronunciation guides, backup memories for the forgetful, and lay nutritionists. Rarer BIEs include expert systems that can guess at someone's weight, origin, recent injuries, and profession from their appearance and their walk; databases of background information that can match faces to well-known case histories; and combined references for toxicology, pharmacology, and pathobiology.

An analytical database BIE is typical. It processes the information its user's senses receive and cross-references it with a number of data sources stored on chip. It then answers specific queries or generates a running report tailored to a specific purpose. Analytical databases give Heightened Sense techniques or Sixth Senses. Sense techniques rely on the user for additional interpretation, and Mind-Based Stat checks measure the data's accuracy in the same way they measure the accuracy of the character's native five senses. Sixth Senses depend primarily on the computer analysis; they require a faster processor and give less detail, but never miss data entirely.

A character might have an analytical database that helps identify the mass or chemical composition of nearby objects, gives hints at the emotional state of other characters, guesses at the recent history of a person based on the kinds of stains and dust on his or her clothing, or roughly measures the romantic compatibility of the various people the character meets. GMs must approve analytical databases.

Select one or more of these Attributes and Defects:

Attributes

Heightened Senses 1 (Choose any Type II), Highly Skilled 1 (No Skill may be raised above Level 1), Sixth Sense 1 (Area, up to Rank 3)

Final Cost: Sum of individual costs.

A BIE normally requires com implant cyberware (page 27) as a prerequisite.

PIPEs

Partially Intelligent Personal Extensions ("pipes") start as an amorphous collection of possible program logics. The user then trains the PIPE to understand how he or she approaches a given problem, using a variety of techniques including demonstrations, question/answer sessions, stimulus-response-based reinforcement, and, for those who know how, direct and intensive reprogramming. After a long period, usually reckoned in months or years, a PIPE begins "understanding" both the task and the user. It never becomes as competent as the user, but it can run independently and is typically much, much faster. Spartans commonly use PIPE software for time-critical operations, such as disaster response, electronic intrusion and its countermeasures, and tactical combat. Most people think of a PIPE as a pet in the early stages of its existence, a dumb sidekick later on, and an important ally once the PIPE reaches full maturity. A mature PIPE has the emotional and conceptual sophistication of a smart dog, the language skills of a teenage child, and vocational abilities approaching the user's own — only their inability to understand the world in complex terms separates them from true artificial intelligence. See purchasing PIPEs and SNAIs, below.

Purchasing PIPEs and SNAIs

Most characters can find some use for software agents that act on their behalf in the net. Hackers use them as assistants; investigators have them monitor data sources; suits use them to help organise their affairs; and ordinary Spartans use them to make their lives more convenient. Unintelligent or semi-intelligent agents are Gadgets. A typical minor Gadget provides the character with a running feed of local street maps and architectural plans. Intelligent agents with a personality patterned after the character's – usually PIPEs – are Agents, Henchmen, or Servants.

A PIPE begins as a minor Gadget. Over time, it naturally develops into a Henchman, an Agent, and finally a Servant. The complete process takes roughly two years, although characters can reduce this with a successful Mind-based Social Sciences (Education) Skill check. To reduce it further, a character can purchase the additional Henchman, Agent, or Servant with Advancement Character Points. The money spent goes into some combination of hiring others to tweak the PIPE, dedicating time to the PIPE instead of money management, purchasing PIPE augmentation software, and possibly studying at the well to figure out how to optimise PIPEs and the specific PIPE in question. This can advance the PIPE through its life cycle in a period suited to the pace of the campaign – normally weeks, but days or hours in a campaign with a tight time frame.

SNAIs have two uses. First, SNAIs give one possible excuse for buying abilities relying on inhuman mental speed. Second, characters can buy any software Gadget, Henchman, Agent, or Servant as a SNAI. It cannot act alone – the character must sacrifice an action each round the SNAI acts. Unlike other software tools, however, a SNAI can use its owner's mental abilities, including Combat Value, Skills, and Combat Techniques. In addition, it benefits from any abilities the character purchases with the Restriction (Cyberspace only) (page 81). SNAIs usually "live" on a chip in the character's brain, emerging into the net only when called upon, and thus can have the Reduction (Cyberspace Only).

SNAIs

Spare Neuron Artificial Intelligences ("snaze") are PIPEs capable of recognising their own weaknesses — the aspects of decision-making that their user does better than it ever can. When running an SNAI, the user goes into a light disassociative trance. The program reduces the key decisions that it cannot handle into small, simple chunks. It then forwards them through the neural jack directly to the user's brain. Due to the interaction of program logic and human understanding, the problem chunks rarely have any obvious relationship to the issues at hand. They enter the user's mind as a slew of apparently random ideas with a strong interrogative attached. New users find this nauseating and useless. Moderately experienced users respond reflexively, elevating their SNAI above the level of PIPE. Veterans can use SNAIs without discomfort. See purchasing PIPEs and SNAIs (page 287).

Transcends — as well as the smart, the determined, the strong, and those with natural tendencies towards dissociation — eventually master the situation. They construct a working mind atop the expanded structure of their brain, using their SNAIs as high-performance components and their organic brain as the architectural core of their cognition. Some have access to specialised SNAIs designed to supplement "ordinary" thought, rather than simply enhancing specific career skills.

• SKILL CO-PROCESSOR •

Characters can use implanted PIPEs and SNAIs to supplement their Skills. Characters installing Skill coprocessors can purchase Levels of Highly Skilled. BIEs and PIPEs cannot increase any given Skill above Level 2.

Attributes

Highly Skilled 1

Final Cost: 1 Point.

A skill co-processor requires com implant cyberware (page 27) as a prerequisite.

• MENTAL TUNE-UP •

Characters can integrate their mind with a SNAI. This gives additional Levels of the Mind Stat. A SNAI cannot increase a character's Mind score above 16.

Attributes

Enhanced Mind 1 to 2

Final Cost: 2-4 Points.

Bioware

Biotech enhancements include surgical modifications to body structure and primarily organic implants. The term also covers products with a biological source, such as goat silk, and bioengineered foods, such as Convem's Cow on a Stick.

Enhancement surgeons who think of themselves as medics — as opposed to technological fetishists who get a visceral thrill from installing machinery in the human form — prefer to work with biotech. The procedures and the results have a classically medical feel, creating new capacities in the same way that restorative surgery returns lost ones.

Bioware Surgery

A typical surgery begins with a physical diagnostic. The patient disrobes and a set of scanners studies his or her form. The doctor typically monitors from another room. Many prefer never to meet their patients directly.

The second step is the patient's disinfection. Most operating tables still require a nurse or doctor to help the patient arrange him or herself upon them, but a modern surgical table can take care of the rest. It depilates, cleanses, sterilises, and anaesthetises the region. A modest additional fee, sometimes discounted as part of an incentive package, provides full general anaesthesia.

In most regions, Spartan licensing procedures require enhancement surgeons to know how to manually perform surgical procedures. In practice, such procedures are rare. Doctors perform most enhancement surgeries remotely. Rather than dirtying his or her hands, the surgeon monitors the automated process and gives the machinery the benefit of a doctor's leadership. This usually produces an inferior but adequate surgery. The recovery time and implant comfort, functionality, and aesthetics are better than if an untalented human surgeon performed the procedure, but significantly worse than if an inspired or IOSHI-trained doctor enacted the surgery hands-on.

Enhancement surgery has a very limited follow up. Hospital stays are rare and short for anything short of full-body reengineering. Usually, the surgical process installs a handful of biodegradable monitoring devices. After the patient's system is stable, the surgeon provides him or her with painkillers, maintenance drugs, and any necessary combination of crutches, cast, wheelchair, and full-body transportation unit and then sends him or her home. If problems arise, the patient's monitoring devices can shout online for the nearest medic.

Retrometabolism

By making the body's natural healing processes more efficient, and possibly installing some basic medical implants to monitor the system and release pharmaceuticals when appropriate, doctors can improve a patient's recuperative abilities. One or two purchases of the Features (Retrometabolism) Attribute results in the following: the first purchase doubles the patient's natural healing rate. He or she recovers twice his or her Body in Health Points per day. The second purchase multiplies healing twelvefold again. The character recovers his or her Body in Health Points every hour.

In more cinematic games, improved natural healing makes this Feature unnecessary.

Attributes

Features 1 to 2 (Retrometabolism or Retrometabolism x2)

Final Cost: 1-2 Points.

Tune-Up, Physical

Biotech techniques for replacing, tuning, and programming a character's muscle, nerve, and bone structure can give characters up to two additional Levels of the Body Stat. Biotech cannot increase a character's Body score above 16. During a physical tune-up, a character can also acquire Combat Technique (Lighting Reflexes

or Hardboiled), and Special Defence types. The latter includes up to one slot of defence against aging, air/oxygen, disease, hunger, and sleep, and up to two slots of defence against pain or poison. Similarly, the character can purchase up to two Levels of Tough.

Attributes

Enhanced Body 1 to 2, Special Defence 1 to 9 (Aging, Air, Disease, Hunger, Pain x1 or x2, Poison x1 or x2, Sleep), Tough 1 to 2

Final Cost: Sum of individual costs.

Physical Mutability

A person who wishes to be able to alter their appearance, gender, and body type at will can implant multiple memory plastic biotech implants in his or her body, connected to a web of cybernetic processors. Each implant respond individually to input from the brain. This surgery is so extensive that it requires Features (Fire) (page 276) to learn to walk and talk again afterwards, much less control a transformation.

The resulting Power Flux (Physical Mutability) Attribute permits the fire to dynamically shift its form. Suitable Attributes for this Power Flux include Enhanced Body, Alternate Form (Cosmetic Changes), up to 1 Level each of Armour, Elasticity, Extra Arms, Jumping, Special Movement (Catlike, Balance, or Swinging), Toughness, up to two Levels of Water Speed, up to four Levels of Land Speed, any Levels of Features (if physical in nature) or Natural Weapons, and any bioware templates.

Attributes

Power Flux 1 (Physical Mutability, minor — Duration Reversed Rank 6)

Final Cost: 16 Points.

The basic Physical Mutability biotech allows shape shifting in 10 minutes. Additional Ranks of Duration Reversed can be taken up to a maximum of 10 ranks. The fire talent package (page 276) is required for Rank 7 or 8, and the fire genius package (page 276) is required for Rank 9 or 10.

Useless Surgeries

Even legitimate enhancement surgeons usually offer customers catalogues of procedures containing many modifications of little, no, or negative value. Many who purchased the reflective iris enhancement when L. Seliken Industries first offered the technique still regret it. The aesthetic results do not merit the severely allergic eyelids that almost inevitably follow. Similarly, the popular gel node implants that theoretically disburse vitamins in measured doses through the body simply do not work. A wise person researches anything he or she plans to install in his or her body well in advance.

Possessions and Equipment

The technology market of the 21st century makes manipulating the potential customer a priority. The ideal citizen, from the perspective of the corporate shamans and sharks, defers his or her primary purchasing decisions to software and augments this with impulse buys. Most Spartans think it wise to hand off their daily shopping to online agents that scout the net for potentially interesting products. Both of the leading agents, Steward XT and 7th Scout, give their users a hassle-free shopping experience that stays within their budget. It also opens them up to the machinations of anyone who makes a deal with the current owner of the Steward or 7th Scout intellectual property or writes an "advirus" that subverts them.

People still do their own shopping. Most of the outsider communities deride shopping agents as a means to hand over personal desires to the trends of the masses. Even core culture Spartans usually accept that software cannot find everything they might want. For those who hunt down their own bargains, dealers rely on a bewildering array of products and options to create customer insecurity. Uncertain shoppers find themselves buying blind or yielding to merchant pressure. Cheap and reliable products must exist, to account for those whose budgets would otherwise prohibit them from buying a given service or good at all. Except for those poor customers, however, merchants prefer that no one leave the store with such a product in his or her hands.

Equipment in IOSHI

All standard cyberpunk equipment is available in this setting. A few unique items or variations on the norm are detailed below:

Mutability Kit

Simple plastic surgery allows characters to alter cosmetic details of their appearance at will. Skin, eye, and hair coloration, and hair growth patterns can change. The character can tighten, loosen, or pad selected regions of his or her anatomy for cosmetic effect, primarily various facial structures, breasts, hips, and the stomach. This biotech makeup kit counts as a minor Gadget, and the changes cannot conceal the character's identity unless he or she succeeds at a difficult Disguise (Prosthetics) check. Minor Gadget.

Sharpware

Sharpware is software that speculates intelligently about its user's intentions and desires. When written for a suitably limited domain, sharpware can save its users time and mental effort. As long as the designers' ambition falls within the programmers' abilities, sharpware makes accurate guesses most of the time and adequate, correctable guesses the rest. Attempts to make sharpware reach beyond the capability of modern software technology or simply beyond the skills of the programmers in question usually fail horribly, producing a program that flounders bemusedly more often than it helps. This does not necessarily prevent its distribution by the Project responsible or its widespread adoption by Spartan users.

Subware

If a program cannot pretend to intelligence, most users turn their noses up at it and call it "subware." Few Spartans want a thermostat that does not memorise their preferences and adjust to their level of activity. Typical users reject phone software that insists on clear identification and cannot reliably call "um, you know, that guy, from last week, you know, with the moustache."

Technically-oriented characters consider subware their bread and butter. While the path of software evolution leads towards ever-greater understanding of the requests users make of it, programs that guess at their user's intentions make mistakes. While software developers endlessly strive for flashier, more flexible code, such trendy programs open the way for intruders. The more options the software has, the less certain programmers are that they've tested for all possible failures. A technical character prefers programs that do exactly what he or she tells them to do, nothing more and nothing less. Some of the extremists still use text-based interfaces for non-textual tasks.

Typical subware has limited applications. The core functionality of an oven is subware — a low-level interface for turning the heat up and down and making

requests of the refrigerator. It never makes mistakes, nor does it correct the user's mistakes. It is as secure as a rock. The high-end interface built on top of it has none of these features.

Security and Defence Systems

Standard security in "IOSHI" games consists of an armed human police force, monitors, a few automated defences, and reasonable software safeguards.

Each Level of Security and Defence (see Table 15-2) has a Circumvention Difficulty penalty, and various feature slots; each feature is equivalent to one major Gadget (see computer Security Levels, page 141).

Escalation

The security level in Sparta — the opposition faced by those engaging in illegal or covert action — varies greatly from region to region. As the characters become more powerful, they gain the ability to act against the system or their enemies in increasingly high-security areas. This gives characters a shorthand with which to measure their own abilities: the higher the security level they can overcome, the more practical a direct assault on the bastions of their antagonists becomes.

The ability of characters to circumvent this security adjusts upwards or downwards based on regional concerns. A GM can rate regions on the quality of each important aspect of security, which affects the characters' ability to avoid that security with standard Stat and Skill checks. In addition, it adds "security features" to the area that the characters must overcome, invented by the Game Master or selected from the suggestions below.

Table 15-2: Security and Defence

Security Level	Circumvention Difficulty	Check Value Modifier	Additional Features
Anarchic	Easy	+4	0
Criminal	Below Average	+2	0
Urban	Average	+0	0-1
Significant	Above Average	-2	1-2
High	Difficult	-4	2
Military	Extremely Difficult	-6	3
Maximum	Practically Impossible	-8	4

General Security

Some regions in Sparta have automated or remotely operated defence systems — electronic barriers, stun fields, and sharpware-targeted machine guns. The circumvention difficulty modifies Check Values when the characters try to disable, evade, or endure the effects of these systems. A bank's key computer systems might have an Automated Defence Systems (High) device that floods the machine room with anaesthetic gas when intruders enter. This imposes -4 to Check Values when the characters attempt to resist the Incapacitating gas or interfere with its dispensation.

Adaptive

The automated defence systems evaluate the characters' actions in an intelligent way when activating. For example, a defence system that seals specific corridors to channel intruders is adaptive; a system that seals all corridors to trap them is not.

Advanced

Normal defence systems include such things as guns, elevator overrides, and alarms. Advanced Automated Defence Systems employ high-end technology. This allows a range of unusual security effects. It also means that standard countermeasures — such as jamming guns or blinding their sensors — do not necessarily apply.

Complex

Normally, at most one system guards any given location within the region. Each Complex feature allows an additional interlocking defence system per location. For example, a region with Complex Automated Defence Systems, chosen once, can have up to two interlocking defence systems per location. Each has its own purpose and activation methods.

Guards

In regions guarded by nameless NPCs rather than important antagonists, the GM can use a standard "guard" template (see below). Rather than making the guards more or less competent, the GM can apply the security-based Check Value Modifier to the characters' Check Values for combat and opposed checks when the characters and guards face off. For example, a maximum security region might have perfectly-trained drone guards. The GM can implement this by applying a -8 penalty to the characters' Combat Check Values when fighting the faceless drone horde.

• Standard Guard •

30 Character Points

Stats: Body 6, Mind 4, Soul 3, ACV 6, DCV 2, Health Points 35, Shock 5

Attributes: Attack Combat Mastery 2, Gadgets (Conditional Ownership, 2 BP) 2, Heightened Awareness 3

Skills: Intimidation (Street) 1, Gun Combat (Pistol) 1, Ranged Defence (Personal) 1, Unarmed Attack (Strikes) 1, Unarmed Defence (Strikes) 1

Numerous

The region employs an atypically large security force — twice what one would expect for a building, borough, hideout, or Project of its sort. Further doublings count as one additional feature each.

Guard Upgrade

The GM should design standard upgrades to normal guards based on the needs of the game. Each assignment of this feature gives each guard either one standard 16 Character Point upgrade or an 8 Character Point upgrade specifically chosen to make the characters' lives more interesting.

Guard Leader

The GM designs one or more significant antagonists whose primary purpose is to augment the region's security. Guard leaders have the potential to become recurring characters who appear in other environments; accordingly, the characters do not receive a Check Value Modifier when fighting a guard leader. Guard leaders instead have high Character Point totals, often comparable to the player characters'. Guard Leader counts as one feature if the antagonists make intrusion more complicated, two if they make it more dangerous, and three if they make it nearly impossible.

Monitoring

In regions under any sort of observation — whether in the form of patrols or security cameras — the Monitoring circumvention difficulty modifies Check Values to evade detection. A ghetto plagued by gang warfare might have Monitoring (Anarchic) on the streets and Monitoring (Criminal) in each gang's base. Characters would receive a +4 to the Check Value when sneaking past patrols on the street, but only a +2 when sneaking through a gang headquarters.

Full Surveillance

Full Surveillance regions continuously monitor or patrol all easily traversable spaces. If the region also fully monitors airspace, ducts, sewers, and other normally inaccessible places, this counts as two features.

Unusual Sense

The region's monitors employ unusual detection techniques that are difficult to circumvent, such as motion detectors, thermal observation, and particle analysis. Each pair of unusual detection techniques commonly used in the region counts as a single feature.

Redundant Monitoring

Multiple independent sources monitor the observed portions of the region. For example, many locations may have both PIPE-manned cameras and patrols.

Operations

When intruders alert security to their hostile intentions, it starts taking action against them. Apply the circumvention difficulty modifier to the characters' attempts to interfere with an organised response. For example, in a region with Operations (Criminal), characters might divert guard response to the wrong location with basic electronic ventriloquism. In a region with Operations (Military), this becomes more difficult.

Response Time

The local security force reacts to the characters' actions with unusual alacrity. Guards, software, and the security head's commands move easily through the region.

Subtlety

The local security acts with restraint and stealth. The circumvention difficulty Check Value Modifier applies to the characters' attempts to discern the current locations and reaction pattern of the security force.

Support Officers

Officers with IOSHI training bolster local security operations. Having a hunter, librarian, shaman, shark, or visionary on staff counts as an Operations feature — rather than participating in combat, these security officers assist the security force in planning its reactions.

Software

Characters invading a secure region may wind up in conflict with the software therein (PIPES, etc.). Use the rules for iconic cyberspace (page 142).

Special Rules

Two special rules — for wealth and for cred — can be used to give IOSHI a unique flavour. Both are optional.

Wealth and Character Points in IOSHI (Optional)

In IOSHI even more than most cyberpunk settings, money can be transformed into knowledge and power through the medium of the well and IOSHI training.

To better simulate this, the GM may opt to assume that Character Points equate directly with money. The standard unit of value in Sparta and associated outsider communities is the tab (denoted by the ‡ sign). Each tab gives roughly $10,000 of buying power in contemporary US dollars and also equates with a single Character Point. Thus, characters can spend ‡1 as an Advancement Character Point. The GM should not allow the normal Wealth Attribute in this case; instead, characters who wish to have liquid resources may instead leave up to 24 Character Points "unused" for future acquisitions.

Except in unusual circumstances, the Character Point cost of the relevant Attributes determines the cost of IOSHI training, cyberware and its implantation, and biotech mods. Note that if GMs do not keep a close correspondence between these costs and the costs of other goods, and any cash rewards or income the characters earn, the system will not work — all costs need to start at ‡1 per Advancement Character Point before circumstances come into play, even if this makes a particular purchase oddly cheap or strangely expensive for the technology involved. This standard also provides the default cost for minor Gadgets (.25 Character Points, or ‡.25, the equivalent of $500 — $2,500), major Gadgets (1 to 4 Character Points, or ‡1 to ‡4, the equivalent of $10,000 to $40,000), and Skill training (0.1 Character Points per Skill Point, or ‡.1, the equivalent of $1,000.)

That said, tabs are still money. Tabs are not Character Points — just currency. IOSHI simply assumes that the Spartan concept of value conveniently matches the Character Point costs in *Ex Machina*. Merchant-customer negotiations naturally centre on that value. Until characters actually complete a transaction and change their character sheet, however, individual costs vary. Tabs are subject to normal financial vicissitudes — the character can get cheated or cheat the merchant; the character can have funds stolen or find a briefcase full of money; characters can buy a house instead of new Attributes, or find themselves unable to buy a minor Gadget because they spent their money on food and shelter.

In terms of filling out a character's wallet, petty transactions are conducted in microtabs (designated as •), worth about $10.00, and nanotabs (n), worth a little under a cent. Fast food meals cost about •1-2. These currencies exist solely to fill out the setting and are not referenced by the rules.

Characters can improve their own abilities by spending money. Purchasing Special Attributes usually involves illicit IOSHI training, finding Gadgets or high-tech Items of Power on the market, or installing biotech and cyberware in the character's body and brain. For prospective purchases of Mundane Attributes and Skill Points, the GM and player decide how the character can spend money to achieve his or her goal. The GM can also assign Mundane Attributes and possibly Skill Points as the natural result of game events.

Table 15-3: Miscellaneous Equipment

Purchase	Type	Standard Cost
Clothing, Armour	Minor Gadget	‡0.25
Clothing, Business	-	‡0.01 to ‡0.4
Clothing, High-Class	-	‡0.02 to ‡1
Clothing, Standard	-	minimal
Computer, Low-End	-	minimal
Eyewear, Network Access	-	Clothing cost plus Access cost
Computer, High-End	Minor Gadget	‡0.25
Neural jack	Minor Gadget	‡0.25
Filter	Major Gadget	‡3 or ‡4
Home, Comfortable	-	‡0.15/month+
Home, Luxury	-	‡0.4/month+
Home, Palatial	-	‡0.7/month+
Home, Spartan	-	‡0.05/month+
Land	-	‡4.0+ or more per 1,000 sq. ft.
Medical License	Features	‡1.0
Vehicle, Combat	Major Gadget	‡3 or ‡4
Vehicle, Improvement	Minor Gadget	‡0.25
Vehicle, Scooter	Minor Gadget	‡0.25
Vehicle, Standard	Major Gadget	‡1

Cred (Optional)

A person's reputation among diverse non-governmental communities is a vital part of an IOSHI campaign. To better simulate this, the GM may choose to replace the Organisational Ties Attribute with a specialised Attribute called Cred. Each purchase rates the character's influence with a specific group: a local community, a core culture Project, or a large social group taken as a whole.

Cred

Cost: 1, 3, or 5 Points/Level
Type: Characteristic
Relevant Stat: Soul
PTMVs: None
Progression: Descriptive
Reduction: Very specific utility
Restrictions: Cred only applies to part of the group in question; character's connection results in conflict; high price to pay

Cred with an individual local community or core culture Project costs 1 Point/Level. In the first case, the character has influence with community leaders and average residents. In the second, the character can impress the Project's employees and influence the Project's decisions. If changes in the game setting make this Cred literally or effectively useless, the player can trade in the Points for Cred with another group at 1 Character Point per week.

Cred with an outsider community type costs 3 Points/Level. The character has the qualities and reputation necessary to influence members of that fringe regardless of the specific community in question. The character should take a 1 BP Restriction Defect for slightly less broad-reaching Cred, such as Cred with monotheistic religious communities.

Characters with significant rank in Sparta's structure of interlocking corporations have "shark Cred." This costs 5 Points/Level. The character can apply his or her Cred in dealing with any Project. Characters who lose their position usually receive a final payoff that converts their shark Cred to cash. If they do not, they can trade in the Points for Cred with other groups at 1 Character Point per week.

Cred always trumps Cred of four or more Levels lower. For example, a character with Level 2 Cred cannot oppose the manipulations of a character with Level 6 Cred. When multiple player characters or major NPCs attempt to influence an organisation or community in incompatible ways, and their Cred is no more than three Levels apart, the Game Master should call for an opposed Soul Stat check. Characters can take the Features (Mover and Shaker) Attribute, see page 48, to gain an advantage in such conflicts. If both characters succeed at the roll, the losing character's influence mitigates the effects of the victorious character's manipulation.

The Attribute Levels are described below; GMs can easily extrapolate intermediate or higher Levels as required.

Level 1 The character has a positive reputation with the group in question, or the character has qualities making him or her mildly appealing to that group. Such Cred usually ensures polite and considerate treatment from the group in question. It does not actually buy the group's allegiance, however, so this may boil down to civil disinterest or a merciful execution.

Level 2 The character has qualities or influence that directly earns him or her the respect of a group. That group treats the character as one of their own.

Level 4 The group treats the character as an important and valuable member. The character is a minor community leader.

Level 6 The character has significant power over the group. Members of the group may question or refuse his or her demands, but not his or her right to make them.

Level 8 The character has vast sway — the equivalent to a Project's CEO or one of a religious community's prophets. Such a character may find him or herself overruled, but otherwise has free rein.

Level 10 The character has essentially free rein with any local communities or Projects that fall under the Cred's definition.

Cred and Occupational or IOSHI Templates

All guidelines for cred here are at the 3 Points/Level, except where indicated as shark cred (5 Points/Level).

Hackers often have cred with artists and technical communities. Some have cred with secure communities and street culture as well. Social influence is not their strength. Suggested Starting Cred: Level 1 Cred (with two groups).

Idols (especially those who are fires) often have cred with anthropophobes, artists, physical idealists, and technical communities. Some have cred with maenads or miscellaneous Spartan organisations. Suggested Starting Cred: Level 1 Cred (with four groups), Level 2 Cred. This may go much higher if they are widely known.

Investigators typically have core culture cred in a variety of forms. In addition, many have moderate cred with a handful of specific communities or community types. Suggested Starting Cred: Level 1 Cred (with four groups), Level 2 Cred (with two groups).

Medics (especially IOSHI-trained healers) typically have cred with secure communities, street culture, and the servants of the high families. In addition, most have connections to one or two medical associations. In Sparta, this explicitly opens a number of doors. The software packages that bouncers use to confirm or deny admission to semi-public parties and clubs recognise accredited medics (whether IOSHI-trained or not) as beneficial guests. Security programs often allow medics into restricted regions, recording rather than detaining them unless they act in a criminal fashion. Suggested Starting Cred: Level 1 Cred (with two groups), Level 2 Cred (with two groups).

Street Punks normally have cred only with a particular street community. Suggested Starting Cred: Level 1 Cred (with two groups).

Street Samurai usually have cred with the core culture, floating boards, criminal communities, and maenads. A few have cred with secure, street, or technical communities. Suggested Starting Cred: Level 1 Cred (with four groups), Level 2 Cred.

Suits (especially those who are sharks) have substantial corporate and core culture cred, as well as meaningful cred with the criminal cultures and high families. A few have cred with maenads, street culture, or other communities. An experienced suit may have one to four Levels of "shark cred" (page 263) — cred applying to every Project.

Techs usually have core culture and corporate cred. Technical community cred is almost certain. Some have cred with artistic or street communities. Recommended Starting Cred: Level 1 Cred (with two groups), Level 4 Cred.

Teleoperators have a small amount of cred with anthropophobic culture and secure communities almost without effort — in the former case, because they live more as machine than human, and in the latter, because they can throw themselves into dangerous situations without risking their body's life. Some have cred with religious or technical communities, as well, depending on their approach to existence. Suggested Starting Cred: Level 1 Cred (with two groups).

Some types of IOSHI training tend to lead to additional cred. For example:

Shamans usually have significant cred with religious communities. Many have criminal cred or cred with the servants of the high families. Suggested Starting Cred: Level 1 Cred (with two groups), Level 4 Cred.

Transcends have significant cred with anthropophobic communities and the floating boards. Some have cred with a local community or two as well. Suggested Starting Cred: Level 1 Cred, Level 2 Cred, Level 4 Cred.

Librarians typically possess a superfluity of cred. They express themselves in terms suitable to the culture in which they find themselves. In particular, they readily impress criminal, religious, and technical communities. Many have significant cred with core culture institutions and the high families as well. Suggested Starting Cred: Level 1 Cred (with two groups), Level 2 Cred (with two groups), Level 4 Cred.

Visionaries tend to have natural cred with secure and technical communities. Many have ties with one or two core culture corporate institutions. Suggested Starting Cred: Level 1 Cred (with two groups), Level 2 Cred.

Data Taint

Only the librarians understand what data taint is, and most of them deny its existence. Like believing in UFO abductions in the modern day, believing in data taint can cost someone a great deal of face. So many credulous people have spread so many hysterical superstitions on the subject that most Spartans have difficulty

The IOSHI Storyline

A standard IOSHI campaign follows the structure outlined below. GMs can deviate from this structure freely; when doing so, they should keep in mind that the setting is designed for use with this story outline and modify it appropriately to match their own.

Sometime before the campaign began, the characters made the deliberate choice not to buy into two standard Spartan assumptions. Rather than accepting the experts' assurances regarding the well's safety, the characters installed filters. Rather than happily embracing a position as corporate resources, the characters nurtured resentment against this fate or found some criminal means to avoid it.

To kick off each character's story, the GM and player should figure out why and how that character chose to rebel. The reasoning and the story do not have to be deep or complicated – just look for something that creates one or two useful personality hooks and a few story hooks besides. This should be part of the character outline.

Next, the system strikes at the characters for refusing it. For some reason – often because of the characters' choice to use filters or because of their rejection of corporate entanglement – the characters appear on someone's hit list. The characters defend against various attempts to remove them for a variable number of stories.

As the characters gain experience, they also gain progressive insight into the motivations of their enemies. Even if the characters perform no research, any IOSHI training they receive or brain chip piracy they perform improves their mental map of the world. This allows the Game Master to reveal new truths. To survive, the characters must usually lean on their allies, creating an increasing number of social entanglements.

At some point, the characters have enough information to begin striking back. Some immediately do so. Others must have specific motivation before they abandon a habitual defensive stance. Typically, this motivation derives from the character's social connections, which also come under threat. The characters' offensive position also lasts a variable number of stories.

Finally, the characters find themselves in a position to take significant action against the hostile elements of the world's power structure. This phase of the campaign can begin as soon as the characters have sufficient experience to confront the Game Master's chosen antagonists – who may be a handful of sharks and other savants or an unstoppable force with practical dominion over all of Sparta. The confrontation itself has one of four outcomes: the characters win a series of limited victories, win a series of victories, die bloodily, or sell out. The Game Master should not predetermine the outcome, but can eliminate some of the last three options depending on the mood of the game.

taking it seriously. Some say that IOSHI is an A.I. out to mind control everyone it can. Others assert in all seriousness that monstrous god-kings rule the corporations and spread data taint as their blasphemous seed. Occasionally, one hears that Elvis's brain is behind it all.

There is only one good reason to believe in data taint: a handful of people with a great deal of credibility and intellectual maturity loudly claimed it exists. Some of them vanished. Some of them retired. Some of them, much more loudly, changed their minds. The rest died violently.

The lay explanation of data taint runs like this: data taint is a sickness coded into IOSHI training. Infection changes the structure of the victim's mind, stripping from the victim a portion of his or her humanity. This produces minor but systemic alterations in the victim's personality and may adjust memories or cognitive capacities. The taint defies full analysis, having in itself complexity equivalent to the human mind. Accordingly, no reputable source has yet established whether data taint has a purpose or whether it simply derives from a software bug.

Data Taint in Play

IOSHI campaigns assume that a deadly cancer lies somewhere in the society, economic infrastructure, or power hierarchy of the late 21st century. A major component of the "system" is inherently hostile.

The GM has three options when connecting data taint to this antagonistic force. First, he or she can make it a minor flaw in IOSHI's design without significant effects in play. Second, the GM can implement it as one of the system's tools for controlling or influencing the population. Third, data taint can be the root of the problem, an epidemic with IOSHI and the librarians as its primary vectors. In all three cases, any IOSHI-derived Power can suffer data taint. This yields a limited form of insanity that affects the character when he or she uses the Special Attributes in question.

The GM determines the conditions for acquiring data taint. Characters who obtain IOSHI training without a filter make themselves vulnerable, as do characters actively afflicted with data taint by a librarian. In addition, the GM can implement other sources of taint. Unless the player group wishes to play a horror game, these sources should be fundamentally fair — characters should have ample opportunity to realise the taint's source before it completely pollutes them, and they should have the ability to avoid it thereafter. Some possible sources include television broadcasts, BIE-targeting software viruses, and intimate contact with the tainted. The GM also determines the effects of data taint. The most common effect, however, is taint-driven madness.

The first time the character uses the tainted Special Attribute in a given scene, he or she must make an easy Stat check or succumb to this effect. Each tainted Level gives a -1 penalty to the Check Value. Should the character fail, compare his or her margin of failure on the Time Progression Chart (page 42) to determine the duration of the insanity. Taint-driven madness can be an ordinary derangement chosen by the GM, such as an obsession, compulsion, phobia, or delusion; it can create perceptual distortions designed by the system to create a specific effect; or it can specifically twist the character's use of that ability. Characters with data taint also frequently discover that they know things they had no way to learn — an innocuous but potentially dangerous trait.

In a normal game, data taint is a meaningful threat. It represents the system's ability to coerce, possess, or brainwash its victims. This potential unfolds slowly. Once the characters have experienced or witnessed the effects of taint, the Game Master should make the taint's purpose more obvious in each moment of escalation (see Escalation of Story, page 294). For example, in a game with three planned moments of escalation, an early obsession with cleanliness might grow into discomfort when associating with dirty people. After the second moment of escalation, some people might seem dirty to the tainted character even when physically clean. In the endgame, tainted characters might find themselves unable to feel clean without first "cleansing" away undesirable acquaintances with a knife or a gun. In another example, minor perceptual distortions might develop into lost time and fugue states in which the tainted character reports the group's plans to the enemy. The Game Master should also increase the difficulty of the Stat check to resist data taint. It rises over the course of the game to average difficulty if the Game Master wishes the characters to have and resist data taint, difficult if taint becomes a driving madness, and practically impossible if the characters must expunge their taint to succeed.

Characters can remove data taint. This normally requires the services of a trustworthy and untainted librarian who accepts data taint's existence. If the character can find such a librarian, typical payment equals one-tenth the tainted Levels' purchase cost. The GM can also institute other methods for removing data taint, such as long periods of meditation or careful application of electroconvulsive therapy.

The nature of data taint is usually one of the core secrets of an IOSHI game — in most games, when the characters finally understand the taint, the story moves to the next stage. In some games, this knowledge is necessary to fighting the system; the characters discover it early in the story, and it is a key factor shifting them from a defensive to an offensive stance. In other games, characters understand data taint only near the end of the story. They can fight the system effectively without this knowledge, but understanding data taint precipitates the story's resolution. It gives the characters the power to force a final confrontation or gives the system motivation to force one on them. The GM decides most of the details of how data taint works so that he or she can customise the secret and its revelation.

Game Masters deciding the nature of data taint can start with one of the following ideas:

- Data taint can be a complex of ideas, like fascism or a religion.
- People with data taint eventually accept it as their new morality.
- Librarians infected with data taint use IOSHI to convey it to others.
- Data taint can be a distributed artificial intelligence, running in or through the minds of its victims.
- Tainted people behave almost normally until their actions impinge on the interests of the A.I., at which point its autonomic systems begin turning others' minds against them — not to mention their own.
- Data taint can be some kind of demonic seed or power, spreading through the mortal world. This can bring unusual questions of spirituality and free will into the game at the cost of some of its cyberpunk feel.
- Data taint can be a back door built into the minds of IOSHI users. The librarians and the companies that own IOSHI can use that back door to bend people to their will.

Story Structure

Typical scenarios combine elements of the military mission, the dungeon crawl, and the superhero adventure. The antagonists threaten something the characters care about, such as their own lives. The characters must get that thing to safety or nullify the threat. At the same time, the characters often have the opportunity to kill the story's antagonists — typically, minions of the overall campaign antagonists — and claim some of their possessions. The characters can then sell off these possessions or — in the case of IOSHI training — install them in a character's brain.

Escalation of Story

Most "IOSHI" games have observable moments of escalation. Something happens during the game, and the characters' ability to affect the world spikes upwards. Discovering the nature of data taint is a moment of escalation, as would be sudden wealth, root access on an IOSHI server, or a terrible secret found in a dead man's brain. Moments of escalation empower the characters, but also change their targets — the next logical step usually leads them to regions or secrets protected by a higher security level than their previous challenges. Most games have at least three: one to shift the characters from a defensive to an offensive stance; one or more to build tension during their struggle with the system; and a last moment of escalation to precipitate the final confrontation. In moments of escalation, enemies fall, secrets come undone, great power finds its way to the characters' hands, and new threats become apparent.

• Michael Amarin •

Street Punk; Shark; 100 Character Points

Stats: Body 6, Mind 10, Soul 6, ACV 8, DCV 8, Health Points 60, Shock 12

Attributes: Attack Combat Mastery 1, Cred (Ultra-Crips gang) 1, Cred (Denny Triangle, Street Community) 1, Defence Combat Mastery 3, Divine Relationship 2, Gadgets (Gun, drugs, filters*) 3, Heightened Awareness 3, Highly Skilled 2, Henchmen (Local gang) 5

Enhancements: Features (Neural Jack, Socket Interface; Bane, Neural Feedback, 1 BP) 1 Point, Features (Brain Chip) 1 Point, Shark (Features: Mover and Shaker; Mind Control 3, Humans Only – Area 2; Duration 3; Range 1; Targets 1; Restriction, Targets remember control, 2 BP) 18 Points.

Skills: Area Knowledge (Rainier Beach Residential) 1, Burglary (Breaking-and-Entering) 1, Intimidation (Political, Street) 1, Performing Arts (Fast Talking) 2, Sleight of Hand (Lock Picking) 1, Street Sense (Gang Activity) 1, Urban Tracking (Residential) 2, Gun Combat (Pistol) 1, Melee Attack (Knives) 1, Unarmed Defence (Strikes) 1

Defects: Ism (Criminal Culture) 1 BP, Nemesis (Meredith Baston) 1 BP, Recurring Nightmares (Filter use?) 2 BP

Note: Michael Amarin (see Criminal Culture, Example Community, page 256) has lost his predecessor's connections to illegal IOSHI services, but he still has access to numerous filters (and runs a very small filter-manufacturing operation), which he is happy to sell. When his stocks are low, customers may have to wait several days or weeks due to the difficulty in acquiring parts, but he's always willing to set a "fair price." He aspires to be a true shark.

• W •

Hacker; Librarian; 140 Character Points

Stats: Body 8, Mind 10, Soul 8, ACV 8, DCV 9, Health Points 80, Shock 16

Attributes: Agent (PIPE, Reduction -2, Cyberspace Only) 1, Cred (Criminal Community) 1, Cred (Religious Community) 1, Cred (Technical Community) 2, Cred (Artistic Community) 4, Defence Combat Mastery 3, Gadgets (Paintings*, paint supplies, weapons) 4, Gadgeteer 2, Heightened Awareness (Restriction, Cyberspace only, 1 BP) 5, Highly Skilled 6, Organisational Ties (IOSHI; Great) 4

Enhancements: Features (Neural Jack, Socket Interface; Bane, Neural Feedback, 1 BP) 1 Point, Features (Brain Chip) 1 Points, Features (Implant Com) 1 Point, Librarian (Telepathy 10; Only with humans – Area 2; Targets 1; Reduction -1, Only for initiating mind combat; Restriction, Only affects someone who has undergone IOSHI training, 1 BP; Mind Shield 4; Features: Insight; Sixth Sense: Lies, Area 3; Enhanced Mind) 23 Points

Skills: Area Knowledge (Aurora Springs) 2, Computers (A.I., Intrusion/Security) 2, Cultural Arts (Art Appraisal) 3, Forgery (Painting) 3, Power Usage (Telepathy) 3, Street Sense (Black Market) 2, Social Sciences (Psychology) 2, Urban Tracking (Corporate) 1, Visual Arts (Painting) 4, Melee Attack (Knife) 2, Melee Defence (Knife) 2

Defects: Famous 2 BP, Owned (IOSHI Corporations/Librarians) 2 BP, Phobia (Loss of net access) 1 BP

Note: W's paintings (major Gadgets) cause people with data taint to have seizures or visions. See Artistic Culture, Example Community (page 255). W is certainly an enigma figure, but is suspected to know more about the legends of data taint than most other librarians. Unfortunatley, W is semi-retired, and reclusive.

• Robin Faciana •
"White Cult Killer"

Street Samurai; Knife Edge; 125 Character Points

Stats: Body 7, Mind 9, Soul 12, ACV 13, DCV 10, Health Points 95, Shock 19

Attributes: Attack Combat Mastery 4, Cred (Street Community) 1, Cred (Secure Community) 4, Combat Technique* (Block Ranged Attacks, Hardboiled, Judge Opponent, Lighting Reflexes x2) 4, Divine Relationship 3, Gadgets 2 (PDW, monowire hatchet), Heightened Awareness 1, Massive Damage (Hatchet) 1, Highly Skilled 6

Enhancements: Features (Neural Jack, Socket Interface; Bane, Neural Feedback, 1 BP) 1 Point, Features (Brain Chip) 1 Point, Knife (Defence Combat Mastery 3; Extra Defences 2; Features: Knife's Edge; Jumping 1; Special Defence: Pain; Speed 1, Restriction, Short bursts only; Maximum of 5 continuous rounds, 4 BP) 17 Points, Nanofibre Skin (Armour; Reduction -2, Stops 3 damage) 1 Point, Cybernetic Eye (Heightened Senses: Infravision, Ultravision; Special Attack "Dazzle Laser:" Damage 20, Accurate, Flare, No Damage, Short Range) 6 Points

Skills: Acrobatics (Flexibility) 2, Intimidation (Business) 2, Medical (Pharmacy) 1, Military Sciences (Intelligence Analysis) 1, Stealth (Silent Movement) 4, Urban Tracking (Residential) 2, Gun Combat (Auto-fire) 2, Ranged Defence 1, Melee Attack (Hatchet) 2, Melee Defence (Hatchet 2

Defects: Famous (White Cult Killer) 2 BP, Wanted (White Cult Killer) 3 BP

Note: * Two of Robin's Combat Techniques (Lightning Reflexes x2) come from Knife Edge training. Robin is known to be a serial killer (who douses his victim's corpses bodies in chalk after cutting out their eyes), but is protected by his interest in Secure Communities. See Street (Poor) Culture, Example Community page 261.

• Faceless God •
"Eurybiades"

Fire; Idol; 150 Character Points

Stats: Body 12, Mind 6, Soul 12, ACV 10, DCV 8, Health Points 120, Shock 24

Attributes: Agents (Community leaders, bodyguards) 3, Cred (Artistic Community) 1, Cred (Maenad Community) 2, Cred (Physical Idealist Community) 10, Divine Relationship 1, Gadgets (Clothing, deck, motorcycle) 4, Highly Skilled 5

Enhancements: Features (Unbearable Beauty x3) 3 Points, Features (Neural Jack, Socket Interface; Bane, Neural Feedback, 1 BP) 1 Point, Features (Brain Chip) 1 Point, Fire Aspect (Features: Fire x3; Mind Shield 1; Special Defence: Pain x2) 6 Points, Physical Mutability (Power Flux 1, Physical Mutability, minor – Duration Reversed 10) 20 Points

Skills: Artisan (Metalworking) 1, Disguise (Costume) 3, Driving (Motorcycle) 1, Etiquette (Upper Class) 2, Performing Arts (Singing) 4, Piloting (Light Airplane) 2, Seduction (Female) 3, Urban Tracking (Corporate) 1, Ranged Defence (Personal) 1, Unarmed Attack (Grappling) 3, Unarmed Defence (Throws) 3

Defects: Famous (Faceless God) 3 BP, Marked (Fire) 3 BP, Nemesis (Librarians) 2 BP, Significant Other (Other faceless gods; acts as 3 BP) 1 BP

Note: Eurybiades is one of the faceless gods, a type of oracle / icon / celebrity at the West Junction Hub (see Physical Idealist Culture, Example Community, page 260). Eurybiades was once an idol on the physical training circuit, winning prizes for his outstanding physique. He has since transcended that, and is a source of wisdom for others seeking physical perfection. The faceless gods, however, have a feud with a minor sect of librarians; in particular, the librarians of Eikonos-Minor (a corporation) have a feud with Eurybiades.





Chapter 16 Daedalus

Daedalus Ascendant

Daedalus is a setting that's about ninety degrees from the reality we live in, where technology and paranoia combine to create a utopia for those willing to give away their independence to live there. It's a place where every need is taken care of, where every want is satisfied so long as you don't question or rebel. For those who decide they cannot live wearing the invisible leashes of their secret masters, the world is a very different – and far more hostile – place.

The setting of Daedalus is everywhere and nowhere, an undefined city in a nebulous region on an unnamed continent. It's very like our world, but somewhere along the way things took a slightly different path. GMs using "Daedalus" are encouraged to personalise the places represented as much or as little as they like.

Gods and Machines

In Greek myth, Daedalus was an inventor of unsurpassed skill, possibly a manifestation of Hephaestus, the god of the forge. He was reported as being clever and politically savvy, a loving father, inventive genius, and a devoted servant — the victim of circumstances beyond his control. At the same time, he's reputed to have killed his nephew out of jealousy, created a machine to enable a mating between divine monster and man, unwittingly caused the death of his only son, and to have brought about the death of his former sovereign by manipulation and deceit. To say that the myths were of two minds about Daedalus is a bit of an understatement.

In modern times, Daedalus is primarily remembered for two things: the first is the creation of the Labyrinth, the prison of the Minotaur (in whose conception he played a major role). The second is in relation to his son, Icarus, who died when he threw aside caution and flew too high, accidentally destroying the amazing wings his father had created and plunging to death into the sea. The name of Daedalus is regularly appropriated and used wherever someone wishes to suggest a bit of creative genius, a source of wisdom and ingenuity, often leaving the darker aspects of the story behind.

This setting carries on that tradition, taking its name and inspiration from that figure of legend. More specifically, the setting focuses not only on the bright aspects of invention and progress, but also on the darker side of the equation. Daedalus — and what he represents in the modern world — is presented as a double-edged sword, reminding us of the sacrifices we have to make to get the things we want, and asking whether those things are as important as what we leave behind.

Behind the Curtain

In this 90-minutes-from-reality future, things haven't gone so well. The shadow government set up to free its citizens from the threat of total federal collapse in the event of a terrorist strike instead became the real power in the world, free from the checks and balances that keep more publicly accountable agencies from overstepping themselves. This shadow government assembled a think-tank of the brightest minds of the time, called Daedalus, devoted to the protection and welfare of the state. This think tank came up with a simple plan: an ID chip, which would be implanted in everyone and contain a unique code. In the interests of public safety (driven by xenophobia and paranoia of further terrorist strikes), fears of a loss of civil liberty were put aside for the duration of the emergency, and the plan was implemented across the board, with incentives for those who signed on. Within two generations of active promotion by the government, nearly everyone was chipped by the age of two.

At first the chips were just another form of ID, with the added benefit of a GPS tracker installed. As time went on, however, they grew ever more complex. They were expanded to track and report the subject's vital signs to a central computer, for use with ambulance and law enforcement efforts. Corporations and other government agencies incorporated receivers into their equipment, letting nearly everything be customised — entertainment, advertisements, custom menus at restaurants, even down to your seat adjustments for your car, all without the subject lifting a finger. Then genius struck.

The chips were given the ability to receive programming as well as transmit data. A chip was implanted near the brainstem, and suddenly learning curves became a thing of the past. Signals from the chip could stimulate the body to produce chemicals it might otherwise be deficient in, nearly eradicating diseases like Alzheimer's as well as other chemical imbalance problems, such as depression. Neurological dysfunction could be recorded on a constant, non-intrusive basis for treatment. It was like a blessing. An additional implant next to the sensory cortex paved the way for sim-technology, and suddenly both entertainment and work had been transformed.

Starting at toddlerhood, chips are programmed and reprogrammed as a child grows to provide appropriate stimuli (entertainment, knowledge, etc.). They're supposed to give the subject more options, to be easily assimilated by society and the workplace, and to make life easier as well. They enable society to give people the reality they want, as opposed to the reality they have. The chips also provide Daedalus with the fine control needed to micromanage the needs of society, while stamping out as many societal problems as possible.

Unlike many cyberpunk settings, everything here is green and lovely. Recycling has become *de rigueur*. Greenhouse gases are down, and pollution is mostly just a memory. Corporations are making more money than ever before by charging higher prices and passing expenses onto the consumer for all the clean manufacturing and environmentally friendly procedures, but since it's the "right" thing to do (as defined and enforced by Daedalus), no one seems to mind. Loneliness is no longer an issue, and those who are without mates are often "set up" by the governing authorities ... and with a little biochemical boost, find themselves married or happily monogamous before they can realise they might have wanted something else entirely.

In most cyberpunk settings, religion is glossed over or set aside as irrelevant. Here, however, the importance of religion in the life of the average citizen is celebrated — even heavily encouraged. The government has largely removed itself from the realm of morality and entrusted the churches, mosques, synagogues, and temples to set their own definitions of moral and immoral for their members — within the limits of the law, at any rate.

The resistance sees Daedalus itself as proof that the road to Hell is paved with the most worthwhile of intentions. In an effort to create a good life for its subjects, Daedalus examines nation-wide trends and forecasts what needs to be done, what fields need workers, what issues need addressing. They then structure programming to guide people into filling those needs.

Most of the time, this societal tinkering goes entirely unnoticed. The traditional political institutions are only a shell of their former selves, gutted by dissent and suspicion and rebuilt into a pleasing facade by those with power; no

Amanda,

I'm sorry.

I wasn't going to talk to you about this so soon, but I don't have a lot of choice left. I know this is really confusing but there was no other way. You already know your chip wasn't working right; I didn't plan for that. If I had, I'd have showed you how to cover it better. As it was, you kept missing cues and your mood went sour sometimes ... it was pretty clear what was happening to anyone looking for it — and they're always looking for it. So are we, for that matter.

Our sources told us you were scheduled for re-implantation next week. You probably didn't know that. They just arrange a house call, a trip to the mall, a "contest winner," and there you go. A few hours of surgery, an overnight stay, and you're back up and working again like a good little drone. Hopefully. We couldn't risk it happening to you, not with you just waking up. We need people with your skills way too much ... so we removed your chip.

I know you're pissed off about now, and you want to know why we did this to you, and if you're going crazy. You're not. Taking the chip out doesn't do that (assuming there wasn't mental illness there to begin with). It doesn't cause brain damage, though a lot of people who "wake up" like you are doing find the world a lot harder to cope with for a while. That will pass, though. You aren't crazy. You're just ... feeling things. The slick stuff over where your chip was is a liquid bandage. It'll come off in a few days, when Doc checks the wound. It's only a little more than a scratch, really, but it's a tricky procedure. Luckily, we seem to have figured out how to take the damned things out without having to carve people up in the process.

See, the chips aren't just a convenient form of ID. They are so much more than that. They allow the powers that be to set your life in the direction they see as best, to control things in a way that no previous government on Earth has ever been able to do. They influence moods by regulating serotonin and endorphin levels, they broadcast position and profile to every seeing eye on the street, so that you'll always know what you should buy, or do, or think, or see.... They use them to tell you who you should be, who you should marry, what sorts of behaviours are acceptable — the list just goes on.

Now I bet you think I'm crazy. That's okay. There's more.

When's the last time you were sad before all this? Angry? Upset? How long did it last? When's the last time someone you knew became upset? Did you suddenly start avoiding them — why did you do that? Shouldn't you try to help a friend who's in distress? Did they disappear for a day or two on "voluntary vacation," or some other nebulous excuse, only to return as though nothing were wrong afterward? Did they return at all?

When's the last time you saw a book that was written before our parents were born?

How many people you've known have suddenly "moved away" without so much as a good-bye? How many others married someone they'd known less than a month? That new guy, Charles, the one you'd seen a couple of times ... you were ready to marry him, weren't you? Got all bubbly inside when you saw him? Did you know he'd bought a ring? Last time you talked to me, you didn't even know his last name, and yet you were ready to get married — at least until the chip started going on the fritz, and you realised he was a weasely git who seemed frighteningly obsessed with getting you into bed.

What sort of sense does that make? Any of it? It doesn't make sense, of course. That's because it's all set up from behind the scenes. You were being managed, just like he was ... just like everyone is.

The authorities you know of aren't really the ones in charge. The "enemies" aren't enemies at all, except that they don't want to be controlled. The criminals are just people trying to get along, and your friends are people who've been chosen to hang out with you because it makes a good group dynamic. Milk costs $6.00 a gallon because the Powers That Be — Daedalus — have decided it's okay, and no one complains or sells it cheaper because those same powers have decided no one should. The same ones who determined what Public Decency was, and that flouting it was a crime punishable by imprisonment and citizenship restriction, whether that was playing loud street music, not recycling, or having inappropriate relationships.

It wasn't always this way.

I know, it seems like it has been. You probably don't remember a time when it wasn't, and neither does anyone else you know. If you looked for information on it online or in the library, it wouldn't be there. They're pretty damned determined to remove all the fixed reference points, so that nobody will be able to question them. It's too late for that, though. We're already questioning them, and we're going to do a damn sight more than that before we're through.

With this letter, I've included a bunch of news and magazine clippings, starting back at the beginning of all of this. Some of it will blatantly contradict what you've been taught, but the paper alone ought to show you we didn't just fake this. It'll also teach you a little more about who we are and what we're trying to fight. Before you make a judgement, just read it all. That's all I'm asking. Read it, then make up your own mind. Doc and the rest of the people there will answer your questions as best they can until I get there. Oh, and the ones directed to Joshua Danvers? He doesn't use that name any more, and his family's changed their names too. Hardly anybody uses their old names here on the Outside.

When you get to the end, I'd like you to think about helping us. Given the way your chip was acting, I'll admit that I don't know if we could replace it and have it work. I don't even think that they could. Still, we can put one in, modify your memories a bit, and return you to your life. They never have to know about what happened, and you can pick up your life from where you left off, though I can't promise nothing will have changed. I'd like you to stay, Manda. We could use you here, as there are never enough sim-spinners to do the job properly. I know you'd be good at it. I don't want to see you go back, not as a drone. You're too good for that.

Anyway, I love you, Sis. I'll see you when I can.

Jace

more the safeguard of the people, but rather attractive mouthpieces that say only what they are told to say. Daedalus was designed by those in power to be the saviour of the free world, but instead it deposed them and made them its puppets. The world has never been the same.

The Daedalus Group itself is a secretive organisation who recruits solely from within loyal members of the government. 90 percent of the nation's citizens have no idea it exists, and all mention of it is forbidden in the state-controlled media. Approximately half the members of the core group have been there for decades, but the rest have been recruited more recently . Needless to say, Daedalus is not something one applies for. If it wants someone, it goes to find him or her instead.

You won't have heard of these, probably, but this was the beginning of it all. You'll be surprised at the language they use, but don't let it throw you. This was mainstream media, not some half-baked conspiracy theorist in a dark corner of the net. Read over the clips and see what you think. Nothing will be the same.

B16

Think Tanks (cont'd from B-4)

can be no doubt that such independent research groups are of great value to the political community — when they can find a politician who is willing to listen to their findings.

Most groups are formed by someone with a great concern about or belief in a given policy agenda. The Carter Center, for example, was founded by former US President Jimmy Carter and his wife Rosalind as a means of addressing and finding solutions for world health and peace issues, or the Ekonomski Institut, which focuses on international economic theory and scien[illegible] of Belgrade.

The Daedalus Group was formed by the brother of the first Department of National Security director, Gerard Hallée, in an effort to study the best ways to protect against terrorism both domestically and internationally. These think tanks are generally non-profit organisations devoted to research, which sometimes partner with universities or corporate interests in order to make their theories come to life.

[illegible] of these groups have a political age[illegible]tor which they lobby co[illegible] more luck in converting politicians to their cause than others. Those with politically important founders are among the most successful in

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Immunisations Against [illegible]

While the number of successful nation-wide terrorist attacks has decreased during the last six months, continuing global unrest makes it unlikely that a quick end will be in sight. The Department of National Security's attempts to tighten restrictions on immigration and travel by both international students and visitors do not address tracking daily movements of thousands of individuals.

Local law enforcement agencies have out-dated means of checking and sharing information on suspected criminals. Traditional forms of identification, such as federal ID cards or provincial driving licenses, are notoriously easy to counterfeit, as are passports and visas. This makes catching a suspected terrorist a difficult task.

To combat this problem, Spiral Shell Networks has taken the fight against terror to a whole new level. This privately held, small but vigorous company from the lower Midwest specialises in wireless networks and micro-receivers. With only 50 employees, their previous focus was on radio-frequency identification (RFID) chips and their integration with commercial inventory monitoring programs. That was before the terrorist attacks began.

During the morning of the Memorial Strike, Spiral Shell's founder, Brad Weston was touring the National Memorial with his family. This was their first vacation in years. They were just outside the building when the bomb detonated, collapsing the structure on top of them. Only Brad and his youngest son, Josef, survived.

After being released from hospital, Weston followed the case being made against the alleged terrorists as their steps were traced back from bomb placement. Spurred by feelings of frustration and helplessness at the investigations' lack of progress he withdrew from his work and became obsessed with the inquiry, following every lead as a means of grieving for his dead family. He had an epiphany while watching a television show about how easily false ID papers were obtained by terrorists and the difficulty of maintaining an easily accessible, current information database on a nation of people. Weston says, "it was like a bolt from the blue." He knew what he needed to do.

Six months later, Weston's inspiration was actualised in a small chip, roughly one-quarter the size of a pencil eraser. It holds encrypted personal information that can be read by any RFID scanner and updated using a magnetic encoder. This information can be double-checked against a national database that holds current information on all registered chips. Any new information can be automatically uploaded to the tracking database. The chip is designed to be injected under the skin in an inconspicuous location, such as behind an earlobe, resulting in a constantly functioning form of ID that can be read at any time and checked or changed by any authorised agency.

Weston and Spiral Shell Networks are currently trying to market the idea to the Department of National Security as a method of tracking foreign nationals during their stay in the country, if not as a replacement for all current forms of ID. Privacy and civil rights groups oppose adopting this new technology, but Weston remains convinced most citizens will see the necessity for a new method of tracking prospective terrorists. Government officials have said as much; a debate on the feasibility of replacing their current obsolete system is underway.

Only one thing is certain: with every successful attack, pressures on lawmakers to find a means of stopping terrorist incursions grows exponentially. The only real questions are: what means, if any, can the government find to stop such attacks, and what are the lawmakers — and citizens — willing to try in order to make it happen?

Secure connection

Terrorism Countermeasures: Are They Working?

Since the first announcements from the Department of National Security, the public has been anxiously awaiting some sign of progress on the part of the government in combating the terrorist threat. The day when our citizens will no longer be threatened on foreign or domestic soil is one that an entire nation is anxious for, but is it any closer to happening? Today we'll take a closer look at the steps taken by the DNS thus far as well as what methods of accountability are being used to judge their effectiveness.

Airport Security

The improvements in airport security are obvious to anyone who has flown in the past months, with increased personnel, sophisticated detection devices, and hard checkpoints guarded by armed officials. Wait times are up, fast check-ins are down, and no one is entirely happy with the current state of affairs. Still, the majority of flyers indicate that they're willing to put up with a little inconvenience in order to catch terrorists. The real question is are we catching any?

The answer is far less obvious than we'd like. Since increased security was federally implemented nation-wide, there have been no successful hijackings of domestic flights. There have been at least five attempts by individuals who bypassed security unnoticed, though they were stopped either in the air or before entering the plane. There are no public records currently of individuals caught or arrested as a result of increased security, least of all any known terrorists. This is due to the National Security Mandate, which states that all terrorist-related arrests are covered by a national security umbrella and not accessible to the press.

Instead, we've heard countless tales of groundless harassment and racial profiling — serious charges, if the security is as ineffective as the records currently show. To date, the government has offered no convincing evidence to the public in support of the effectiveness of these tactics.

Shadow Government

Reasoning that disrupting the function of the federal government is a primary goal of any terrorist organisation, the President announced that a shadow government would be put in place in a bunkered secret location. In the event of a disaster, control would be transferred from the capitol to the secured headquarters, where staff members would be able to pick up all essential business without interruption. The idea of a secret government dates back to the Cold War, where preparations for a similar arrangement were made for this country but never enacted. Similar plans were put in place for most of the nations involved in that standoff, on both sides, but no other nation put them into action.

The singular lack of knowledge about these emergency arrangements is troubling, to say the least. Very few members of other areas of government know anything about the arrangements, including most of the minority party. Most disconcerting is that only the executive branch is represented in the shadow government. Attempts to gain additional information have been stymied at every turn as both the President's office and the Department of National Security refuse to comment publicly, citing security concerns. There appears to be a total lack of accountability, a turn of events that has both serious thinkers and conspiracy theorists alike deeply troubled.

Increased Vigilance

Soon after the first attack, the federal government vowed to crack down on terrorists and those with known terrorist or criminal affiliations. Not only were obvious stockpiles of weapons of mass destruction kept under tight surveillance, but trails of money were also followed

• TERROR STRIKES • Paralyse Nation

New Metro (CCN) – Terrorists struck again in another series of harrowing, widespread attacks on Thursday afternoon, targeting at least four financial centres, public buildings and national landmarks. The fifth such set of attacks in as many months caused all red-designated sites to go into complete nation-wide lockdown, while orange and yellow sites retained emergency and minimal staff respectively. Green and blue sites remained unaffected.

Explosions have allegedly hit the Metro Stock Exchange, National Museum, Ministry of Human Services, and Federal Bureau of Law Enforcement. Police defused additional devices at the Plaza Del Sol and Arc de Liberte in Metro Harbour. Early reports indicate the death toll from the combined attacks may stretch into the hundreds.

At the Department of National Security press conference, Under-Secretary Ronald Jacobson stated, "We are deeply grieved over this turn of events, and are redoubling our efforts to prevent tragedies such as these from ever occurring again. We are determined to bring the individuals responsible for these crimes to justice, and ask for the co-operation of all our citizens and allies in determining who is responsible for these heinous acts." Jacobson stated no group had claimed responsibility.

When asked what steps the government had taken to prevent these attacks, the Under-Secretary had no comment.

For the third time this year, a 48-hour air travel restriction is in place, excluding government, corporate and emergency services. All non-essential travel is discouraged, and checkpoints have been set up outside all major metropolitan areas. Dusk-to-dawn curfews are again present in all major east coast and south coast metropolitan areas, and police street patrols are in full force.

Privacy watchdogs are deeply


Daedalus?



First, be
chip is. This is a defi
and it doesn't pay to go fishing
Make sure the knife has been sterilised in alc
hol and boiling water. Make a small cut over the
top of the chip, but don't press too deep. It
shouldn't need to be any more than two inches
long.

Take a set of tweezers or needlenose pliers (something long,
slender, and designed to pick up small things) and grasp the
chip firmly. There will be a fair amount of blood. Try to use
gauze packs or clean towels to keep it out of the way. The chip
may have a silver pouch area. If so, don't squeeze it!!! It
holds psychotropic drugs, and squeezing it could kill the
patient. Find a different place to grip it.

enough blood out of the way, you may see silver
ing from the chip to other areas away from

Removing the Chip at Home

you ever feel like your feelings aren't your own?
t like you're living someone else's life?
you may be a victim of government control.
chips given by the government (really
controlled by the Secret Government, also known as
Daydalus) do more than just tell officials who you
are. The government can use these chips to track
your movement and control your thoughts, turning
you into a robot at their whim, creating a nation
of "Manchurian Candidates," serial killers, and sex
slaves! If you feel disconnected and powerless, as
though your emotions aren't your own, you may be a
victim. Take back your life!

Thanks to the efforts of the Secret Government and
its puppet figureheads at the DNS, it's almost
impossible to find a doctor who'll remove your
ID chip for you. The procedure can be done at home,
though, with a bit of effort on your part.

Don't Forget!!!! The SG Can Monitor your Vital Signs through the chip!!!

While you can remove a chip yourself, it's safer
to have a friend do it for you. That way you can
make sure you're unconscious when the chip is
removed, so that you don't trigger an alert. Monoxin
is an excellent anisthetic, though it can make you
feel really sick when you wake up. Don't take more
than two tablets, even at high body weights, unless
there is no effect after one hour. If one additional
tablet doesn't help, don't take another! Talk to
your local pharmacist about getting something to help
you sleep. Hypnosis can also regulate your vitals,
but be sure the hypnotist isn't a government spy.

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A20

Rise in Marriage Rate, Divorces Decline

Metro City (CCN) — Marriage is becoming more popular and divorces are down, according to a study by the Ministry of Health and Human Services. The Ministry today released the totals for the year 2[redacted] of everyone who has been approved for a marital license, as well as the number of licenses revoked through legal proceedings.

According to the report, weddings are up nearly 10% over the year before. That is a significant jump, indicating a steep rise in couples deciding to live together in an exclusive state-sanctioned relationship. The Ministry offered the president's Initiative for Happiness as a significant influencing factor.

At the same time, the number of divorces has decreased by roughly 5% from the previous year. A Ministry spokesperson was quoted as saying, "The marital relationship is the cornerstone of society, as the president has made clear. We are overjoyed by the response to his call for greater personal commitment in relationships, and hope it will continue."

Dr. Raoul Avarti, professor of sociology at Metro University, was at a loss to explain the numbers. "While the change is anomalous, there is no indication as yet that this will be statistically significant over the long term. Spikes happen every few years, and it's possible this is little more than that." Nevertheless, the Bureau of Statistics and Measures was excited, claiming the results show every indication of the start of a new trend.

• Neurological Chip Allows • Medical Breakthrough

By using nanofibres and a variant of the MEDIC (Medical Emergency Diagnosis Identification Chip) ID chip, doctors have been able to electrically stimulate the neurological systems of common lab rats to administer endorphins and stimulate the sensory cortex of the brain. The MEDIC is instead placed at the base of the skull. Nanofibres then penetrate the areas of the brain that control a particular function and either deliver the correct chemical dosage from its internal reservoir (refillable by prescription) or stimulate the body to produce the proper amounts of any given substance to correct any imbalances.

"The possibilities are extremely exciting. Using microdoses of chemicals and electronic stimulation, we are able to control the amount of endorphins or other hormones produced. These technologies have promise in controlling the production of natural dopamine, serotonin, and other naturally occurring chemicals that affect brain function," said Dr. Edwina Duchamps, director of research at Medicon, the company developing MEDIC. "We are awaiting federal approval for testing in humans, but we hope to have the chip available for widespread use as soon as five years from now."

Targeted Marketing Reaches New Heights

A mother of three walks into the supermarket. As soon as she grabs a shopping cart, the sensor on the handle reads her ID chip. Seconds later, the cart's viewscreen comes to life, addressing her by name and informing her of the latest sales on baby items, family-sized meals, and relaxation products. As a single 25-year-old woman walks down the mall, store ad screens change their advertising to feature items for her size, preferred colour, and body-type. A teenage boy walks into a game store. As he does, the cash register raises a flash screen with his ID, console type, past purchases, and related sales.

Magazines with specialised content that is personalised for your tastes. Ads that know how many times you've eaten out in the past month, or when you last purchased a car, or when your house is due to be paid off. At one time, this was all in the realm of science fiction. Not so any more.

Thanks to the Corporate Information Dispersal Act, any corporation can access the broadcast information from the federal ID chip and use that information to build their own targeted marketing base, allowing them to pinpoint trends in purchasing down to the individual. While the chip only includes basic identity data currently, new models are being tested that can be updated with up to ten times the current amount of data. Retailers and manufacturers are using the information already available to create their own data records listing past purchases, preferences, and likely future buying trends.

These hyper-accurate marketing campaigns allow the makers of goods to get chipped customers exactly what they want, when they want it. In addition, it allows them to access the customer's financial information, making purchases no more difficult than a swipe of the hand over a terminal to provide authorisation.

While less than twenty percent of the nation's citizens are chipped at this time, corporations are seeing an average increase of ten to twenty-five percent in sales for the chipped individuals in their databases: significant numbers. Enthusiasm for this technology in the business sector is growing by leaps and bounds, leading to a five-month backorder list for chip readers and related items. At least one company, Medicon, is going public next month with one of the most highly anticipated IPOs ever. Many tech analysts still consider the stock undervalued.

What do the customers have to say about this? "It's wonderful," said Regina Velasquez. One of the first to be chipped in her district, Ms. Velasquez has been receiving targeted advertisements for roughly six months. "Being notified of the neighbourhood sales just when I need an item has saved me roughly $50 a week in my grocery bills, not to mention savings on larger purchases."

Not all individuals are pleased about the prospects, of course. Privacy watchdogs are deeply concerned about this latest invasion of personal rights, but the general public seems to like the idea. Efforts at raising general awareness of the possible dangers has met with little success thus far, in no small part to the safeguards against identity theft built into the chips and the overwhelming corporate and governmental support of the project.

• ID CHIPS •
And Your Child

Information for Parents

Department of National Defence
Ministry of Health and Human Services
Safer. Smarter. People.

ID CHIPS ARE A SERIOUS MATTER

ID chips are tiny devices, much smaller than a grain of rice. They are injected just under the skin in less than a minute, and can't be seen after they are installed. They allow the authorities to identify you quickly and easily, saving the taxpayer's time and money.

• Over 800,000 children are reported missing each year, including both abductees and runaways.

Some are found and returned safely. Some are not.

Giving your child an ID chip allows authorities to find him or her quickly and easily.

The chip can be tracked by the police, cutting the time your child might be missing by as much as half. It includes his or her name, address, age, phone number, and any useful medical information in case emergency treatment is needed.

ID chips are harmless, and will not hurt your child in any way. They are hypoallergenic (do not trigger allergies) and can save your child's life in an emergency. In giving your child a chip, you help protect the nation against crime and terrorism and make the world a safer place.

ID chips give you child a head start on a productive life. They make acceptance at the college of your choice more likely, ensure eligibility for government grants for school, and circumvent most known learning disabilities and socialisation handicaps.

Children one year old and older are eligible for chip insertion. We urge early chip placement, to give your child protection as quickly as possible.

The Best Time to Vaccinate is Now.

Protect Yourself. Protect Your Loved Ones.

Get Your ID Chip!

For more information, ask your doctor or call the DNS Immunisation Hotline.

• FIRST HUMAN ID CHIP • IMPLANTED IN BOY

After receiving federal approval for use in humans, SSN Inc. has implanted the first scanable ID chip in Marcus Brown, a 12-year-old Metro City resident. Brown, a gifted studies student who has been building computers since his eighth birthday, had always fantasised about merging humans and computers. Both his Internet journal and stacks of notebooks at home are full of stories about androids and cybernetically enhanced humans, along with countless drawings of cybernetic creatures, or cyborgs. It was only natural for him to be interested in the ID chip announced by Spiral Shell Networks.

According to Marcus, he was waiting for a dentist appointment when he stumbled across the article describing the new ID chip. Following the appointment, he immediately looked up the information on the Internet. His mother recalls him running in from his bedroom waving a printout, saying, "I want one of these!"

"He knew immediately he wanted to be the first to receive one of these chips. It was all he could talk about for weeks. I didn't think anything of it at first, but then he was so adamant that I did some research on it. After becoming convinced of the benefit of the device and the low risk, I contacted SSN and told them about Marcus's wish. We met soon thereafter, and before long, Marcus was signed up. My husband and I will get them as well, to support our son."

The chip itself is roughly the size of a grain of rice. It is currently too large to be injected, but plans for miniaturisation are in progress. It emits a radio frequency to a distance of 40 metres, so nearby scanners can pick up any health or other identification information encoded on the chip. Right now, implanted chips cannot be modified. Designs are in the works for including GPS tracking as well as updateable memory.

F32

Crime Rate Drops

According to the Department of National Security, incidents of crime across the board have dropped among fully registered citizens. Violent crime has fallen by 50% from recorded levels five years ago, while non-violent crime has fallen 30%. Since being fitted with an ID chip became mandatory upon conviction of a crime, recidivism has dropped 75%.

Ms. Anne Black, of the Metro District Attorney's office, had this to say: "We're very happy with the decreasing rates. It lets us do a better job at finding the remaining non-chipped suspects, since the chipped ones are much easier to track and investigate. Add in that the new chips seem to help ex-convicts resist the urge to break the law again, and you have a recipe for a crime-free city."

• NEW ENVIRONMENTAL • BILL PASSES

The federal legislative houses have approved HB 1245, a piece of sweeping environmental legislation that will change the way the nation does business. While similar measures in the past were soundly defeated, a federal initiative to raise public awareness of this issue gathered momentum after the recent outbreak of fires and pollution-related deaths across the southern coast. House Labour Party Leader Marcus Brown (LP-New Metro) sponsored the bill, and HB 1245 was approved by a wide margin. 1245 encourages companies to cut their pollutants by 50% over five years. It offers incentives to those that meet or exceed their goals, as well as subsidising hybrid electric and hydrogen automobiles along with monorail or electric train systems. Alternative power sources are also subsidised, all along with a 5% tax increase across the board for taxpayers in order to fund the bill's measures.

The bill is now headed for the desk of the president. President Beauchamp has supported environmental legislation in the past, but he had been critical of 1245. He said that the bill made too many changes too quickly. Polls show that public opinion seems to be against him. Should he veto the bill, lawmakers have sworn to override him.

A4

President Beauchamp Resigns

President Johannes Beauchamp today stepped down from the position of leader of the federal government, citing ill health. Beauchamp was elected two years ago and only narrowly won the popular vote. His tenure had been a rocky one, and his decisions — derided as "obstructionist" by his critics — often seemed out of step with popular opinion. He was two years into his presidency when he resigned from office, a change that became effective today. Succeeding him will be Marcus Brown, the House Labour Party leader. Beauchamp resigned from the Labour Party as well, stating a wish to retire from politics altogether.

The oldest president in many years, Beauchamp celebrated his 75th birthday last November. Beauchamp remained unchipped throughout his political career — an unusual choice for a modern politician. He looks forward to retirement and public speaking, as well as spending more time with his dog, Scamp. He is a widower with no children.

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Mr. Joshua Danvers, isn't it time for a new car?



Hello there, we're the **Kellerman's Superior Auto Dealership** two streets down from your house, purveyors of fine environmentally safe vehicles that are in 100% compliance with the EPA's strict standards, out of concern for the health of you, your family, and your future grandchildren. We carry all major brands of automobiles approved for sale in the Metro City area, and we're happy to serve the community.

We know you know where we are, as our windows are just along your way to work at the Preston Insurance Agency. As you pass by daily, you've had myriad opportunities to witness the fine luxury and family vehicles we have for sale. Every day, your co-workers and hundreds of other customers come to us to fill their car-buying needs. Won't you let us help you as well?

Just this week, it came to our attention that you've finished paying off your prior vehicle, an Elega Mirage. While that undoubtedly served you well with one child, your seven-year-old son Misha, now that you have Pearl, who is three, and your new baby boy, the Mirage is undoubtedly too cramped for your current needs. We'd like to invite you in for a test drive of our latest model, the Caravan 350 XL. The Caravan has seating for six and is fully hydrogen fuelled for your convenience. It has flat-folding rear seats for those trips to the Warehouse Store or luggage for when you visit your mother in Springfield, and it has a 0.013% emissions record, making it legal to operate in both urban and rural areas.

Your raise at Preston Insurance is due in less than a month, and we've been in contact with them to ensure their willingness to support you in this matter. Ellen's birthday is coming up in a few weeks, and it would be wonderful to surprise her with a new car better suited to your busy lifestyles. This is an entry-level vehicle, available for only $35,000 — one of the lowest priced basic models currently available. Won't you come in for a test drive today?

Sincerely,
Your Neighbourhood **Kellerman's Superior Auto Dealer.**

The Maze and the Tower

For someone born into the world of Daedalus, life is an invisible labyrinth of sights, sounds, and feelings designed to keep him or her trapped neatly out of sight and mind of the government, happy, safe, and content — at the cost of personal privacy, independent thought, and free will.

For some, this world is perfect. The Earth is like a shining jewel, clean and well cared for. The seas are largely free of pollutants, disease and crime are almost non-existent, and unhappiness is fleeting. The nuclear family is on the rebound, religious tolerance and piety are both at levels unseen in previous history, the economy is healthy, almost everyone is happily employed, and all seems right with the world — most of the time, anyway.

For the huddled masses once yearning to breathe free, being able to breathe freely, without fear of poverty, pollution, or major health problems is worth almost any price. Their children are safe, well cared for, and educated, with chances of success in life at least equal to their own. By the time of "Daedalus," most of society is content, even happy, with their lot in life. Therefore, we begin a tour of Daedalus with the daily life of an average citizen, a content, happy individual who approves of his or her life and is proud of what the government has accomplished. For that person, no cost is too great if it ensures a safe, peaceful life for his or her family.

Life in the Maze

Daedalus created the Labyrinth for the Minotaur at the behest of King Minos, to hide the queen's monstrous bastard from sight and mind, as well as to protect the countryside from being terrorised by its brutish and violent acts. A strong parallel can be made for how things came to be in "Daedalus" as well, at least from the perspective of those in charge at the time. Still, the labyrinth of this bright new world is not the Labyrinth of myth. It is a kinder, gentler creation, with invisible walls created of comfort and concern, not cold unfeeling stone. Its residents have an undoubtedly more pleasant existence than the Minotaur could have claimed. It is boundless, with endless room to roam within its walls and a suite of luxuries to keep its inhabitants well contented. Some sacrifices have to be made to ensure things continue running smoothly but no utopia comes without cost.

A Day in the Life

Philippe Tsuobo wakes early on a Friday morning. The sun's light slips through the sheer white drapes of the room he shares with his wife and lays its long fingers across his bed. He yawns and rises from his bed. It is precisely 6:45, the same time he has awoken every workday since he was first offered employment. There is no clock in the room, but he doesn't need one. The chip takes care of that.

Philippe moves to the bathroom. A brisk shower in cool water serves to awaken all his senses, followed by a hot water shave, the brushing and flossing of teeth, and the orderly combing of his hair. The shower has no temperature controls for the water, the proper showering conventions have long since been established by the authorities. He then makes way for his wife, who enters the bathroom moments after Philippe finishes his ablutions. She does not work outside the home, but rises early to ensure that a nutritious breakfast is prepared for the children in plenty of time for school. She receives an extra 15 minutes of slumber at night to ensure that her morning routine does not interfere with her husband's.

In the closet, Philippe's clothes are organised neatly by type, style, and colour. His wife's clothes are similarly arranged on the other side. He places his towel in the hamper, puts on his undergarments, and then chooses his outfit for the day. This is a casual workplace day, so he chooses a pair of khaki trousers and a soft blue button-down shirt. His belt and shoes are made of imported synthetics that give an old-fashioned, comfortable leather-look to his outfit.

Once downstairs, he picks up the newssheet and passes it over the telescanner. Instantly, the flat LCD display reconfigures from a soothing grey-blue to the front screen of today's newsfeed. The coffee-soy blend is already brewed and flavoured to his specifications by the coffee dispenser, so he merely fills his cup and sits down at the table. Today's newsfeed is short, no more than a page and a half. It was normally two or three pages, but evidently his particular content choices were not widely available today. His company news was presented first, naturally, along with any federal news briefs or announcements. His investment news came next, followed up by parenting advice, sports, and entertainment news. News from his local parish was last, including updated meeting times for his men's study group.

Dear Joshua,

We were sorry to hear about your recent illness. We've sent over one of our representatives with casseroles for your family, of course, and good old chicken soup for you, along with our prayers. Just keep your faith, and you'll be feeling better in no time!

Once you're feeling better, we'd like to have one of our counsellors stop in for an afternoon chat. Brian D'Angelo is the counsellor for your block, and he's anxious to talk with you. We just want to make sure you're feeling well, that Ellen's happy with her new job, and that Misha and Pearl are settling well into 1st Grade and day-care respectively. Misha's teacher, Mrs. Triska, let us know that Misha is having a bit of trouble paying attention in class. We'd like to discuss attention modification strategies with you, as we think we can be of help in getting him more focused.

Of course, there's also your youngest son. I believe I remember his name as Stephen, though I don't have it on record yet officially. He'll be turning two soon. The optimal time for ID immunisation is at one, of course, so we're a bit surprised you haven't had him come in yet. We understand how time flies so quickly with so many little ones at home. We'd like to offer our help in getting him squared away. It would be unfortunate if such a promising child were to slip through the cracks.

Just let us know what time and day would be convenient for you, as soon as you feel better. Brian's looking forward to visiting with you.

Gretchen Zhao
Regional Administrator
Council for Christian Living

By the time he has finished the newsfeed, his wife, Jasmine, has arrived. She is neatly dressed, wearing her hair pulled back from her face in a high ponytail. She is wearing a cute, yet practical, pleated green plaid skirt and a slimming white sleeveless sweater, all of synthetic materials. She kisses him on the forehead, then begins assembling breakfast for the children. They all come down within the next half-hour, dressed and groomed with their school things assembled in their backpacks: 12-year-old Trevor, who attends a private engineering school, 10-year-old Persua, who is studying for her geography test later that morning, and 7-year-old Annette, who is singing to herself in flawless French. As each arrives, Jasmine prepares their plates and finishes adjusting the girls' hair. After eating, all three children walk to the bus stop, arriving precisely at 7:50 and boarding the bus five minutes later.

Philippe eats with the children, finishing when they do, then spends a few minutes discussing plans for the evening with his wife. By 8:00, he is walking out the door himself. Philippe and his wife live in a corporate housing edition roughly a 10-minute walk from his office. Employees who work for his company for five years or more become eligible to move into the complex. Rent there is deducted directly from the employee's salary, typically at a significant savings over outside housing of a similar type. Philippe and Jasmine live in a spacious, four-bedroom two-story home that reflects his status after 15 years as an efficient and loyal company manager. As Philippe walks to work, Jasmine takes a moment to look over her newsfeed for the day. She is notified of specials at two local stores for goods the household needs. She then proceeds with her housekeeping and volunteer activities for the rest of the day.

When Philippe arrives at his station, he takes his extra five minutes to settle in and take care of any remaining personal needs. Upon the beginning of his shift, he tours his portion of the facility and checks in with his subordinates, determining the status of their projects and personal lives. As their supervisor, he is responsible for their conduct both on and off the job, and thus is careful to note any potential problems and keep them from occurring as much as is possible. His reports are naturally shared with local authorities, which assimilate the information and change personal programming or additional interaction as needed to keep things going smoothly.

After work, Philippe goes out with his fellow managers for a company dinner, wherein they review the happenings of the week and determine the direction needed for their sections, the individuals under their supervision, and the company as a whole. The children attend various extra-curricular meetings after school: Trevor plays lacrosse, Persua has ballet, and Annette goes to football practice. Jasmine finishes up her afternoon shopping and returns home in time to fix supper for the children and herself.

Once supper is completed, the children study for an hour each, completing their homework, then begin getting ready for bed. Each chooses a form of quiet play, reading, or some form of artistic endeavour for the remaining hour before bed: Jasmine reads to the youngest girl, Trevor puts together a model monorail system, and Persua works on her embroidery. Philippe arrives home just before the children are put in bed and kisses them all good night, after which Jasmine and Philippe return to the living room to watch a little television (only two hours is allowed per set per day) and talk about the day's events. Enjoying each other's company, they decide to make an early night of it and retire to their bedroom for the evening. The lights turn out on their own, and another day ends.

A Perfect World

Within the "Daedalus" setting, the world is divided in to two unequal sides: citizens and those on the Outside. Citizens are what the vast majority start out as and remain for the rest of their lives. Their parents (or the state) make the decision for them when they are still little more than infants, and very few ever muster the will or desire to overturn that early edict. Their citizenship is set when the mandatory chip is implanted, and they proudly embrace it (with small, external nudges) for the rest of their days.

Citizenship

In this latter-day utopia, the key to living in this enlightened society is to take part in it by becoming a citizen of the realm. There are a few methods by which someone can become eligible for citizenship. The first and most common is to be born to other citizens. The second is to marry a citizen. The third to renounce whatever former allegiances were held and announce your intention to seek citizenship to your local authorities. The government is always happy to accept immigrants, so nation of birth is never an obstacle.

Citizenship, however, is a two-part proposition. While any of the initial methods will ensure your eligibility for citizenship, none of them will finalise the arrangement. In order to be declared a full citizen, the individual must consent to being "immunised," or being implanted with a fully functional ID chip. Consent is always required for the implant procedure when carried out as a part of citizenship regulations. Withholding consent results in a denial of citizenship, along with all the rights and privileges pertaining thereto. Regardless of other qualifications, no one without a chip is considered a citizen.

For those who are committed to becoming federal citizens, there is a series of procedures and paperwork that must be completed. If the prospective citizen is a minor, then the child's guardian can apply for citizenship on his or her behalf, including giving consent for immunisation. This is typically the case with

• Rights • and Privileges

Under federal law, all citizens have the following rights and privileges:

- The right to vote to help elect governmental leaders.
- The right to apply for public office or to nominate for election to the Legislature.
- The right to leave and re-enter the country without a visa or permit.
- The right to enlist in the federal armed forces or apply for government positions that require citizenship.
- The right to engage in free commerce.
- The right to due process.
- The right to pass on eligibility for citizenship to your children.
- The right to full access to the educational system.

In return, citizens are expected to perform the following duties:

- Defend the nation should it fall under attack.
- Obey federal and local laws.
- Pay all federally mandated taxes.

those born to federal citizens. For adults who either marry citizens or declare their wish to immigrate, the individual is taken to an immigration centre, where he or she will live for four months. During that period of quarantine (during which prospective citizens are restricted to the facility and attend classes on culture, citizenship, job skills and personal finances), the prospective citizen is immunised, sworn in, and allowed to make his or her way in the world unhindered.

Provisional Citizenship

There are some cases where a person's body rejects the implant (possibly suffering neurological damage as a result). The Federal State recognises these individuals as handicapped, and as a result should not be considered criminals; they are, instead, granted only provisional citizenship.

Provisional citizens still receive access to education and medical care, but have paperwork stating that the individual is medically unable to receive an implant. They are ineligible for public office, government work of any kind, or any special legal permits — owning a weapon or even a driver's license, for example.

Childhood

By the time a child is five, odds are that he or she has been implanted with an age appropriate version of an ID chip for four years. The federally recommended age for initial immunisation is one year old. Older children can be implanted, but all parents are encouraged to get their children chipped as soon as possible. The younger the child, the less likely they are to experience any trauma from the procedure. Older children often find it frightening, and can be less likely to accept the implant in the long term. Implanting a chip is an outpatient procedure, something that is typically done in an afternoon with the child under sedation.

Early-childhood chips come in sizes specifically built to coincide with the growth stages of a child. Current models come with tracking, transmission, and neural stimulation equipment. All minor citizens have access to a suite of programs designed to stimulate young minds and accelerate the learning curve. Emotion conditioning is also used separately to help children adjust to their worlds more effectively, with fewer outbursts or violent emotional scenes.

The average child in "Daedalus" is punished less than three times a year past the age of four. Corporal punishment is never used and is considered unthinkable. Tantrums are almost completely unknown, except in unchipped children.

The average child can read and/or speak a second language at an advanced level by age five, with math skills similarly advanced. Day care facilities are found nearly everywhere, typically provided by corporations for their employees or publicly funded. Health care is free for all children.

Most children live in a two-parent household. They usually begin attending day-care before the age of two, even though single-income families are becoming very prevalent. Most married couples have children, and those who do average two-to-three kids during their childbearing years. While there have been no official initiatives regarding population control, it is widely considered by experts that the government uses the chips to manage local and regional population levels by inducing or enhancing a desire for children among married couples.

Education

School begins formally at the age of four in a pre-kindergarten class. Primary school follows through from ages 5-11, covering the basic educational building blocks. Secondary school (forms one through five) is from age 11 to age 16 and covers more advanced subjects. At the end of secondary school, children are tested to determine their natural aptitudes. Those who are better suited for trades are transferred to technical or trade schools (or graduate from school at this point to begin a career) while those who are slated for higher education continue with their studies, typically at a sixth-form college or extended secondary school. There, students study for one or two years while applying to universities (assuming they wish to continue to a university) and complete their exams. Universities range anywhere from three to four-year courses of study, and provide advanced degrees with post-graduate study available for masters and doctoral degrees.

Very few children fail or are held back in "Daedalus." With the aid of the chip, most forms of learning disability are simply worked around. Emotional problems that might prevent success are monitored by authorities and treated with the help of neural stimulus therapy and emotional conditioning (either by stimulus or chemical assistance), freeing the child from any mental or emotional obstacles to success. The few cases of these handicaps that are seen occur in non-chipped children, who are often isolated from the other children as a means of controlling their outbursts and limiting distraction for the others.

Employment

In "Daedalus," corporate or government employment is predicated on passing credit and security checks — both of which require a functional chip. Small business jobs are available to unchipped individuals, but both pay and benefits of those positions are generally inferior to corporate work. High-paying blue-collar work is available, but has become more rare as unions push their members to become chipped as well.

For those with a chip, financial survival is rarely a concern. Upon graduation, an employable chipped individual is automatically entered into the national job database. Employers regularly list jobs in the database. When a position becomes available that suits an individual's preferences, the individual is offered the job and told where and when to report to work. An applicant can refuse to take a job, just as a company can refuse to hire the individual. Most positions are probationary for at least one month following the hire date. There are very few firings since the chip mitigates or eliminates punctuality and health issues, as well as depression or stress (the leading causes of poor job performance).

Individuals with serious health issues are not required to work, and are instead supported by the government and entitled to continuing health care with government-employed physicians. The expense for this program is paid for in flat sums by the corporations, who are absolved of the greater cost of most benefits in exchange.

Personal Relationships

Within "Daedalus" personal relationships are held sacred. The media fawns over them, society lauds them, and using them as an excuse will get you out of almost any situation. The reason for this is simple: people with close, positive personal relationships are happier, healthier, and live longer. Families are urged to spend time together and build close ties. Very few vacation spots still exist that do not cater to families with children, and most restaurants have children's menus or children's areas.

Single individuals are urged to find long-term, monogamous relationships. This message is apparent in the media, the entertainment industry, and in society as a whole. Many people marry before they reach their 20th birthday; someone who reaches 35 without being married at least once is unusual. If a single individual has problems finding a suitable mate, local religious authorities, corporate singles groups, secular dating clubs, federal databases, and traditional cultural matchmaking services are all available to help a person find love.

Society is often preoccupied with the idea of true love, and many people meet, date, and wed within only a few months, especially as they get older. Divorce rates are surprisingly low among chipped individuals, even after whirlwind courtships. Unchipped individuals remain single far longer than average and divorce rates among them are five times the national average.

Monogamous, heterosexual relationships under the auspices of marriage are the ideal; anything that deviates from that ideal is discouraged. Discrete extramarital affairs are tolerated, but one becoming public is considered a scandal and an affront to society. Careers have ended over public accusations of adultery, though such occurrences are rare. Homosexual relationships are also quietly tolerated, but only if the individuals involved are married to opposite-sex partners and have produced at least one child. Again, public revelation meets with stern disapproval and unpleasant social ramifications. Individuals who remain stubbornly single, patronise prostitutes, engage in public fetishist or anti-social behaviour, or who otherwise buck the conventionally accepted relationship template are likewise ostracised if their behaviour is noticed.

Divorce is still an accepted solution should the marriage not prove satisfactory to either the individuals concerned or to the government as a whole. Of course, what the individuals find acceptable is often determined by the signals sent to their chips.

Society looks on some reasons for divorce with more favour than others. Divorcing due to irreconcilable differences or adultery (unless causing scandal) is frowned upon. Under such circumstances, a couple is required to attend at least one year of therapy before a divorce can be granted. Favoured reasons for divorce, on the other hand, include the loss of citizenship by one member of the couple, criminal or anti-social behaviour, sterility, untreatable mental defect, suicide attempts, or abusive relationships. Divorcees are typically expected to remain single for up to 12 months before seeking a new relationship. Anything longer can result in the local social management groups taking an interest in the individual.

This form of social pressure is backed up by social management strategies on the part of the federal government. Individuals who do not conform to the societal healthy ideal are often persuaded to change their ways, using emotional conditioning, sensory stimulus chips or other forms of bio-meme controls (see page 314) to temper their actions and redirect their desires. Of course, many of these "deviant" individuals prove resistant to the programming. Many find ways to renounce their citizenship and leave society altogether, leaving the authorities (and the public) particularly suspicious of anyone who exhibits this type of "potentially criminal" tendency.

Those who cannot find work are typically forced to turn to illegal activities to support themselves and their families — assuming they still have a family to speak of once the dust settles. Many chipped spouses of unchipped individuals are subtly encouraged through bio-memes to end that relationship and form a more stable one with another citizen. "Refusal of citizenship" is considered valid legal grounds for divorce in federal courts.

Technology

The world of "Daedalus" looks and functions much like the modern world, with a few subtle differences. Most things are automated: doors, lights, appliances — in short, anything that used to require manually flipping a switch. Short range sensors pick up radio signals from any chips that come within a pre-set distance, ranging from 2 meters away for doors to .5 meters for appliances. Single function items, such as doors or lamps, execute whenever the sensor is tripped. Items with customisable settings, such as toasters or lamps, change their settings for the next use of the product. Some items have secondary triggers, such as requiring both a chip to change the settings and a pressure sensor (such as someone sitting in the chair) to be activated before the reacting to a given radio signal. Everything has sensors; items read the data from the chip and customise themselves appropriately to suit the preferences of the current user. Car seats accommodate the people who sit in them, televisions remember favourite shows, and showers remember preferred water temperature and strength of flow. Nearly everything is personalised and customisable, resulting in a comfortable, intimate world that caters to an individual's every whim.

The Mass Media (especially in the form of documentaries, advertisements, infomercials, and mass entertainment) are omnipresent. Television is tightly controlled, but movies, print and holographic ads, advertorials (marketing disguised as articles), and other subtly invasive techniques are used with great success in nearly every home and public retail space across the country. Books are rare, looked on as environmentally unfriendly and unreliable sources of information. Only government-approved books are allowed in local libraries or retail stores. Using the sensory stimulation programming available on most chips, simulated sensory input is a regular occurrence now with nearly every ad, game, show, or program. While this technology is still limited (it can conjure a sensation of heat, for example, but not a lover's kiss), the mere presence of it has opened new doors in education, work, and play.

Computers are everywhere. The Internet is accessible in nearly every urban location thanks to an open wireless network that is available to the public. The use of Internet resources revolves largely around graphic and text pages (the World Wide Web), though most pages are highly graphics and media intensive, can customise themselves automatically to the viewer, and are available to a wide variety of equipment (phones, PDAs, notebook computers, or even game consoles). There is no full-sensory "virtual reality" version of the Internet, and no direct neural sensory feed is available between computer and humans (at least not that the public is aware of).

Naturally, those who are chipped benefit most from these changes. Unchipped individuals are unable to take full advantage of many of these advances, leaving them reliant on tools or manually configuring items to get the same benefit, if such options are available at all.

On the medical front, neurology has made tremendous progress. Those few who question the government funded research surmise that far more has been learned about the brain and its functions than has been made public, but such voices of discontent are usually ignored. Advancement has also been made in cybernetic organ and limb replacement, granting many longer and healthier lives without falling back on genetics, a science viewed with suspicion by the government and heavily regulated. Cancer, asthma, and other diseases were shown to be products of the changing ecosphere and elevated pollution levels, and their incidence dropped dramatically after the first few years of environmental reform and reclamation were in place.

Environmentally conscious living is the rule of the day. Recycling is mandatory, as is the use of biodegradable plastics for food products and the total ban on non-biodegradable wrappers or packaging. Failure to recycle is a misdemeanour, and punishable by community service, fines, and even jail time for acts such as dumping old vehicles or appliances in wilderness areas and failure to correctly dispose of petroleum products or other hazardous chemicals. Most cars and other vehicles have been converted to electric or hydrogen fuel cells, and petroleum is only available by special permit for antique automobiles. The nation's highway system has been maintained, but is slowly deteriorating as more and more individuals turn to monorail or air transport for long journeys. Wind, solar cells, and hydrogen fuel cells provide the power for the majority of the cities, with environmentally sound hydroelectric plants providing much of the remainder. Nuclear fuel is also common, having been rendered clean by the discovery of a neutralisation process for waste material.

Within cities, cars are slowly being displaced by mass transit, and urban planning has long since returned to integrated neighbourhood zoning. Small stores and business districts are built in the centre of housing areas, creating dozens of insular small neighbourhoods, in an effort to fight the spread of suburbs and curb vehicle pollution and traffic.

Privacy

Citizens in "Daedalus" consider themselves to have a reasonable amount of privacy from both the government and one another. It is true, however, that most personal information is now public knowledge, and broadcast constantly by each individual for any nearby sensors to detect. Manufacturers and retailers know a citizen's credit rating, salary, and work record before they even send out an advertisement. Local cultural and religious groups keep an active eye on their members, checking up on school, work, and personal issues. Identity theft is widely considered impossible with the advent of the ID chip, so there is little to frighten citizens away from the benefits of constant information dissemination. Even vital signs and location are made available to official channels for use as necessary. This could create the impression that life as a citizen is much like being constantly held under a magnifying glass.

The reality of the situation is that few people merit focussed individual surveillance. Being physically in distress or causing a scene attracts attention and gets information reported to the authorities. Employers or educators can call attention to those under their supervision if necessary. Happy, well-adjusted individuals, however, rarely experience any overt societal or governmental intrusion into their lives. Their comings and goings are not recorded, activities in their homes are left unmonitored, and no one disturbs them, so long as they obey the laws and refrain from disturbing others.

Unchipped individuals naturally invite more overt surveillance, since they are untraceable by normal means. Authorities rarely disturb a non-chipped individual without "reason," but employers, neighbours, or co-workers may take a close interest in the person. Conventional wisdom indicates that unchipped individuals are less trustworthy, more prone to mental illness, given to violent rages, or otherwise unpleasantly unpredictable. It is only natural, then, that those who are placed in a close-contact situation with unchipped individuals would remain vigilant, if only for their own safety. There are some unchipped people who attempt to pass as chipped, but a quick sensor read easily detects them. Automated objects do not work for them and they have no physical chip port at the base of their skull. In addition, authorities ensure that key personnel in an individual's workplace or school are aware of that person's unchipped status; they may, in turn, inform others as need be to ensure public safety.

• Public Decency •

While private life allows for a number of options, the socially approved path is straight and narrow. Public lives must conform to that expectation, or else run the risk of disturbing the carefully maintained peace enjoyed by federal citizens. The individual good is always subordinate to the public good; one of the ways the authorities ensure this is with Public Decency statutes.

Public Decency statutes vary from region to region, but their basic function remains the same everywhere: If it is unhealthy, immoral, or might make someone complain, it's illegal. Common Public Decency violations include: playing loud music or music that is deemed "offensive," public displays of affection between same-sex couples or unmarried couples, suggestive clothing, extensive visible piercings, profanity in a public place, vandalism, graffiti, loitering, littering ... the list seems endless.

Violators of Public Decency statutes can receive anything from a fine and community service, to mental health counselling, to reprogramming, to prison sentences. The degree of punishment depends on the severity of the crime and the number of previous offences. Continually violating Public Decency statutes will result in having one's records tagged, possibly causing an offender to be passed over for promotion, new housing, certain jobs, or even result in a loss of pay or demotion at work, whether the offences occurred at work or not. GMs are encouraged to use this aspect of federal life to impress the darker side of Daedalus upon players as necessary.

Freedom and Control

Many unchipped individuals complain that chipped individuals lack free will. This is patently untrue. Chipped citizens, who point to the hundreds of choices they make each day dealing with their career, family, politics and personal lives, laugh off such complaints. The knowledge that they control their daily routines gives most citizens a feeling of freedom, and a lack of concern about the "insane" claims of a few malcontents.

In many ways, the government and local authorities do exert a significant amount of control over daily life. Through the job database, the government helps decide where a person may work and what he or she should pursue as a career. Through local and cultural authorities, individuals who have remained single for longer than society deems "healthy" are matched with likely prospective mates. From procreation to taxation, the government has ways of influencing individuals so that although the final choice is theirs, the options given to them were ultimately chosen by the state. Unchipped citizens, of course, claim that the state-sanctioned choice is no choice at all.

Emotional conditioning programs can also be activated to avoid (or attract) certain behaviours or stimuli, and are used openly to "assist" people who are recovering from addictions and to rehabilitate criminals. Senior officials or key operatives in sensitive government agencies like the DNS, or the Regional Patrols, are also implanted with emotion-conditioning chips — typically without the knowledge or consent of the individual. The use of such chips is categorically denied by those agencies on the rare occasions reports become public, and few outside of the highest level administrators know this for a fact. Oftentimes, those chips are directly controlled by Daedalus agents, marking one of the few occasions when Daedalus takes matters into its own hands. Most individuals never notice any such influence on their own decisions, leading them to believe that programmed controls do not exist.

Unchipped individuals, of course, have no fears that their choices are not their own. The factors that limit their lives are obvious and easily identified, the primary one is a lack of the rights and privileges of citizenship. Choice (or the lack thereof) has little to do with it.


POUNDS
NEWS



The Keys to the Labyrinth

In the end, the main differences between the haves and the have-nots, the privileged and the impoverished, boil down to one thing: the chip. In "Daedalus," the chips are the keys to get into the labyrinth — unlike the Labyrinth of legend, where the inhabitants wanted nothing more than to escape. The chips open the door to the unique benefits of the age, they keep the recipients of those benefits happy and well cared for, and they conveniently draw a line of demarcation between those who submit easily to external control and those who won't.

The chips themselves are a marvel of engineering. Taking the original RFID (Radio Frequency IDentification) technology as the basis for the first ID chips, the engineers created what was initially little more than a miniaturised transmitter with hardcoded information, enclosed in a plastic bubble roughly the size of a grain of rice. It was implanted under a person's skin in an unobtrusive area, sometimes the back of the hand, sometimes behind the ear, where it could transmit easily to receivers nearby.

As technology advanced, the chip changed to match the times. Today's chips use both biological and technological parts, including organic memory cells, bioelectric generators, nanotech filaments, micro-machine sensors, and advanced methods of biochemical stimulation and targeted pharmaceutical micro-dosage. The shape of the chip has changed to accommodate all the additional material needed to perform these functions, though it has not grown much beyond its original size. Most current chips vary between one and two centimetres in length and one-half to one centimetre in width, with a cylindrical, capsule shape. The size of the chip depends greatly on the components involved, as larger models typically include a pharmaceutical reservoir. The size and shape of older models may vary.

Modern chips are built with a two-part construction, with the lower half handling the physical connection to the brain and the upper half containing the "brain" of the chip itself, including medication reservoirs, transmitters, receivers, and memory circuits. The lower half is designed to be universal and work with any chip, so that the upper half can be exchanged, should the individual require a special chip or an update in technology become available.

Dealing with Chips

With everything coded to respond to each individual, signals can naturally get crossed. One likes dim lights, one likes bright, and both are in the same room at the same time. What happens? The answer lies in precedence.

In any home, the signal of each individual who lives there is rated by room in order of precedence. The father typically comes first, followed by the mother, then each child in order of birth. Family members are rated higher than guests are. When signals conflict, the appliance uses the data for the higher precedence signal.

In work areas, precedence is arranged by title. Most employees can only affect things like their chairs and workstation settings. Break room fixtures are often left without sensors, just to avoid signal interference. Only managers and janitorial crews are allowed to affect lighting, climate control, or other wide-scale systems. Security systems are typically only controlled by the signals from senior security staff, though managers are sometimes given manual override codes in case of emergencies.

All sensor systems have built-in over-rides that grant precedence to any police in the room. DNS members have precedence over everything.

Bio-memes

All the functions available to modern-day chips have paradoxically made them less independent. The chips cannot be left on their own and expected to function correctly. If an individual's dosage needs to change or he or she becomes resistant to the current pattern of emotional conditioning, federal and medical authorities must have a means of resetting and customising a chip's programming as needed.

To that end, the government developed small instruction sets, effectively burst transmission programs, which could be received and implemented by chips. Each chip is set with an individual instruction code, allowing it to be singled out from every other chip in the nation. That code must precede any given signal in order to let the chip know that it is receiving a new instruction set. There are also global override codes that allow programming to be spread en masse if necessary. What follows the code is a string of instructions and program code that administrate and co-ordinate chip functions. Each set of program alterations takes roughly five seconds to download (or 1 round).

Once downloaded, the changes are assimilated gradually. Simple changes can take place over the span of an hour. Wide-ranging changes or the introduction of a new technique will be slowly instituted over a course of days. New medications require an appointment with an approved physician, and also involve a weaning process so as not to damage the brain or nervous system of the recipient.

In order to function effectively, chip programmers have taken a biological model as their inspiration for the chip programs: the virus. These instruction updates attach themselves to the core programming and alter it subtly over a period of time. This "time-release" effect allows for individuals to accept the changes in a natural, graduated fashion rather than the all-or-nothing implementation that is typically used with programming.

While the proper name for these types of programs is ICOP, short for Identification Chip Operating Protocols, individuals who work with these programs often call them bio-memes: bio, of course, meaning life, and meme is a unit of intellectual or cultural information that can be transmitted from person to person, from the study of memetics in the early twenty-first century. When the concept of ICOP was first introduced in the media, the bio-meme nickname stuck in the public's mind. The entire branch of programming that has come from that development is called biomemetics, and is a burgeoning (if strictly controlled) field of study.

Bio-Meme Functions

Bio-memes perform various functions through the chips, giving rise to different subcategories based on intended effect. The categories are: emotional conditioning, sensory stimulus, pharmacology, memory enhancement, and subattentive tutelage. Additional program types, such as motor skill enhancements, co-ordination adjusters, sensory amplifiers, and pain blockers are reputedly being researched, but are not available to the public.

Emotional Conditioning

Emotional conditioning refers to the use of tiny electrical impulses to stimulate the emotive centres of the brain on command. This sort of programming is used with individuals who are chronically depressed or who have some other neurological malady. By stimulating the parts of the brain responsible for happiness and contentment on a regular basis, individuals can ignore the effects of their otherwise debilitating conditions. Studies have shown that such stimulus can actually "teach" the brain to "be happier" over time. These direct emotional stimuli can also be linked with a sensory trigger, enabling this type of therapy to be used to direct behaviour as well. Such programs are subtle where they are used. The target usually only notices the grip of emotion (good or bad) in the face of the stimulus. The actual decision of whether or not to act on that stimulus is still left to the individual. Typically, the emotional or sensory response will begin as a faint, almost unnoticeable feeling. It will then intensify with repeated exposure to the stimulus.

Sensory Stimulus

Sensory stimulus is another behavioural tool, which uses the sensory centres of the brain to access various types of input as a training mechanism. Pain and pleasure are both available, as are specific tastes, smells, colours, and types of touch sensations. This is used quite often with individuals who have suffered some form of neurological damage inhibiting their sensory input, as well as a training method for criminals who have a history of recidivism.

Pharmacology Programming

Pharmacology programming controls the location and dosage of any direct-application pharmaceuticals an individual may be taking via his or her chip. Because of the nature of the chip and the direct placement of the medication, concentrated micro-doses are all that are necessary. They can be administered via programming, allowing far greater precision over both amount and location than was possible before the advent of chip technology. Chips with pharmacology programming come with a reservoir, which holds a 30 day supply of the medicine in question. Refills are injected through a tiny port at the skin's surface, and are typically done during a normal, 15-minute visit to the physician's office.

Memory Enhancements

Memory enhancements use bioelectric stimulation to facilitate the retrieval and storage of memories. This is a typical bio-meme for individuals whose occupations demand an excellent memory; college and university students in particular request this bio-meme, along with doctors, politicians, and law enforcement officers. It can also be used to block particularly traumatic memories, should an individual have difficulty coping after serious trauma.

Subattentive Tutelage

Subattentive tutelage is an educational bio-meme that imparts knowledge directly to the individual's brain — hard coding it, as it were — without disturbing or distracting that individual from daily life. Tutelage bio-memes are subtle and long lasting in scope. It may take months for one to impart any significant body of knowledge, but once in place, the information can be recalled perfectly at any time. Roughly 40% of the individuals running a subattentive tutelage program report feeling more easily distracted, but most people cannot tell that the program is running, even over an extended period of time.

Bio-memes and Their Effects

Used creatively, bio-memes can provide a twist on the concepts of self-determination and free will, both of which are staples of classic cyberpunk literature. For many games, bio-memes will be a background element. Their effects will be story-based, not Stat-based, and primarily used to add a little colour and definition to an otherwise grey area of the setting. Other players may wish to use bio-memes more actively, allowing them to give Stat modifications to those who have such programming, either for good or for ill.

For GMs who wish to actively apply them, we urge you to remember that bio-memes are truly a double-edged sword. Used by the government on its agents, they can provide an extra edge, allowing those agents to overcome obstacles and outperform the competition. They also place the agent more firmly under control and can have unpleasant consequences if turned against the programmed individual. Used by the resistance on its volunteers, it can provide extra capability at a crucial moment. It might also create a blind spot, dulling an operative's natural instinct and creative abilities by distracting them.

In addition, bio-memes can be switched with very little notice, changing their effects in as little as an hour or as much as a few days. An individual who has a memory enhancement bio-meme running today, could instead have an emotional conditioning program tomorrow, a program that makes the character resistant to fear — or prone to anxiety over any given trigger, depending on who set up the new meme. Depending on the meme, changes can even be made over the course of a minute or less. The shorter the handoff time between bio-memes, however, the greater the likelihood that brain damage, mental illness, or neurological damage can occur.

There are various ways to handle bio-memes. One way is to include with the full chip (see page 341) the Power Flux (Bio-memes) Attribute, possibly with a Reduction of Fewer Flux Points Awarded. By setting the Power Flux at Level 1 (or even 0) with a maximum of 2-3 Flux Points, the GM can then purchase low Levels of positive Attributes for the character by assigning Defects (Owned, Phobia, Sensory Impairment, and Special Requirement are all very appropriate), up to the maximum allowable Flux Points. Alternatively, GMs could simply decide to add or take away minor chip-related Attributes and Defects as appropriate to the story, assuming the character does nothing within the story to take control of his or her chip and its programming.

Regardless of character's Stats, GMs are urged to be cautious not to let bio-mimetic programming become a substitute for a character's personality or freedom of choice. While it may provide impediments to (and in a paranoiac's horror tale, could completely prohibit any expression of) free will, no player will enjoy having his or her character's actions and thoughts dictated by the GM. The GM should explore this facet of the setting, but not to the exclusion of anyone's enjoyment of the game.

Rapid-Fire Bio-Memes

To determine the standard base time required to install a meme, look at the effect the meme is designed to produce. A subtle single-effect meme has a standard base time of 1 hour. A subtle multiple-effect meme takes a standard base time of 2 hours. A radical single-effect meme takes a day. A radical multiple-effect meme takes a week. Meme transfers that use the standard base time incur no penalty, and go unnoticed by the affected character. Meme transfers that use less than the standard time will be obvious to the person affected.

Time	Mind Stat Check Modifier
75% base time	-1
50% base time	-2
25% base time	-4
Less than 1/4 base time	-6
Instantaneous	-8

To see if a character take some form of damage or acquires a Defect from rapid meme exchange, make a Mind Stat Check using the modifiers from the table above.

Should the character fail the check, he or she takes some form of damage. This damage should relate to the new meme's function if possible. The GM and the player should work together to determine what effect the failed check will have. Recommended options include: taking a mental Defect (Achilles Heel, Blind Fury, Easily Distracted, Less Capable: Mind or Soul, Marked, Not So Tough, Phobia, Physical Impairment, Recurring Nightmares, Sensory Impairment, Unique Defect: Chip Rejection, or Vulnerability); inflicting Energy Point damage (if appropriate) or Health Point damage (if a character fails the roll by 2 or more); or temporarily or permanently removing a Point from one of the character's Stats (if a character fails the roll by a catastrophic margin; this latter option should be used sparingly, if at all).

Implantation

Implanting a chip is a relatively simple process. The age of recommended implantation is on or around an individual's first birthday, to avoid the trauma that older children often experience when undergoing the implant procedure. Once a child is fully aware of his or her surroundings the process becomes quite frightening, for they do not understand the changes and temporary side effects are ultimately for their benefit. It is difficult to explain the procedure to a child in a way that he or she will understand. Some feel it to be a gross violation of their bodies, especially if their guardians arrange for the procedure without consulting the child's wishes. For this reason, the state encourages implantation as early in life as possible.

The typical procedure involves a series of incisions in the back of the neck, up to and slightly above the hairline. The device is then seated in the incision, along with a surface "plug" that can be used to grant access to the device without necessitating further surgery. This plug is used to upgrade models in small children as they grow, and otherwise allows diagnostic check-ups on the machinery itself with a minimum of trouble. When the procedure is complete, the patient remains in the hospital overnight for observation. Barring complications (which only occur in 1 out of every 5,000 patients and typically have to do with the anaesthesia rather than the implant), the patient is sent home the next day.

Following an implant procedure, most patients complain of slight disorientation, headache, or dizziness. Young children experience this as well, of course, but studies show these symptoms pass quickly with no long-term effect. During this period, the surgical micromachines are creating the silicon/titanium pathways from the chip into the memory, sensory and emotive areas of the brain. These symptoms typically resolve themselves within two to three weeks, as soon as the pathways are completed.

Should a patient find these symptoms do not fade away, or if they are severe enough to cause significant problems, the patient is readmitted and tested for neurological incompatibility. 1-in-5 patients who experience continued side effects (something that happens to roughly 6 patients out of every 100,000) who are readmitted reject the implant, while the rest eventually accept the implant after receiving treatment or are fitted with an alternate, less intrusive model (see Chip Statistics, page 341). These statistics include those few who experience immediate non-anaesthesia-related complications following surgery. Those who reject the implant sometimes suffer neurological damage as a result and are granted only provisional citizenship.

The Guards in the Tower

In "Daedalus," someone is always watching. The chips constantly report intimate details of your life to government centres staffed by anonymous individuals. Powerful computer systems monitor all the information they collect on every citizen. That information is sifted, weighed, and analysed, then reported to shadowy figureheads for dissemination to local authorities. The authorities follow up, noting suspicious activity and determining the cause and appropriate resolutions — either through creative reprogramming, sudden absences for re-education or medical treatment, or criminal proceedings where necessary.

Naturally, most people are oblivious to this, because they follow the rules and never give the authorities cause to act. There are many that go their whole lives without ever realising the controls that run their lives. There are some who brush up against that knowledge once and shy away, like spooked horses running from their own shadows. There are even some who live with that knowledge without ever once being concerned about it, grateful for the protection it offers and secure in the belief that it will be ever benevolent.

There are three main groups who watch over ("guard") the citizens within this invisible labyrinth. The first are the economic institutions: retailers, manufacturers, and employers. They keep watch over the economy and every citizen's contribution thereto. Second are the religious institutions, which keep a close eye on the moral and spiritual well being of both individuals and the nation as a whole. Third, of course, is the government. Whether local, regional, or federal, the nation's protectors are ever vigilant against threats both foreign and domestic, as well as being concerned with the happiness and contentment of individual citizens.

Economic Institutions

The grocery store that ships your weekly items to you without fail. The electronics shop where you always buy your CDs. The office you spend eight or more hours a day in and the boss who checks up on you without fail, every day. Every one of these entities knows who you are: they know your name, your address, your favourite brands, your tastes in entertainment, your work habits, and your level of participation in the economy as a good citizen and consumer.

The economic sector specialises in observing patterns of behaviour, both long-term and short-term. They've based an entire way of life on knowing what you will need before you yourself know you're going to need it. Should a consumer's patterns of behaviour change, they bank on staying on top of it.

Once business was given access to consumer chip transmissions, an entire industry sprang up overnight to track chipped people and their financial data, including saving, spending, and investments. Data reception centres sprang up across the nation to collect, collate, and track personal trends in purchasing for individuals.

With every verified purchase by a chipped individual, the information from that sale is transferred to a data reception centre, that then sends weekly updates on all of the companies' customers (including overall sales and forecast data) to the analysts employed by that firm. That same data is sent to manufacturers and local organisations with an interest in economic growth, such as a town's chamber of commerce. Data reception centres also place unobtrusive scanners in public areas to track patterns in foot traffic and determine how many visitors a store has, not just how many purchases. Individuals who shopped but did not buy are often sent customer satisfaction surveys that try to determine what the underlying factor was in their failure to purchase anything.

Naturally, part of keeping a secure, financially stable business is taking care of one's customer base. To that end, sudden significant reductions in purchasing amounts or styles can lead to a flagged account, which is forwarded to government and law enforcement authorities as suspicious behaviour. Such wild fluctuations often indicate mental health issues, identity theft (rarely, but occasionally true), addiction, or criminal tendencies.

While that collected information is used to judge long-term patterns and predict future trends and behaviour; the information an employer keeps is used to observe short-term patterns. Historically, employers were only interested in an employee's life to the extent that it affected (or enhanced) productivity in the workplace. While that still holds true, the free availability of personal information has made it clear to most companies that workplace efficiency can be optimised by taking a strong interest in the lives and habits of their employees, both on and off the worksite.

Current corporate structure has one supervisor for every 10-15 workers. Those units of workers all have a similar job (or perform different jobs dealing with the same subject, such as a group consisting of computer network support, tier 1 and 2 technicians, lead technicians, and network engineers). Supervisors are expected to take an active interest in the lives of their subordinates and keep abreast of new developments. They study work trends and determine the best ways to

improve efficiency while keeping morale high. Should one of their workers slip, they are to determine the reason for the performance degradation, whether for personal, medical, or technical reasons. They help seek the best solution for those problems, informing authorities if the reason is sufficiently serious or remains unknown after an initial inquiry.

Religious and Secular Institutions

Roughly 75% of the nation's citizens believe in some form of higher power. They gather in places of worship to give praise, thanks, and learn. Congregations are encouraged to gather together outside of church as well, socialising with and supporting one another to create a sense of community. For each religion licensed to practice within the nation, there is a board created from national congregation with the goal of building a community of worshippers. This national board then co-ordinates the efforts of regional chapters. Within those, local committees are formed who are responsible for organising events, retreats, social gatherings, and fund raising for their community of worshippers. In addition, the committees provide personal, spiritual and even limited financial support to its members in time of need.

Every committee finds volunteers among the community to serve in its "outreach" programs, and assigns them to become acquainted with their neighbours. The volunteers become familiar with a given subject's background and current situation, interviewing the subject's supervisors or instructors to get a general idea of the individual's habits and needs. They then meet with the subject's family and get to know them, offering support or counselling when problems arise and enjoying their successes when times are good. Should they discover anything suspicious, the committee is authorised to inform authorities of any possible involvement in illegal or dangerous activities.

For those who are not religiously active, other committees are always available. Non-faith based examples include agnostic, cultural, professional, or interest-related groups. While many of these are typically smaller than the religious chapters, this allows them an even more intimate relationship with their members. They function similarly to the faith-based groups in terms of offering support and watching for suspicious activity. Over 97% of citizens are members of some organisation at any given time, though members may shift between specific groups. Membership in something is highly encouraged by society as a whole, and there is a great stigma involved with being socially withdrawn. Individuals may be part of multiple organisations, but primarily devote themselves to only one or two. Officially licensed group activities are noted in the subject's files, and are not investigated by any other organisation to which the individual may belong.

Faiths or groups without licenses may not form chapters or congregate in any way. Participating in an unlicensed faith or secular organisation is illegal and subject to a loss of citizenship along with any other punishments deemed appropriate.

Getting a group licensed is a simple, though lengthy process. To keep malcontents and those who wish to merely shirk their social responsibility at bay, the DNS relies on a tried but true method: extensive paperwork. The process takes between three and six months to complete, as well as yearly re-applications to maintain one's license. First, the prospective group must submit an in-depth plan for the group and any necessary credentials from a parent organisation. Should the prospective organisers cross that hurdle, each member of the initial board must then pass a background and security check.

Government

The last group of watchers comprises local, regional, and federal authorities, all constantly on guard to assist the populace with their problems and protect the nation from domestic and foreign terrorist threats. While the authorities are recognised as the first line of defence against terror, very few average citizens realise just how many resources are devoted to this effort.

At the top of the chain is the Department of National Security, or DNS. This federal agency is charged with the safekeeping of the nation and its citizenry, and has the budget and means to effectively carry out that mission. More than one domestic department has been subsumed into the DNS since its creation, not the least of which was the Federal Investigative Branch — the department formerly in charge of enforcing federal laws. The National Ministry of Medicine was also folded into the auspices of the DNS, giving them authority over public health care, R&D, and statistical tracking of health-related issues.

The DNS believes wholeheartedly in intelligence over action. While they do have field agents, they rarely act until local or regional authorities have investigated leads and taken steps to resolve the situation. The exceptions to that rule are cases of terrorism or national security issues — a blanket that covers all resistance efforts, naturally. Instead, they act as a repository for information.

The average DNS office is a maze of cubicles, data screens, and network cables. Up to a hundred employees staff nearly every regional office. They go over leads from local authorities, requesting information from employers, merchants, or religious organisations, and otherwise interpreting data on cases that have been flagged by lesser authorities. Satellite feeds come in constantly, updating data for subjects in their territory. The DNS officers have full access to all chip-transmitted and video satellite data from the region; it takes very little to pinpoint someone and watch them 24 hours a day.

From there, senior agents take the information collated and summarised by the analysts and make a decision as to what form of response should be taken. If there is deemed to be sufficient evidence to warrant action, the senior staff then issues instructions to the local authorities to arrest, capture, or observe the individual. If there is not sufficient evidence for alarm, then they either instruct an analyst to keep recording the individual's data or cross them off the list entirely as a false alarm, with comments forwarded to the local and regional authorities as well. In extreme or highly sensitive cases, the DNS will send in its own agents to apprehend or eliminate the threat, circumventing the inquisitive nature of the local criminal justice system.

Regional Patrols

Beneath the DNS are the regional authorities, the Regional Patrols, or RPs. While laws are uniformly applied across the nation, local authorities can vary widely in quality and ability. In addition, rural areas rarely have the same level of resources to apply to law enforcement as their urban counterparts. Regional authorities deal with individuals or crimes that fall outside the capabilities of local authorities. The Regional Patrols are primarily responsible for policing the nation's rural areas, though they can exercise jurisdiction over local urban authorities when necessary.

The regional authorities are divided into five separate offices: Central Regional Patrol, Northern Regional Patrol, Eastern Regional Patrol, Southern Regional Patrol, and Western Regional Patrol, each with jurisdiction over a roughly equal-sized part of the nation's territory. They are subject to the mandates and rulings of the DNS, but otherwise set the tone for the local authorities under their control. The DNS may commandeer all local investigations that may be connected to terrorism, threaten national security, or reveal a crime that crosses regional borders. DNS often uses the Patrols for assignments that require immediate response, especially when keeping an individual out of the hands of the local authorities is prudent but there is no need or desire to simply eliminate the criminal out of hand. Regional Patrols are also in charge of the nation's penal institutions and rehabilitation centres.

• Ministries • and Departments

While no government organisation is simple and straightforward, the tangle of departments, ministries, bureaux, and commissions under Daedalus is positively Byzantine – and that's the way they like it. To help GMs make optimum use of the government, however, the following list of major and minor government organisations has been provided.

Department of National Security (DNS)

A large, umbrella organisation that has jurisdiction (and many times, complete control) over any aspect of federal control that relates to "national security." Its mandate is to protect the federal government and keep the nation safe from threats both internal and external.

Department of Taxation (DoT)

A government organisation whose mission is to write, and implement tax code to provide continued government income, and to collect due taxes from the citizens and non-citizens of the nation. There are regional versions of this organisation as well, devoted to setting and collecting regional taxes.

Ministry of Medicine (MIM)

One of a number of departments overseen by the DNS, the Ministry of Medicine is in charge of overseeing health care within the nation's borders. It is in charge of research (specifically related to chip functionality and mental health), public health initiatives, immunisations (both medicinal and chip), national insurance, and overseeing medical facilities. There are regional divisions of the MIM that handle regional issues.

Department of the Environment (DoE)

This department oversees the food supply for the nation, helping manage rural areas and setting standards for food service. The DoE is also responsible for setting and enforcing environmental edicts.

• Ministries • and Departments

Bureau of Foreign Intelligence (Foreign Bureau)

This department, under the supervision of the Department of National Security, is responsible for all foreign and diplomatic relations. It is also responsible for gathering intelligence about both allies and enemies abroad, though such efforts are typically contracted to DNS operatives.

Bureau of Domestic Intelligence (Domestic Bureau)

This organisation was subsumed into DNS some years prior, and now exists as an independent entity only on its own letterhead and in certain formal documents. The Domestic Bureau's mandate is to investigate and prosecute federal crimes, such as treason and conspiracy, as well as crimes that cross regional borders.

Ministry of Law (MoL)

The Ministry of Law sets precedent and functions as the judicial branch of government. Several attempts to reclassify it as a subordinate to the Department of National Security have not passed the legislative process. The Ministry has had its powers for reversing previous cases severely curtailed.

Ministry of Citizen Welfare (MCW)

The Ministry of Citizen Welfare is a division of DNS covering governmental financial assistance for the needy, programs designed to assist provisional citizens, the citizenship process, and child and welfare services for the general populace.

Ministry of Corporate Oversight (MCO)

This commission is appointed by the DNS to oversee corporate activities within the nation, including environmental compliance, monopolies, unfair business practices, use of unauthorised technologies, and other corporate issues. All mergers or sales of publicly held companies must be authorised by the MCO before they can take place.

Local Law Enforcement

Below the Regional Patrols are the local law enforcement, or police (the resistance often terms them "doggies," a pejorative term indicating how the RPs keep them leashed). While rural forces tend to act as little more than lackeys for the Regional Patrols, urban police are capable of dealing with a wide variety of threats on their own. All police handle initial local investigations and arrests. Most of their time is spent investigating potential terrorists and criminals before disaster strikes and passing on evidence to the regional DNS office for evaluation. Police work closely with corporate and religious interests to ensure that suspicious behaviour is recorded, investigated, and accounted for. They are also responsible for the trial and sentencing of suspects (see Laws of the Realm, page 331, for more information on the criminal justice system).

The Federal State

In the Federal State, there are no counties, provinces, parishes, or sub-states. There are administrative areas (also law-enforcement jurisdictions) called Regional Patrols. They aren't publicised, and have no specific flag or cultural identity (something Daedalus is very careful to prevent). Few people know much about the Regional Patrols. This has a great deal to do with their broad focus: the Patrols are responsible for supervision of the urban local authorities, patrolling rural areas, handling inter-urban criminals or especially dangerous threats, and penal and criminal rehabilitation programs. They are extremely powerful organisations, and are granted a great deal of latitude by DNS in the pursuance of their duties.

Each Regional Patrol has a labyrinthine structure of power, given the many goals and departments under their umbrella. It always comes down to one individual, however — the Regional Patrol commander. This individual is the head of the entire RP and answers directly to the Under-Secretary of the DNS. The commander sets the tone for the entire region during his or her tenure — a lifetime appointment.

Federal State

The area governed by Daedalus is called the Federal State. It has a high population that is concentrated in urban areas, unspoiled wilderness, and authorities that believe heavily in micromanagement. It is designed to be anywhere and nowhere, to take its cues from the real world but then somehow suddenly diverge from it. Some areas of the geography are completely fictional. Others greatly resemble their real-life inspirations. For GMs, this has been done to give a fictional setting a touch of familiarity while keeping players from feeling altogether at home in this brave new world.

• Officers on Patrol •

There are two common types of DNS patrols. The first is a standard investigative team, composed mostly of investigators, suits, and wingers. This group dresses in plainclothes, uses surveillance equipment, and is lightly armed. They are skilled in physical subdual techniques, and apply deadly force only as a last resort. They are allowed to carry personal sidearms. They wear no armour as a regular rule, though dangerous assignments might see them put on soft body armour. They use modified civilian vehicles in order to blend in.

The second type of patrol is the tactical team. These individuals (primarily dukes, techs, and wingers), use wearable coms/tactical headsets, flex armour or tactical armour, and can be deployed with either riot control gear (tasers, rubber or wooden bullets, incapacitating chemical weapons, etc.) or with conventional weaponry (assault rifles, submachine guns, PDWs, heavy pistols). They are trained in physical subdual and defence methods, used to apprehend and eliminate threats as necessary. They sometimes use chipped, behaviourally modified animals such as chipped dogs, both to track and to apprehend terrorists. When in rural operations, they are often given active optical camouflage to help them on missions where stealth is important. Tactical teams use military grade vehicles, including modified utility helicopters, APCs, or modified, armoured SUVs.

Central Regional Patrol

The Central Region is home to a single huge metro area, called Sun City. This metroplex is surrounded by wilderness, connected only by dilapidated highways, five monorail lines, and an international airport. In the lands surrounding Sun City, there are still a handful of small cities (10,000 to 50,000 in size) and a scattering of little towns lost in the wilderness. The land is primarily plains, with scattered forested areas and a few old mountain chains riddled with caverns.

Commander Denise Stelyer

The Commander of the Central Region is Denise Stelyer, a 54-year-old veteran of the Patrols who began as a rookie and worked her way up, with a spotless record and a steely dedication to duty. Stelyer takes a hard line toward terrorism, and is rumoured to personally oversee the executions of convicted terrorists. The rehabilitation clinics in the Central Region have declined under her tenure, and she has gone on record stating that she doesn't believe rehabilitation is effective. Patrols here spend extra time in the field surveying likely cell sites, as per her direct orders.

Northern Regional Patrol

Unlike most of the other regions, the Northern Region is home to three major metropolitan areas: New Metro, Old Town and Metro City. Between the three of them, as well as smaller cities in-between, over 60% of the land area in the Northern Region is urban. What land there is consists of rolling hills, forests, and coastline. There are very few small towns left in the rural areas that remain.

Commander Jean Foucault

The Commander of the Northern Region is Jean Foucault, formerly the assistant to the under-secretary of the DNS. He was appointed to this position following a decade of service in the DNS and a significant amount of time in political office prior to that. Foucault's focus is primarily on the urban areas, and he has trained the men and women under his command to specialise in joint investigations, undercover field operations, and both subtle and direct interrogation methods. He is also a great believer in diplomacy as a means of doing business, and that focus has trickled down to most of the officers under his command.

Eastern Regional Patrol

The Eastern Region is even more divided than most of the regions are, for in addition to urban and rural areas, it also has a significant mountain range bisecting it from north to south. The few roads through the passes have been maintained, but the journey is always difficult in winter. It is considered an ideal hiding place by many for terrorist cells, many of who are willing to accommodate some danger or discomfort if it allows them to reach their goals. Work proceeds on a tunnel through the mountains for a new train line, but sabotage and other unforeseen delays have slowed it. There is a single long metropolitan area that stretches the length of the western side of the range, called Liberty City. It is no more than twenty miles wide at its widest point, but is still the largest city in the nation in area.

Commander Renaldo Martinez

The Commander of the Eastern Region is Renaldo Martinez. Martinez was a member of the army's Special Forces for twenty years, achieving the rank of colonel. Upon retiring from fieldwork, he was appointed to the position and has held it for a decade. Because of the unforgiving terrain that comprises much of the Eastern Region, Martinez has officers trained to handle mountaineering, rappelling, and wilderness survival, even to the extent of developing an elite cadre capable of air assault and other extreme methods.

Southern Regional Patrol

The Southern Region is home to the longest continuous coastal region in the nation. While the interior is home to gentle, rolling plains and light woods, the coastline is a morass of swampland, wetlands, peninsulas, inlets, deltas, small island chains, bays, sandbars, and reefs. It is also home to Green River, one of the largest rivers in the nation.

The Southern Region has a number of smaller urban areas. While none have more than 500,000 inhabitants, there are at least six such cities throughout the region: Hope City, Gulf Shores, Cooperton, Woodsville, Birnam Wood, and Springfield. The southern area is also home to more remaining small towns than any other region. While the initiative to renew the land was pushed here as much as anywhere else, much of the acreage had been used for ranching instead of farming in the first place, leaving the land still in its natural state. The land itself was inhospitable enough that settlements were few, but the ones in more remote areas were already so accustomed to self-sufficiency that there was little left to entice them to the cities.

Commander Marie Molneaux

The Commander of the Southern Region is Marie Molneaux. Marie was a survivor of the Woodsville Bombing, one of the last major terrorist attacks on federal soil. The attack robbed her of her sight in one eye and the use of her right arm, but it gave her in return the dedication of a zealot. She entered politics with a righteous fury that cowed her opponents and earned her the respect of even her detractors. Despite a lack of formal experience on the front lines, her knowledge and deep personal conviction earned her the spot as the Southern commander. That same fervour has rubbed off on her subordinates, leading to a rise in the number of arrests, as well as injuries and deaths of suspects from the use of excessive force.

Western Regional Patrol

The Western Region is the most hospitable, climate-wise, of any federal region. It does not suffer the level of seasonal change the others exhibit, but rather maintains a pleasant 16-27 °C year-round. This is largely due to the Western coastline and the mountain range at its eastern border. The management of natural resources is cutting edge here, and wilderness sports such as hiking, skiing, surfing, parasailing, hangliding, and rock climbing are year-round favourites. This region has one very large metro area, Angel City. There are two or three smaller cities as well, scattered across the coast and interior of the region.

Commander Chon Wang

The Commander of the Western Region is Chon Wang, former Director of Research at the DNS. Chon is a big believer in the ability to rehabilitate both regular criminals and terrorists, and so has pushed extra funding into the rehabilitation centres during his tenure. It is widely reported that he is continuing his researches on effective rehabilitation and re-education treatments in the Western Region's centres, gaining important new insight into the workings of the human mind as he does so.

Outside the Labyrinth Walls

Within national borders, the chip is considered to be all the identification you need: no passports, no licenses, no identity card, and no wallet. It's all on the chip. Foreign nationals who visit these shores must carry paperwork at all times and are restricted as to length of visit (see IDs, page 331). There are no work permits allowed, only immigration — and the Ministry of Citizen Welfare welcomes everyone, so long as they wish to become a citizen and agree to have a chip installed. Provisional citizenship is not allowed for immigrants except for medical reasons; dual citizenship is also not an option.

Still, there is a world beyond the nation's borders. The Labyrinth was designed to keep the Minotaur and his victims in, not to let them wander. The invisible labyrinth was designed similarly, despite its lack of physical walls. Because the national maze has no set boundary, there are ways of making it travel with its inhabitants wherever they go. There are also ways of escaping it, once you roam far enough from the source.

Local and International Travel

In "Daedalus," the best things the world has to offer typically are found right at your own front door. Urban areas are large and well managed, with arts and sports receiving a large portion of both funds and attention from the local community. Pollution is rare and non-obtrusive; city planners have taken great pains to make the natural beauty of each area accessible and obvious to the city's residents.

Large landscaped parks are common. Concerts, plays, and lectures occur nightly. Sporting events take up much of the weekend, and are televised throughout the region for the benefit of those who cannot attend. In short, everything one could possibly wish to do or see is made as accessible as possible. Very few places within the nation can offer more variety in one metro location than another, a feature of urban living that is quite intentional. Federal authorities discourage moving from one city to another, so they exert their influence to make sure there is little reason to relocate.

Despite that, there are always reasons for people to travel. Business trips, vacations, family gatherings, and a host of other reasons can call people from one part of the country to another. With this in mind, travel in Daedalus is not restricted — at least for citizens.

Travel between urban areas is typically handled by mass transit. High-speed maglev trains are a popular choice, as are planes due to their high safety ratings. Cars are rarely used outside of an urban setting, as the highway system became a low priority decades ago. What remains of the highway system is in poor repair, and most commerce along old thoroughfares (including refuelling stations) has closed down, making long trips often out of the question entirely.

Citizens who wish to travel across regional zones will encounter checkpoints set up at airports and train stations. Similar checkpoints are also set up on highways for particularly busy crossings. These checkpoints consist of an array of chip sensor stations manned by human analysts and armed guards. People with valid chips pass by without pause, as their information is read automatically during their approach. Should there be a problem with someone's information, he or she is stopped while the issue is cleared up. Those without chips must stop and present all citizenship or identification papers. They are often searched physically, and their luggage is always pulled aside and searched as well. Their vehicle is also subject to a search, as are all other non-chipped individuals inside.

Those wishing to travel to other nations must clear border checkpoints. For those entering or leaving the country, the chips ensure that these security points are as delay-free as possible. Non-citizens and provisional citizens are prohibited from leaving the country unless they have papers that prove citizenship elsewhere. The Federal State refuses to allow non-citizens to act as refugees in other nations, damaging international relations, enacting smear campaigns, and planning terrorist attacks from abroad. Even when foreign citizenship can be shown, the process can take days to complete and verify before they are allowed to travel. Travel to allied or neutral countries is allowed; travel to enemy nations is forbidden.

Other Nations

For the federal citizen who wishes to travel abroad, the choice of destination boils down to three basic possibilities: allied nations, neutral nations, and enemy nations. These distinctions are made by the federal government based on its opinion toward those nations, not necessarily on the foreign country's attitudes.

It is easy to tell what category each country falls under by paying attention to the media.

Allied Nations

Allied nations are defined as those over whom the federal government can exert some amount of control and who either use (or support and allow the federal use of) ID chips. Federal citizens with ID chips can be tracked easily even while in these countries, and federal agents are allowed to take action regarding those citizens when necessary. Extradition is available. Chip sensors provide much of the same functionality that citizens are used to at home. Commerce is conducted via electronic transfer as it is here, and chip scans are considered valid authorisation for payment. These countries are shown on travel media channels, talked up on the news, and considered prime vacation spots.

Neutral Nations

Neutral nations are countries who act without consideration of federal desires and refuse to support the federal ID structure. They do not use ID chips with their citizens, and most chip functionality is not supported in these nations. Commerce is conducted via debit card or with hard currency, and visitors must exchange their dollars for the local currency upon arrival. Chipped individuals are not restricted, and chip functionality is available in some areas. These nations typically allow the federal government to track its citizens while they are within neutral borders, but do not allow the official presence of federal agents in their sovereign territories (though they will allow their own law enforcement agents to act on requests of the federal government). Extradition is available. Neutral nations receive very little press and are rarely spoken of in glowing terms. Individuals are not restricted from travelling there, but transportation is always expensive and there are no discount tickets or advertised vacations. The lack of chip functionality makes many federal citizens nervous and disoriented and reverting to using local hard currency is a distinct hardship for those who have never dealt with physical forms of money before.

Enemy Nations

Enemy nations are countries where the use of ID chips is disallowed and actively spoken against. Many of these nations feel the use of such chips is a major human rights abuse, and thus have no chip functionality available whatsoever. Federal agents are barred from the nation in any official capacity, and requests from the federal government to act against its citizens while in that nation are summarily rejected. No extradition treaties are in place, and these nations forbid the federal government from tracking federal citizens within its borders.

No direct air, sea, or land travel is available to enemy nations. The government does not allow the domestic consulates of these nations to offer visas or travel permits to any federal citizen. The media regularly focuses on stories of violence, intolerance, or incompetence from these nations, feeding their negative

GM Advice

To preserve the literary feel of the setting, we encourage GMs to remain vague as to what hostilities actually are ongoing at any given time. Terrorist strikes should remain mysterious in origin, never fully explained by federal sources. Enemy nations should likewise be portrayed as mysterious and exotic, full of barbaric people who act in inexplicable ways. They may be completely manufactured by the government or all too real; wars may be automated affairs with secret strike teams, or bloody manned offensives that take place somewhere across the ocean's waves.

• Terrorism in Daedalus •

To listen to federal reports, terrorism is a constant threat to the daily life of every federal citizen, and only constant vigilance prevents further outbreaks. Foreign nations who are not allies are enemies in the eyes of the federal government, regardless of their official public status. The world is very black and white according to this worldview, and those in charge of the government like it that way. The real world, however, is rarely so uncomplicated.

Life under federal rule is secure and quiet. Any wars that happen are necessarily far away in remote locations. The nation is wealthy, prosperous, and beautiful, and the peace is rarely ever disturbed. At the same time, the government encourages its citizens to be very protective of the benefits they have, to a xenophobic degree. The media are encouraged to demonise the nation's enemies, providing the average citizen with a skewed view of world politics at best. While unbiased information is available, it is blocked from most major media and so is only truly accessible to those who actively search for it.

It is therefore easy whenever a terrorist strike occurs, or something intended to look like a terrorist strike, to rouse the emotions of the populace against the enemies of the people. They know only what they are told, most of them never realising how tightly controlled their trusted news sources are. Terrorism is internal, and unchipped madmen are the cause. Terrorism is external, and our armies must go forth and punish the madmen who seek to destroy us. "Terrorism" is whatever the government deems it to be, and the label has been stretched and strained to suit the needs of the spin-doctors at the nation's capitol.

The federal military does fight engagements, but always on foreign soil and far away from the home front. There are homeland forces that fight domestic terrorism who are trained and outfitted in a military fashion, but who are not technically military. Veterans are highly honoured, but are restricted from speaking of their time in service. Those who have seen too much and grow disenchanted with the federal government often go "rogue," abandoning civilisation and moving to rural areas. Government veterans associations speak of "battle fatigue" and "post-traumatic stress" to describe their reactions, carefully painting the public a picture of an honoured soldier who eventually goes insane due to the sacrifice he made for his nation.


STATION


DAX GORDINE
UDON

image within federal borders. The only way to travel to these nations as a citizen is to travel to an allied or neutral nation, then on to an enemy nation from there. If this travel is recorded, the citizen may expect a full investigation upon returning home — assuming he or she is allowed back within federal borders to begin with — as the DNS has marked these nations for possible sources of terrorism.

Urban vs. Rural Areas

In "Daedalus," the expansion of the powers of the federal government was combined with a heightened environmental awareness and a historically unprecedented will to do something about it. These factors led to a move to return much of the rural land to wilderness. Reforestation was a prime concern, as was re-establishing natural habitats for animals native to the region. Dams were removed from creeks and rivers, allowing them to flow as they had previously; engineered lakes were drained and many rural constructions were dismantled. Advancements in agriculture had rendered obsolete the use of large tracts of land for crop growing. Using hydroponics farms, rotated or simultaneous growing methods, and high-yield varieties, huge yields could be provided in one-tenth the space formerly required.

One side effect of this was a significant decline in the infrastructure to support rural communities. Forecasting this, the federal government launched a campaign to relocate the populations of rural towns and villages into urbanised areas, where the environmental pollution endemic to man's residence on the planet could be contained. The government offered fair market value plus 25% to anyone willing to sell back their land and relocate, plus job training and/or a full scholarship to a four-year university in addition to the typical job-placement services they normally offered. Farm subsidies were eliminated. Job seekers were routed toward urban areas, leaving rural businesses and services understaffed. Tired of struggling to maintain their traditional homes, many chose to take the government up on their offer. Abandoned towns were bulldozed or left to fall to ruin all throughout the nation's interior.

In the time since this initiative was undertaken, tremendous strides have been made in restoring many rural areas to their natural state. That is not to suggest that no one lives outside of the cities. There have always been a number of individuals who were loath to leave their homes, who instead put their efforts toward becoming self-sufficient. Many of these people also rejected chips and citizenship, leaving them without rights or government services amid the wilderness. Other non-citizens who cannot endure life among citizens in the cities have also gravitated toward the rural communities, isolated as they are. Many of those, however, find that they are ill suited for such an existence, and return to the fold willingly not long thereafter. Newcomers may be distrusted or even shunned by their neighbours, who fear ex-urbanites may be federal informers, or, worse, trouble-making dissidents or terrorists that will bring down the wrath of the Regional Patrols on their community.

While there are chipped citizens still living in rural areas, the functionality of their chip is greatly impaired. Many of the items taken for granted in urban areas, such as the automatic adjustment of appliances, media, and vehicles are unavailable. There is also a dearth of both receivers and transmitters outside of the urban metropolises. Instead, chips are primarily used simply as a form of identification and funds verification for when it is necessary to make a trip into the city. Most commerce in rural areas uses archaic forms of hard currency or barter.

The Regional Patrols are in charge of these vast areas, but it is no easy job. Instead of blanket coverage, they tend to rely on surprise visits and stool pigeons to let them know if criminal or terrorist activity is occurring somewhere in the nation's wilds. It is known that many terrorist cells and criminals make their homes in neglected rural communities, thus the Patrols are ever vigilant for signs of illegal activity. Cells that form often have to hide themselves in the most remote areas, or else limit the size of their organisation, for fear of notice by loyal citizens still living in the area or the Patrols.

Although rural areas make it easier for state-defined terrorists to hide, the travel to and from hidden bases is difficult at best. Only off-road vehicles can still traverse the unmaintained roads and trails of rural areas, making it difficult for resistance forces to transport goods and people quickly across the countryside.

A non-chipped individual can come and go from the city as he or she likes, simply hiking, biking, or walking past the city limits — so long as he or she isn't spotted by Patrol sweeps, who will assume the non-chipped individual must be a terrorist or criminal until proven otherwise. Once outside the city limits, characters have to be able to survive. Federal schools do not teach wilderness survival skills and unless one is a veteran, simply having such skills is cause for suspicion.

There are very few significant government installations within rural areas, only the odd way station, military outpost, or redundant signal station and those are liable to be attacked by resistance using standard guerrilla tactics. All major targets are located in the cities, forcing the terrorists to try to blend in and live among normal citizens if they want to succeed.

Icarus Descending

For every few thousand individuals who go along with the federal vision of the world (and the programming they use to achieve it), there is one who slips through the cracks; someone who doesn't like the feeling of being "guided;" someone who knows this isn't the way things used to be, and isn't entirely sure how it all got "fixed." Some of these people don't let their kids get chipped. Others have their own chips removed after growing up. A few people have no intention of falling out of the system, but grow resistant to the programming. Eventually, these people find themselves on the Outside, whether by their own volition or through no desire of their own.

For those who grow up with the chip, "awakening" can be a very difficult experience. The real unadulterated world is a shock. With no guidance, it can paralyse those who never learned how to deal with it. Those who wake up inevitably have problems with emotions, self-control, and isolation. The world no longer notices or cares about your presence, a shock to the mental system of those accustomed to personalised attention on every level. In addition, these problems are treated by the public as a particularly dangerous form of psychotic episode, requiring quick and decisive treatment without regard to the wishes of the individual.

This hostility and lack of understanding has driven some of the unchipped underground, forcing them into a criminal lifestyle whether or not that is what they wanted. Prejudice and discrimination, even against those whose chips stopped working for no explicable reason, cause many people to flee urban life altogether. Those who remain — whether openly unchipped or disguising that fact with semi-functional chips — stay at a distinct disadvantage. Suddenly they have to fit in and play their parts, only they are no longer getting the federally authorised script everyone else is acting out. The least emotional outburst can signal everyone around that something has gone desperately wrong, putting them that much closer to a visit from their boss, church group, physician, or policeman ... all of whom want to determine whether or not the unchipped are a danger to family, friends and neighbours.

Some who have rejected the chip have formed into a loose alliance against the powers that be. They want to find out who or what is controlling everything and free themselves, their loved ones, and the entire world from its grip. There are also those who just want to be rechipped and resume their lives. Others are just out for themselves, determined to take what they want instead of being spoon fed "what's good for them." The latter individuals often become criminals, changing to fit the label society has already given them.

It's a scene of desperation and deception, even more so since the worlds of the unchipped and the regular world overlap so very much. There really isn't anywhere they can go to hide, no mean-streets in which to lose themselves. Rural areas can provide a base of operations, but eventually almost everyone has to come back to the city for supplies or money. The only place to hide is in plain sight, and that's never an easy option.

When Good Chips Go Bad

When a federal citizen loses a chip, the world just suddenly goes crazy. Nothing works right, no one reacts the way they should: it's as though the entire universe stopped recognising you (which, of course, it did). The following are all symptoms of a malfunctioning chip. The GM is encouraged to use some or all of these, or make up his or her own descriptions, should a character's chip stop functioning. This will allow a player to get a sense of what the transition is like in character, experiencing some of the fear, loss, and confusion an individual undergoes who has been chipped for the majority of his or her life.

- The character begins to oversleep, as the internal waking function stops working.
- The character can no longer access bank funds, or transactions have to be started repeatedly in order to complete them.
- The character stops receiving whatever medication he or she was getting through the chip, causing withdrawals or side effects.
- The character's appliances no longer respond automatically: toast burns, newssheets are blank, showers won't come on (or use the wrong settings), security doors won't open, etc.
- The character begins to "hear" static or voices, as the chip begins transmitting or picking up random signals.
- The character's emotional buffers are removed, giving both positive and negative emotions full range. Many individuals mistake this for a psychotic episode and believe they are going insane.*
- Other people seem different; annoying habits or problems become evident to the character for the first time. Relationships may suddenly fall apart, as chip-instigated feelings drop away. Crises of faith are very common as well.
- Co-workers, friends, and even strangers on the street may begin habitually avoiding the character, without realising it. When confronted, they will deny any such behaviour.
- Authority figures seem overly interested in the characters welfare and habits. Police, managers, or religious authorities will often charge peers with watching the character to observe their behaviour.

* Note: While GMs should normally not tell players how their characters feel, this rule can be bent in "Daedalus" where chips are concerned.

Resistance Groups: The Spiral Shell

• La Liberte •

Region of Operation: All

Headquarters: Central Regional Patrol

Membership: 25,000; the largest of the resistance groups

Leader: Roger "Chauvelin" McLaughlin

Method of Operation: Prefers to use stealth and guerrilla tactics. Also performs a lot of diplomatic missions to foreign nations, trying to build alliances and gain support. Lots of dukes, technopeasants, ninja techs, and wingers, but La Liberte doesn't restrict its efforts to just those types of jobs. This is the default choice for a resistance movement in a game, and will have a bit of everything available for everyone.

• West Enders •

Region of Operation: Western Regional Patrol

Headquarters: Same

Membership: 10,000

Leader: Roy "Emperor Ming" Chen

Method of Operation: Mostly sleepers, shadow docs, technopeasants, and sim-spinners, with a smattering of wingers and dukes. Prefers intelligence and rescue operations. Recruits are often trained here, then loaned out or recruited by other resistance organisations. Has little interest outside of the Western Regional Patrol.

Amanda,

Sorry I didn't call. Things got a bit hairy on this end, and I've been away for a while. Doc has been letting me know on and off how you're doing, though. Don't get too reliant on those tranqs, they'll just bite you in the ass eventually. Doc is supposed to wean you off of them starting next week. You can feel free to bitch me out next time I make it down there — what else are big brothers for, right?

Zenia sent a message to me. She says you're doing well on your training, but that you're not exactly playing well with others. She says she could use you, but doesn't know if you can fit in and handle it. I figure that's my cue to step up.

Sis, I won't lie to you. What you're doing is damn hard. I'm really proud of you for deciding to stay, and I know it wasn't an easy decision for you to make. Heck, I haven't talked to Mom and Dad since I left. That didn't make it any easier for you, I know. The problem is, though, that it doesn't really get much easier than this. The sleeping pills, the downers, the uppers, the drinks ... they're tools we sometimes use to get by, but the getting by is still basically up to you. Don't let them suck you into dependency. You're strong enough to get by on your own.

If you and Zenia can't get along, there are a few other options open to you. You could leave the resistance proper and just live as an Outsider. We've got a town a few miles from where you are where our noncombatant family and friends live. It's not much, but at least it's a safe place. Of course, we were able to get you out because you're good at sim-media. I'm not anxious for you to throw that away, not after what we all went through, but I'll live with it if that's what you've got to do. After a few months there, we might be able to arrange to get you asylum somewhere outside of the country, but I can't make any promises. For all that numerous nations rail about how wrong this all is, none are ready to accept a potential flood of refugees either.

Of course you can stay here with us. We're spread out to hell and back, but we're well protected and I think we've really got a chance at pulling off some important changes here. Of course, this is all academic if they manage to shut us down before we can start negotiations with our friends across the border, but that's the chance you take. I'd like you to stay here, naturally. If this isn't working for you though, there are other groups you can talk to. We're not the only ones fighting this war.

In truth, I don't even know how many resistance groups there are. At least a dozen that I've heard of, though there's only five major ones. We're sort of the baseline. Most of the other groups started with us and split off; at least that's the way I've heard it. Our MO here is pretty basic: fight, run, hide, and talk — not always in that order. Still, if, for whatever reason, you find life here among La Liberte unappealing, there are other options available.

First, there's the West Enders. They work exclusively in the Western Region, which makes them one of only two major groups in that area. I still don't understand why they'd spend so much time building up a strong base only to hamstring themselves like that, but that's not my call. They're real big on counter-indoctrination and subverting people from inside the Feds wherever possible. I'd have to say most of the sleepers out there work in the West End, but there's no way to say for sure. They focus on search and rescue operations to get people out of the clinics that butcher Wang built. They're really careful not to give the Patrols any sort of ammunition to come after them full force — non-lethal force only, no property damage, the whole nine yards. I'm not sure why it matters, as the Patrols simply fabricate propaganda regardless, but it's a big deal to them. If you want my opinion, I'd say that they're just spinning their wheels. If reason worked on the chipped, we could have had this stopped long ago.

Second (and a splinter from the West Enders) are the Warriors of Nature — but everyone else calls them the Luddites. These guys were founded by a group of rejecters and runners who'd had enough of the psychobabble bullshit. They don't have any chipped people among them and won't use any sort of invasive tech at all. They'll still take guns and monkey wrenches and gleefully wreck whatever they can get their hands on, but they have a big problem with using any advanced tech themselves. Lots of them are also deeply religious, and look on chips as the biblical Mark of Satan. They don't take well to sleepers or Typhoid Marys, that's for sure, and a lot of them seem to think that most people are a lost cause. They don't exactly take a careless attitude toward human life or society in general, but they usually won't go out of their way to save someone who's been chipped for their whole lives.

The second largest group is Charlie Company or Charlie Foxtrot as everyone else calls them. We call them that because that's how they leave the enemy after a hit. It's like nothing you've ever seen — mass confusion.

Charlie Company was started by a group of old military men who got pushed out of the service as the DNS took over. Apparently they didn't want to get chipped and didn't agree with the way things were headed, so they retired early. They eventually decided things were getting out of hand and wanted to do their part to stop it. The leaders are all old-time military, top brass from their days in the service. They run it like a military outfit, too — all exercises and drills and military protocol. They specialise in sabotage and assassination, done old-school military style. They've got a "civilian" division that does most of the support work for the troops and puts out what counter-intelligence and propaganda they bother with.

The best thing about Charlie Company is that they're professional. Cold, ruthless, fearless ... just utterly professional. The worst thing about them is that "this is a war, soldier!" They don't take prisoners, they don't spend a lot of time worrying about the rules of engagement, and they don't pull their punches with anybody they see as the enemy. A schoolbus full of children has nothing to fear from them. A government office full of clerks and bureaucrats? None of them would cry over the loss.

The last major group is the MKs. A rebooter by the name of Frances Baldwin who used to work in the DNS R&D department started the MKs. When her chip stopped working, she lost her security access and was summarily fired, her work assigned to other people and her name stripped off of it. To say that she became angry is a gross understatement. She'd been working on chips that could hone latent human abilities to unheard-of levels, effectively creating super-soldiers. Her specific line of research was supposedly drawn from a variety of old world research (including MK ULTRA, Qinghua University, and the Institute of Control Problems) done sometime in the last century.

Baldwin immediately set to work finding a local resistance group and begged a meeting with the higher-ups. She ended up here with us at La Liberte, and the council talked to her on and off for a while. Apparently she wanted to set up shop again, this time on our side. She said that she'd been working on modifying chips to channel the body's energy into extraordinary abilities, and offered the tech to us if we'd give her money, research space and "volunteers." Not bloody likely.

So we told Frances to piss off, and that was the last we heard of her for a while. I joined up not long after she left, and the stories I heard about her were entertaining, to say the least. Let's just say that "Lady Frankenstein" was an entirely appropriate nickname. Evidently she found someone to give her backing, because a few years later we started hearing about this new group gaining steam. They call themselves the MKs. The stories were that these people could pull off some incredible stuff, things that are right out of the movies: superstrength, moving really fast, reading minds ... all sorts of bizarre things. She was rumoured to be one of the heads of the organisation.

Not many people get on well with the MKs, and some people think they're lying altogether about what they claim they can do. They like to keep their distance, though off the field they're polite enough, I suppose. On the field, though, they'll kill you as soon as look at you if you get in their way. More than one mission has gone all pear-shaped due to a lack of communication between factions, and fighting between resistance forces has caused more than a few semi-permanent feuds to break out. In addition, some people just don't like or don't trust the MKs. As an example, never get a group of Luddites together with a group of MKs unless you just like watching large-scale brawls.

They're all just a little ... intense, I guess. There's a fanaticism there you sometimes see with some of the older members, only it seems to be all of them. If you manage to get chummy with them, I'd imagine that you're in solid with all of them from that time out. Still, I wouldn't recommend it. I don't trust them, and I don't want to know what they had to go through to get the sort of abilities some people say they've got. It's definitely not where I like thinking of you, if you'll pardon the brotherly instinct.

I just wanted to let you know that you had some options. I'd advise you to stay where you are and stick it out, honestly, but if you make another choice, I'll understand. Just don't expect it to get much easier anywhere else. Zenia's tough, but there are very few who are better at what she does. She can teach you a lot.

I got your last letter, and I wanted to answer your question about why we are fighting, and how all this might have happened in the first place. It sounded like you were looking for some sort of reassurance that we weren't really a bunch of lunatics playing around in a fantasy world.

I'm afraid I don't have any strong reassurances on that point.

Still, there are some questions I can answer. The main problem is that most of us weren't around during the beginning. There was very little evidence left behind, but we believe we've got most of this right. Charlie Company did a lot to straighten us out; much of this comes from them. I don't think they're lying, but it's up to you to decide.

In short, the "government," in the form of the president, his ministers, the cabinet, all of it ... they aren't in charge. They haven't been for years — possibly decades, or more. No one knows for sure. The people who are behind it all can be summed up in a single word: Daedalus.

Daedalus was a thinktank that was supposed to offer advice to the government. From there, they managed to pull off a secret coup and replace everyone with their people over the span of years. They invented the chips; they came up with the environmental ideas; they designed the bio-memes. The DNS is their baby, and it allows them to make this supposedly perfect society where everything works and everyone is happy. What fascist bullshit. The truth is a lot deeper and darker than that.

There are some people who claim that Daedalus started with good intentions, but what they've done is rob an entire nation of its free will. There is no good intention to make up for that. I think that whatever their original reason, things have gone way beyond that now. Now the people who are in charge like the power, and there's nothing stopping them from acquiring more. There's something really bad going on, according to everything we've learned, and we've got to put a stop to it. No one's safe if we don't.

I don't know when I'll be able to get back to you, Sis. Things are pretty ... well, messy right now. We've been moving in on a new position to act as support just in case things go bad. I hope they won't, but sometimes you have to face that we really have a snowball's chance in hell of pulling this off. In case the worst happens, I want you to know that I never forgot you, or Mom, or Dad. Not once. I'm sorry it's ended up like this. Just don't give up, and maybe tomorrow will be a brighter day. Love you.

- Jace

• WARRIORS OF NATURE • ("LUDDITES")

Region of Operation: Western Regional Patrol, Southern Regional Patrol, Eastern Regional Patrol

Headquarters: Western Regional Patrol

Membership: 15,000

Leader: Binah "Lakshmi" Pavarti

Method of Operation: Primarily dukes, wingers, technopeasants, and ninja techs. Violently rejects methods of resistance that involve using chips or other invasive tech. Does not work well with most of the other groups, specifically the MKs or West Enders.

• CHARLIE COMPANY •

Region of Operation: Northern Regional Patrol, Central Regional Patrol, Eastern Regional Patrol

Headquarters: Eastern Regional Patrol

Membership: 7,500

Leader: Thomas Waverly, AKA "The General"

Method of Operation: Primarily dukes, wingers, technopeasants, ninja techs, Typhoid Marys, and sim-spinners. Specialises in covert operations and counter-intelligence.

• MKs •

Region of Operation: Northern Regional Patrol, Eastern Regional Patrol

Headquarters: Northern Regional Patrol

Membership: 3,000

Leader: Frances "Lady Frankenstein" Baldwin

Method of Operation: Sim-spinners, dukes, Typhoid Marys, and ninja techs. All important operatives are chipped, and most have unusual abilities. The smallest of the resistance movements, but the most high-profile where the government is concerned.

The Outsiders

While the DNS and its subordinates tend to see all non-chipped individuals in the same light, those who live on the Outside know the truth is a different story. In common parlance, there are four basic types of unchipped: resistants, rejecters, runners, and rebooters. Each type sees things a different way, with various skills and outlooks that set them apart.

Resistants

The first category is known as the resistants (not to be confused with the resistance). For these individuals, life as a citizen was never an option. All the resistants had chips implanted at one time, but to no avail. The sensors could not read their vital signs; their body mysteriously blocked transmissions; programming caused them injuries or else gave them nothing more than a headache; their chips were mysteriously expelled or rejected from their bodies, before the wound had even healed.

Out of every thousand chip recipients, there are always a handful that are like this. Medical science does not yet understand this condition, but prevailing theories include oversensitive immune systems, abnormal levels of metals present in the subject's body, malformed spinal structures, brain defects, and unusually resistant neurological systems. In the end, though, no constant between resistants has yet been discovered.

Resistants are usually suspicious and fearful of anything that smacks of authority, many of them having endured all manner of "treatments" in order to fix what was wrong even though no diagnosis was ever firmly decided upon. Electric shock treatments, cold water immersion, drugs designed to suppress the autoimmune system: all of these are standard approaches, designed to force an individual's body to accept the chip. These methods only have a 30% success rate, something that has the DNS scouting for new techniques. Many resistants experienced these treatments as small children, leaving them with phobias and psychological scarring as a result.

While many resistants leave society as soon as they're able, others try to make a life among the federal citizenry, even though they lack the same benefits. Those who are medically unable to get the chip can receive provisional citizenship, and resistants often try that. The results are a mixed bag at best. Most large companies are suspicious of someone who works by virtue of paper alone, and others view the inability to accept the chip as a sign that the person lacked the determination or willpower to overcome his or her problem, as if resistance to the chip was his or her own fault.

Resistants who try to make it in federal society often have their children chipped as soon as it's feasible, in an effort to give them what they were denied. Some continue to live a second-class existence in the cities, denying their problems in an effort to take the prize of life within those invisible walls, and all the benefits that entails. Others want nothing more than to get back at the nation who wronged them, forcing them into a criminal lifestyle due to no fault of their own. Regardless of their opinion, very few could be considered ambivalent or neutral on the subject of the federal government, the lives they've led, and the responsibility of the people in charge for that existence. Whether they want back "in" or not, the Outside is their only home.

Rejecters

The next category is the rejecters, the most common type of individual on the Outside. The rejecters are people who grew up with the chip. They likely had it implanted during childhood at their parents' request, and grew up with it shaping their personalities and ensuring punctuality and good grades in school. Some of them may have not have received the chip until they were old enough to know it

hadn't always been there and have traumatic memories of the implant procedure. Others may have received it as adults, only to discover the unadvertised features of the chip were more than they bargained for.

Regardless of the time of implantation, they all have something in common as adults: they fought through the programming and the controls to realise they didn't want it anymore. They got past their own fears and the warnings issued by the state and decided to do something about it, even if the consequence was their own death. They removed the implant themselves, had a friend help them, or paid someone with enough medical training enough to do it under the table. Alternatively, they might still have a chip implanted, but spent exorbitant amounts of money to find a black-market specialist who could partially turn off its programming portions.

A lot of rejecters take this route, not realising at the time that alienation begins with difference. For the average rejecter, having the programming turned off causes them to miss enough social cues that they end up just as ostracised from society (and in as much danger from the authorities) as if they had simply had the chip removed. A significant number of rejecters want to get rid of the controlling ability of the chip, but not their entire lifestyle. They have no desire to abandon their way of life — which makes it that much worse if they cannot cope with the end result.

Rejecters are usually very untrusting individuals. They had been given a comfortable easy life, something that was formerly the ideal of society, only to discover the price was more than they could bear. Behind the beautiful facade is a devil that takes your soul in the bargain. Once most rejecters realise that, they are unable to take anything at face value again, no matter who offers it.

Rejecters who end up Outside are usually quite unhappy about it, since leaving behind their entire life was not what they had in mind. Despite this, there are very few who would not make the same choices again. It is rare to find one who would willing have a chip replaced to get back their former lives, if only because their wisdom (and so they view it) was so hard won the first time. Ignorance is one thing, but blatant self-delusion is something else entirely. Those who want back in only have to report themselves to the authorities and have their chips re-implanted or reactivated; for rejecters, going back isn't the hard part. The trick is living with themselves if they do.

Runners

The next most common situation found on the Outside are the people known colloquially as runners, because they've been running from the government all their lives. Runners are people who have never had a chip implanted — have never been citizens. Many were the children of rejecters, or were born on the Outside and have never experienced that other life.

Runners who are raised in urban areas are repeatedly treated and diagnosed as being damaged somehow. They are listed as psychotic, schizophrenic, manic-depressive, antisocial, paranoid, and victims of a half-dozen other typical mental illnesses. They are treated as potentially violent individuals who cannot be trusted to perform even the simplest tasks, and are the victims of discrimination from their first social experience onward. Sadly, many of them come to believe that there is something very wrong with them, unless or until they go Outside and meet others who are unchipped, like them. Even then, the self-esteem issues they carry can prove damaging for years afterward.

Runners who are raised in society tend to have confidence issues. They also walk a fine line between wanting to get the chip and become "normal" (assuming they believe that is possible) and rejecting society and everyone in it out of hand. In general, the length of time spent in society and their familiarity with life on the Outside — and their reception by those Outsiders they meet — is what determines which way they fall.

Runners who are raised on the Outside, on the other hand, tend to have a very high opinion of their capabilities. They are some of the most competent, self-sufficient individuals one could hope to meet. At the same time, they have no point of reference for what the other types of unchipped have gone through. They often lack empathy and have very little sympathy for the failings of others.

In fact, many of these runners are deeply jealous of the lives and opportunities that citizens have. Being runners, they have no chance to attend any sort of formal school, get degrees, take on careers, or make something more of themselves than what they start out with. There is no foundation upon which they may build a career or accumulate wealth. Regardless of their skills or talents, no one within society would trust them enough to work with them — unless they accept an implant, in which case they're trading their free will to buy into the illusion, and they know it.

In the end, very few runners ever successfully integrate into society. Because they grow up among federally designated criminals and terrorist cells — some of which live up to their descriptions — they possess a vast amount of potentially dangerous information about their family, friends, and associates. Very few freedom fighters are willing to allow someone that potentially dangerous to wander into the bosom of the enemy and ask for asylum. Those who aren't killed or imprisoned are often used as double agents should they accept the chip, or have else have their memories modified before heading into society.

Rebooters

The last category, rebooters, got their name from an old computer process of shutting down and restarting a computer to correct a programming problem. While few rebooters like the name, they cannot deny the similarities between their circumstances.

Essentially, a rebooter is a former citizen for whom the chip worked perfectly for years or decades without the slightest problem. He or she was able to create a happy, fulfilling life and had no intention of looking beyond it; life was good. Then a car accident, a fall, an illness — some personal health issue came up, and the chip stopped working, never to be fixed.

Rebooters are the smallest percentage of all the outsiders. The odds of such a thing happening are exceedingly small. Those who do suffer such an unfortunate mishap are doubly victimised, first by the tragic event that caused the physical trauma, then by the loss of their emotional and societal buffer. While the other types of unchipped were in some sense prepared to lose that filter (or never had it), rebooters have it unceremoniously stripped away and are thrust unprepared into the real world — an experience so traumatic for some that they give up entirely, retreating into catatonia or insanity and spending the rest of their days in federal homes and asylums.

For those rebooters who survive the initial panic, very few accept the change lying down. Most immediately begin treatments to fix the problem that prevents the chip from working, if at all possible. Expensive therapy, drug treatments, surgery, all these things and more are tried in an effort to keep their citizenship and resume their lives. Almost all of them fail, sometimes with dire consequences for the patient. Those who survive the attempted cure then get to face life with only provisional citizenship at best, losing some of the privilege to which they had long been accustomed. Many work hard at accepting these changes, but picking up their lives where they left off is almost never an option — at least not for long.

When they do come to the Outside, they are almost always bitter and angry at the hand they've been dealt by fate. Few willingly take part in any effort against society as a whole, seeing only the idyllic life they were forced to leave behind. It can take years for a rebooter to accept the stories other Outsiders tell as the truth; some never do. For those who can come to grips with what they learn, however, it seems to awaken a zealous fire in their souls that will not be quenched.

Once they recognise that an implanted chip should not be — is not — the sum of a human being's worth, all the anger and pain and loss that they felt about their old lives becomes channelled into a burning desire to take down the people who are the source of the real problem. Still, despite the fury that drives them, other Outsiders find it hard to fully trust a rebooter, even the most zealous of them. The reason (and the question that keeps rebooters themselves up at night) is this: how much would a condemned man pay if he had the chance to gain back his life?

• VIOLENCE AND REBOOTERS •

Most of the (admittedly rare) violent criminals in federal society are rebooters. There are a thousand stories about normal people who suddenly snap, hear voices, or shoot up businesses – normal individuals whose chip suddenly went bad and drove them over the edge. This is not to say that mental illness does not exist in its own right. There are still schizophrenics, psychotics, depressives, people with personality disorders, phobias, homicidal and suicidal tendencies, and a whole list of other conditions. Most of them have been made treatable, if not curable, and those who are not treatable are often committed at a young age to a federal or regional facility. Finding such people mixing with your average citizen is unheard of.

Despite advances in technology, human minds remain very fragile. Once a rebooter has slipped across into insanity, treatment is rarely successful. More often, these individuals become violent. More than once, a resistance team has combed the city for a killer, hoping to either rescue or kill the poor soul before he or she is captured by the authorities and subjected to the federal R&D clinics.

In the Shadow of the Tower

For those who live Outside, the shadow of the proverbial Tower is ever present. Nearly every facet of their lives is defined by what they cannot have or do, all by decree of the government and the DNS. Their freedom is kept only by running counter to the laws of the nation in which they live — their futures determined by their efforts to subvert their pre-determined fates.

Despite the strong media slant, not everyone who lives without a chip is either insane, criminal, or a terrorist. There are a number who are, but few who made that their initial choice. For the reasons why once respectable citizens turn to an underground resistance or criminal profession, it is necessary to take a look at what life on the Outside entails.

Work

Imagine you are an individual whose chip has suddenly failed. You return from a lengthy hospital stay and invasive procedures to find that nothing in your house works for you now. Despite your good job performance and excellent education, you're let go with no warning. No one is there to help you find another position, because you no longer qualify for the service. Instead, you get work sweeping floors, hauling boxes, washing clothes, doing manual labour ... and that's if you're lucky.

For those who fall through the cracks of society, daily life suddenly shifts from a comfortable setting to a surreal, nightmarish existence. Unchipped individuals cannot hold any job that relies on a background or identification check. This includes places with automated security, where a chip's signal transmission acts as a security pass. Such jobs as unchipped individuals can hold naturally come with no retirement or healthcare benefits, and vacation or sick leave is only a dim memory.

Those who cannot find work are typically forced to turn to illegal activities to support themselves and their families — assuming they still have a family to speak of once the dust settles. Many chipped spouses of unchipped individuals are subtly encouraged through bio-memes to end that relationship and form a more stable one with another citizen. "Refusal of citizenship" is considered valid legal grounds for divorce in federal courts.

When looking at non-traditional career choices, one of the first things that occurs to most unchipped individuals is that they are now untraceable by normal methods. Many take up criminal careers such as smuggling, prostitution, drug dealing, or muscle jobs. Those who had highly specialised job skills often take on jobs committing "white collar" crimes like embezzlement, computer hacking, or investigation; others may take on security work, including extraction, breaking and entering, assassination, and theft. Such jobs are often independent work, or are contracted with either corporate or international interests who cannot work within the restrictions placed upon them by the federal government.

Individuals who take up a criminal lifestyle follow a dangerous path, paved with money, power, and blood. The authorities are not forgiving of non-citizens who engage in criminal enterprise. Most captured criminals end up in rehabilitation clinics for a lengthy re-education process, often coming out no more than a compliant, docile shell of their former selves. Still, the freedom of knowing that you are the master of your own fate, as well as the chance to bleed a little from the people who put you in this position in the first place, is often enough to make up for the risk for those so inclined.

For those who find a life of crime-for-profit ethically or morally repugnant, there are always more righteous (if less well-paid) avenues — primarily joining one of the resistance groups that have formed on the Outside, with the intent of fighting back against the corrupt and sinister forces that stripped away the humanity from their lives. These groups are the terrorists who are feared and abhorred by citizens everywhere, though they are rarely as deserving of their reputation as the media portrays them. The government knows the truth, at least at the highest levels, though the average government employee will believe the media. Daedalus ensures that the media exaggerates, dramatises, and takes other more destructive steps to demonise its enemies and gain further public support.

For those who take up the struggle against the oppressors, it is a dirty, thankless job filled with subterfuge, anxiety, and danger. There is little personal reward beyond the hope for a brighter future and the freedom that comes with knowing your heart and mind is truly your own. Regardless, the chance to give one's children a life free of controls, possibly even immigrating to another land one day where their progeny can live free lives: these are the dreams that make it all worthwhile.

Money

While nearly all transactions are carried out electronically via chip scan authorisation, this is obviously not an option for provisional citizens, residential and visiting non-citizens who do not have chip implants, or non-chipped visitors from other nations, or citizens whose chips simply stop working. Official chip scan authorisations are also required to obtain and access bank accounts. Since not everyone has a chip, and it is not technically illegal to be a non-citizen, the government has to provide some means for those individuals to survive.

For those who are unable or unwilling to use chips, the government still supports both hard currency (on a very limited basis) and a device known as an electronic funds card, or "fundcard" for short. These slim plastic cards (roughly the size and shape of an old-fashioned credit card) are encoded and verified by an authorised financial institution. These forms of exchange generally incur a small transaction fee on any given purchase, but for those without chips it is the only option they have. While hard currency is still common in rural areas, very few urban merchants are comfortable dealing with it. Smaller stores will refuse to take it altogether, looking on it as a security risk and viewing the person carrying it as a potential criminal. Fundcards are considered far more acceptable as they do not require a business to keep hard currency on hand. They also have a stigma to them, but fundcard users are perceived more often as a "foreigner" or "downtrodden member of society," rather than suffering any sort of criminal association.

Those who deal in under-the-table activities will sometimes barter for their goods or services (especially with those living in rural areas), but will more often take hard currency.

IDs

Providing identification is the farthest thing from the minds of most citizens. After all, they live in a world that knows exactly who they are, all the time. For the unchipped, providing identification is a daily trial. They walk a knife's edge each time they present their papers, for should an official decide the documents are questionable, insufficient, suspicious, or simply not what the authorities expected to see, they could be arrested and incarcerated without warning and with little hope of appeal.

For residents who do not have an ID implant, official papers are available from the government verifying their identity and status. All provisional citizens and residential non-citizens are required to carry a set of papers at all times indicating their citizenship status, employment verification, address verification, any special permits and licences, and any travel permissions. Only one official copy of these papers is allowed at any given time, and they must be updated yearly.

These papers are regularly asked for when: leaving or entering a metropolitan area; travelling between regions; purchasing medication; seeking medical treatment; attempting to purchase any controlled or possibly dangerous substance; and at all train, aeroplane, or ship boarding areas. Any member of the authorities can demand to see identification papers at any time. Any non-chipped individual who is found without papers is subject to immediate detainment until his or her identity can be verified, along with possible jail time or fines levied. If the non-chipped individual's identity cannot be verified, he or she is inevitably arrested under suspicion of terrorism and sent for rehabilitation and chip implantation.

All foreign nationals are required to carry these papers as well, along with an official passport and proof of foreign citizenship. Should foreign nationals be unable to present papers, they can request to speak with their consulate. They are then detained for up to 72 hours while their identity is verified. They may then be released, incarcerated, or deported depending on their identity and the wishes of the consulate.

Faking It

For those who live in urban areas, daily life looks on the surface much like it is for any citizen. The differences are still there, subtle but pervasive. Those with partially functioning chips (also called half-chips) still get the technological benefits of being chipped, which helps them maintain the illusion of citizenship. Compare the image of that person to someone who has to manually adjust his or her seats, who gets no personalised ads, who cannot use the newssheet, who has to have temperature controls on his or her faucet, who cannot interact with the world on anything more than a physical level.

The trick for individuals with half-chips is to interpret their expected reactions through the actions of others. Since their emotional conditioning is gone, they must watch what others do and use that to predict what reaction they will be expected to have. If someone comes up to an individual and suddenly seems head over heels for him or her, that individual must then determine if the reaction is natural or scripted, and decide whether he or she plays along. Going too far could result in a marriage three weeks later, with the half-chipped trapped in a parody of marital bliss. Not playing along could attract the attention of the authorities, especially if this is not the first time that the individual has "not responded" to a programming change.

Half-chipped individuals must also watch their vital signs and emotional responses. While outbursts or more than cursory displays of negative emotions in daily life are obviously dangerous, high levels of stress, emotional distress, or depression can also be monitored from interpreting their vital signs. Anyone exhibiting these symptoms for a prolonged period of time is likely to receive a change in programming at best, a visit from authorities at worst. Those who would pass themselves off as full citizens must be in control of their minds and bodies sufficiently to keep from giving themselves away over the long term — no easy task.

Those with no chip or with a totally non-functioning chip can rarely pass as citizens under anything but the most cursory inspection. Some have managed to devise handheld or pocket gadgets that can mimic chip transmissions well enough to get by most scanners, but being caught with any device designed to bypass national security precautions is illegal and will result in prosecution for suspicion of terrorism. Many Outsiders manage the masquerade on a limited basis, allowing them to get in, accomplish a set task, and get out again undetected.

The Laws of the Realm

In keeping with the ordered world the government has tried to create, it is only natural that such a place should have a preponderance of laws designed to preserve that carefully orchestrated balance.

Since its inception the DNS has been given broad license to deal with any perceived or actual threats to the nation. As the department grew and subsumed other agencies under its umbrella, so did its ability to influence legislation and social agendas as needed to carry out its mission. In the present day it controls both regional and local authorities and uses them to further its ends as necessary.

Laws in "Daedalus" are fairly straightforward (if frighteningly broad in scope). Murder, kidnapping, rape, theft, and assault are all still crimes, along with their various permutations. Drug dealing and distribution are also serious offences. White collar crimes are handled much as their real-life counterparts, though they can be considered as terrorist acts depending on who was involved: a non-chipped individual will probably be considered a terrorist, as will anyone embezzling from a government agency or contractor. Prostitution and trafficking typically fall under public decency statutes, and penalties vary by region.

From there, the law branches out into sections dealing with terrorists and their actions. Authorities can act with near impunity when it comes to terrorist threats. "Suspicion of Terrorism" is a common charge, with the burden of proof

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resting on the accused to prove his or her good standing in the community and lack of terrorist ties. Nearly any criminal act that impacts a government facility, government worker, or government property can be deemed terrorism and prosecuted with the full power of the DNS firmly behind it. This includes tampering with, removing, or otherwise trying to counterfeit the function of ID chips.

Due Process

When the police, Regional Patrol, or DNS agents arrest someone, he or she is brought to a holding facility for interrogation. Legal council is provided free of charge for criminal trials for both citizens and non-citizens. Suspected terrorists are not provided legal council, but citizens may hire their own attorneys to represent them. No attorneys are allowed to be present during interrogation sessions.

Interrogation is typically a long process, sometimes stretching out over days. It begins with questioning (with irregular breaks to let the prisoner reflect on the gravity of the charges while his or her answers are investigated). Chipped individuals are monitored closely and given powerful compulsion bio-memes to ensure their compliance.

If the suspect is not chipped and officials are not convinced the prisoner is telling the truth, then interrogation methods become more invasive. Traditional techniques of psychological persuasion are used to wear down the suspect and convince him or her to confess. Continued resistance over two or three days from this point (and continued fruitless investigation) moves on to physical methods, including beatings and non-injurious torture. Causing any sort of permanent physical injury is not allowed — it is also rarely necessary. Should the victim still not confess (or give any verifiable evidence), the case moves on to trial. If the victim does confess, the case moves directly on to sentencing.

There is no such thing as double jeopardy; victims may be held for lengthy periods without being charged in pre-trial detention; and victims are often considered guilty until proven innocent.

In a trial, the defendant is brought before a judge, with the attorney for the state presenting the case and the defence lawyer acting on the prisoner's behalf. In criminal trials, a panel of civilian peers is also present to witness the proceedings and ensure accountability. The panel is not present for terrorism trials. Only legal council, the judge, the officers of the court and an official DNS witness are on hand for those proceedings.

Once the trial has begun, each side presents their cases. In a terrorism case, a defendant without council is still allowed self-representation, including the calling of witnesses. Otherwise, the counsel for the defence presents the refutation of the state's claims and offers whatever proof is available to counter their allegations. After both sides have presented their cases, the judge delivers a verdict, immediately followed by sentencing. Confessions skip straight to sentencing.

Acquittals are simply resolved and result in the defendant being returned to his or her life with a brief explanation to any employers or necessary groups that all charges were dropped. Guilty verdicts receive the following typical sentences: for criminal cases, the options are community service, fines, medical rehabilitation and re-education in a federal mental facility, or incarceration in a federal penal facility. For terrorism, only the last two are available options. Example facilities include Sun City Federal Sanatorium, the Smith-Hendel Correctional Facility, and Buena Vista Rehabilitation Clinic.

Since non-citizens (as differentiated from foreign nationals) have no rights within the criminal system, they are typically either given the harshest sentence available or else handed off to DNS research departments as "experiment volunteers." Non-violent individuals without chips are typically sent to rehabilitation clinics, where chips are implanted and severe conditioning and aversion procedures are used to render the individual harmless to society. Eventually, those individuals are released as healthy, productive citizens, typically with little memory of their former transgressions or prior lives. Any non-citizen who engaged in violent behaviour or committed felony property damage, however, is considered "irredeemable" and is either consigned to prison, a research facility, or a combination of both according to the needs of the DNS. Foreign nationals who commit crimes are either deported or sentenced as non-citizens, depending on their nation of origin and whether their crime was deemed a terrorist activity.

Citizens may receive up to a life sentence in prison, but are never used by the state for medical research. More often, they receive rehabilitative therapy and are released after serving their sentences.

Feathers, Wax, and String

This section covers the rules modifications and suggestions for the Daedalus setting, as well as new Defects, Attributes, and suggested character templates.

Setting Restrictions

While the technology of Daedalus is somewhat more advanced than the modern day, there are also areas in which it has been unnaturally suppressed, seeing no progress at all for decades. Characters are normal men and women who have dropped through the cracks of the system. There is no virtual reality to speak of; no backbone of technology exists that could support the demands of a global virtual environment. To better control it, the government has dammed the flow of information to little more than a trickle.

One of the most obvious applications kept under wraps is that of biotech, especially as regards the chips. The biotech industry is almost wholly under contract with the federal government and very heavily restricted. Any technology relating to the chips is kept under strict control, minimising the risk that someone could use it to reverse engineer the chips and subvert Daedalus control on a wide scale: everything from the nanomaterials used in the chips, to the programming language for the bio-memes, to the organic chemistry behind the chemical transfers in the emotion controls. Though members of the resistance have discovered ways to modify or partially deactivate the chips, no one outside the government has the money, facilities, and knowledge to actually create chips from scratch.

Mercenary Campaign Options

The resistance or criminal campaigns are considered the default for this setting, but mercenary campaigns are also a viable option. The federal government, resistance groups, and corporations all need deniable assets from time to time, both for military and intelligence operations. Sometimes it's easier to hire someone from the outside with the skills you need on a temporary contract basis than it is to acquire those services full-time.

For campaigns built around this facet of "Daedalus," the game will tend to move from mission to mission, rather than the Herculean dystopia involved in hiding in plain sight all the time, waiting to make the next move. The downtime in-between is often skimmed over or used as a chance to train, spend Character Points, follow up on individual plot lines, and otherwise forward character development.

When creating characters, the GM is encouraged to keep the aforementioned aspects in mind. Not every technology or skill will be available to members of the resistance in a Daedalus game. Those who work against the system are hunted by the system, and there are no areas of urban blight or social decay in which to hide.

Power Level

The protagonists in "Daedalus" are all normal men and women with some unusual skill sets. While they are exceptional in having escaped from the control of Daedalus, they are otherwise normal individuals in extraordinary circumstances. Some groups of the resistance do feature additional abilities derived from malfunctioning or redesigned chips, but that is not considered the default for the setting; the GM has final discretion over whether such elements will be suitable for his or her game. The setting is based on intrigue and cunning more than special abilities. It is gritty rather than grand. Hiding in plain sight is common and subtlety is key.

Shock Value should be used to reinforce the low-power level and encourage players to think before acting in this setting.

For character creation, players should start with between 75 and 110 Character Points, depending on the focus of the game. 75-90 Character Points are appropriate for characters just making the transition from citizen to resistance fighter or criminal while 90-110 Character Points are appropriate for experienced criminals, veteran resistance fighters, ex-military, or DNS agents.

Characters should be limited to Mundane Attributes and Defects, with the normal exception of any gained through allowed cyberware or bioware (see Technology in Daedalus, page 336) and those new Attributes detailed below. In a few specific cases, GMs should let characters such as sim-spinners or Typhoid Marys take Mind-Control or Mind Shield as innate talents, or Sleepers take Mind Shield to represent a developed resistance. In such cases, it is recommended to limit these Special Attributes at Level 4.

Restricted Attributes and the MKs

The MKs (see page 328) are rumoured to use malfunctioning or reprogrammed chips to induce or create unusual abilities in its operatives. These abilities act as enhancements to their own natural abilities as opposed to external powers, granting access to Attributes like Enhanced [Stat], Immunity, Regeneration, Telepathy, and so on. These abilities draw from a person's mental and physical energy in order to make them work, and thus should require the use of Energy Points and the Burns Energy Defect (see *Tri-Stat dX*). All MKs should attach the Burns Energy Defect to any Attributes linked to their chips. Alternatively, for games not using Energy Points, they could burn Health Points per each use, or suffer from the Backlash Defect.

In such games, GMs may wish to limit Special Attributes to Level 4.

Advancement

Characters in a traditional cyberpunk setting often seek to earn a living through illegal activities (such as selling stolen goods) while living in the shadow of the corrupt corporate overlords. They become part of an amoral group trying to preserve its own humanity while sticking it to authority figures by becoming rich off their corrupt practices.

This is true of "Daedalus" as well, but not in a conventional sense. The government's control is so thorough that there's far less need for deniable assets. Either a corporation is in league with the government and thus can do no wrong, or they are not — in which case they are barely tolerated and are either harassed in an effort to bring them back in line or run out of business altogether — coincidentally, the second class of corporations is most likely to be willing to use unchipped individuals. There are few illegal jobs even among competing corporate interests, and the Daedalus government is far more interested in re-integrating or eliminating resistance members than in using them for nefarious secret missions.

Defects

Most of the setting-specific rules needed for Daedalus are standard for cyberpunk, see Chapter 6. In addition, the following Defects are provided for use in "Daedalus."

Special Requirement (Addiction)

In the age of Daedalus, being chipped can seem like the answer to all your everyday problems. There are downsides to it that the government has been working hard to suppress knowledge of. The constant rush of media stimulation, the regular hits of endorphins, the need for an external substitute to calm the raging emotions once the chip has been removed — these are the driving forces behind a dozen widespread addictions, most of which remain unnoticed until a chip is removed or a fix is denied. Characters who choose this Defect must choose a specific addiction, such as media, chips, drugs, or alcohol.

1 BP The object of the addiction is easy to come by and needed only infrequently. The character needs to get a fix for his or her specified addiction at least once a month (once a week in very stressful conditions). Failure to get the fix results in a -1 penalty to all checks until the character gets the substance he or she craves.

2 BP The object of the addiction is moderately difficult to come by and needed frequently. The character needs to get a fix for his or her specified addiction at least once a week (once a day in very stressful conditions). Failure to get the fix results in a -2 penalty to all checks until the character gets the substance he or she craves.

3 BP The object of the addiction is difficult to come by and needed very frequently. The character needs to get a fix for his or her specified addiction at least once a day (once every few hours in very stressful conditions). Failure to get the fix results in a -3 penalty to all checks until the characters gets the substance he or she craves.

Media Psychosis

Life with the chip can seem like an endless stream of advertisements, news, and customised content everywhere you go: in the car, on the street, in the mall, in your living room, bedroom, and even bathroom. For some, the constant flow of subtly intrusive information is simply too much to handle.

1 BP The character is mildly sensitive to media overload. If the character spends more than a week under constant bombardment, he or she is mildly incapacitated and must get away from all media input for at least four hours in order to recover.

2 BP The character is sensitive to media overload. If the character spends more than three days under constant bombardment, he or she is moderately incapacitated and must get away from all media input for at least one day in order to recover.

3 BP The character is extremely sensitive to media overload. If the character spends more than 24 hours under constant bombardment, he or she is mildly incapacitated and must get away from all media input for at least three days in order to recover.

Vulnerability to Programming

This is a variation on the standard Vulnerability Defect (page 83). The character is vulnerable to chip programming, and thus very easy to affect or control.

1 BP The character is mildly vulnerable and takes a -2 penalty on all checks to resist the effects of a given program.

2 BP The character is vulnerable to programming and takes a -4 penalty on all checks to resist the effects of a given program.

3 BP The character is extremely vulnerable to programming and takes a -6 penalty on all checks to resist the effects of a given program.

Chipped

The character has a function chip implant. The ID chip can be partially or fully functional, depending on the level of the Defect. Characters without this Defect may have an inert chip or none at all, and may be subject to the limitations imposed on non-chipped individuals within the setting. For more information on the benefits and drawbacks to having chip implants, see ID Chips, page 340.

3 BP The character has a partially functional chip implanted. This chip is not capable of accepting programming and could be singled out as being dysfunctional by the authorities, prompting them to attempt to implant a fully functional chip instead. It allows the wearer to be tracked and transmits the wearer's vital signs and basic identification, but nothing else. It allows the wearer to engage in business transactions, travel, and go through everyday life without a problem. In-depth scans of the chip by authorities will reveal its malfunctioning nature. Characters who take this defect must add the Partially Functional ID Chip template to their Attributes.

6 BP The character has a fully functional chip implanted. This chip is capable of accepting and enacting programs inserted by government officials, including nervous system stimulation, pharmaceutical infusion, brainwashing, and so forth. It also transmits the character's vital signs, location, and full ID information (including identification, bank or business information, permits, security clearance, medical information, and information about his or her immediate family as well). It will pass any scans and grants full rights and privileges to the wearer. It can provide the level of information necessary to travel freely, to qualify for government employment, and to secure special privileges, such as weapon permits and security clearances. Characters who take this defect must add the Standard ID Chip template to their Attributes.

Daedalus Archetypes

This section contains archetypes specifically for use in the Daedalus setting. While some are Daedalus-modified variants of the archetypes, others are entirely new. As always, characters should feel free to modify any area of the templates to suit their specific game. The modified templates only list additions or changes to the base templates in order to better fit "Daedalus."

Technology in Daedalus

While "Daedalus" generally fits the definition of a Classic cyberpunk setting (see Technology, page 310) the technology level of the setting has been kept artificially stagnant. The "Daedalus" setting uses Near Future technology as a whole. Iconic Cyberspace is unavailable and actively suppressed, as are neural buffers, space colonies (the space program was dismantled entirely to force attention back onto Earth) energy weapons of all types, and virtuality networks. Wetware jacks, neural jacks, persona plugs, and data jacks are all replaced in this setting with Daedalus chips, which can duplicate some of their functions through bio-memes and pharmaceuticals.

"Daedalus" straddles the fence between Hard SF and Dramatic SF. The technologies used are heavily based in real life science and research that is already taking place, but the steps taken to render the location and place mutable take the setting as a whole into the Dramatic SF side of things. By either altering or ignoring the technology that the chips draw from, or by grounding the setting in a place and time the GM considers appropriate for a given campaign, the GM can shift Daedalus either way on the spectrum, creating the experience he or she would prefer for the players.

Dukes

Dukes are the foot soldiers of the resistance. They gain their name from an obscure 20th century video game (popular among unchipped individuals and available on the black market), wherein a tough soldier fought his way through a world full of mutants while exhibiting unsurpassed bravado and corny humour. Some also point to the nickname of a 20th century tough-guy actor, or the traditional noble title, but regardless of the argument, no one can deny the nickname fits. Bodyguards, front-line soldiers, or mercenaries ... they're the people you call when you have something bloody to do.

Customisation Notes

Dukes are based on the street samurai archetype. The *Bushido* code is not as common as in some cyberpunk settings, though individuals could certainly use it. Instead, most dukes simply find that fighting comes naturally. They are people who gravitate toward the resistance (or some other clear-cut goal), and use that goal as the mark that centres their worldview. Aside from the stylistic changes listed above, no changes to the street samurai archetype (page 21) are necessary.

Ninja Techs

While the federal government is omnipresent in so many ways, such a monolithic organisation requires a great deal of superstructure to support its efforts. Computer networks, training facilities, prisons, retreats, and administrative offices are only a few of the necessary behind-the-scenes components to keep the DNS and other federal groups going strong. Naturally, not all of these can be fully guarded all the time; should the attempt be made to make every facility

100% secure, their ability to function effectively would be greatly compromised. Instead, the DNS (along with other corporate interests) attempts to proactively stop potential terrorist action before it starts. That's where the ninja techs come in.

Despite their amusing nickname, ninja techs are anything but a joke. They specialise in sabotaging technical installations using stealth, cunning, and superb technical know-how. While they have been known on rare occasions to use explosives or other destructive means, they typically make a point of damaging machines, not people. They rarely kill, for their mission is all about liberating minds, not destroying them.

Most ninja techs grew up unchipped on the Outside, as the training and education needed to gain their skills are heavily restricted in regular society. Ninja techs who come from a chipped background were often federal or high-level corporate employees before falling Outside.

Ninja techs are used primarily by the resistance groups, who employ them as saboteurs, spies, agent provocateurs, and so forth. They are in high demand among mercenary groups and corporate entities as well. When in a group of mixed abilities, the ninja tech is typically the infiltrator, and the individual who short-circuits fences, security systems, and power supplies in order to give the team time to get their task done.

The ninja techs are based on the tech template, page 25.

Customisation Notes

In addition to their technical skills, it is recommended that ninja techs spend Points in some of the following: combat and stealth Skills, Attack Combat Mastery, Combat Technique, Heightened Awareness, or Heightened Senses.

Shadow Docs

"Shadow Doc" is the slang term for a medical professional that operates on the shady side of the law. Most shadow docs were full members of society at one time, getting their degrees in prestigious universities and opening urban private practices. Along the way, something fell apart. Perhaps they saw something regarding chip technology that they shouldn't have, and couldn't keep it to themselves. Perhaps they began to remove the chips from others — a criminal offence under federal law. Perhaps they had their own chips removed — also a criminal offence. They may have differed from the party line in some other way, over abortion, euthanasia, forced rehabilitation, mental conditioning, care for the unchipped, or any of a dozen other medical practices where their personal ethics ran contrary to the fluctuating but dictatorial federal line. They might even have violated the law in some less savoury fashion and found themselves stripped of their license to practice medicine. Whatever the individual history, the physician found it unwise to continue his or her public practice, and thus became a shadow doc.

A few shadow docs have never lived as a full citizen, but instead obtained their knowledge through secret study and apprenticeship on the Outside. While lacking the general knowledge imparted by a full multidisciplinary course of study at medical school, these docs tend to focus on a specific branch of medicine and become expert at it, sometimes even devoting their lives to research in that field. Neurology and psychology are common focuses for these individuals, though some prefer to work in a more people-oriented environment, pursuing family practice and offering their services to other unchipped individuals. Genetic engineering is a highly valued choice as well, but equipment and training for this field are rare, and unapproved researchers who are caught are subject to severe federal punishment.

Shadow docs cannot practice medicine legally, nor can they prescribe medicine through any legal pharmacy. Instead, they use the black market to gain the drugs and equipment they need. Those who join the resistance are often skilled at emergency care, able to keep their companions alive and in one piece long enough to get the job done. Others who move to the Outside may specialise in backroom plastic surgery, organlegging, and other unsavoury criminal behaviour. Shadow docs are based on the medic archetype (page 20).

Customisation Notes

Some shadow docs are also able to use combinations of drugs and hypnosis to induce a trace state where memories can be modified. This ability is best represented through an Item of Power containing the Mind Control Attribute or Telepathy Attribute.

Sim-spinners

Sim-spinners play a key role in the underground. While most people are victims of the media messages directed at them twenty-four hours a day, seven days a week, the sim-spinners are masters of redirection. They take their name from their job: essentially, they take the simulated-sense media broadcasts (sim-media) and synthesise their own versions, which they put in place of the pabulum that is ordinarily fed to the masses. They turn the deadly lullaby that keeps the people quiet into a subtle call to action, doing as much as possible to nudge people awake to the threats that surround them.

Most sim-spinners began life as a model citizen. Their fascination for words, pictures and sounds brought them to a deeper understanding of how those images and their associated messages were constructed, as well as how these transmissions could manipulate people over time. It is rare for a sim-spinner to come to the career without ever having an implant, as those without the chips are simply not privy to the breadth and depth of media exposure that chipped individuals are. Those who do come from an unchipped background are likely to specialise in the design of new media campaigns rather than the implementation, making them somewhat less useful in the field.

• SIM-SPINNER •

Template Cost: 11

Mind +1, Soul +1

Attributes

Gadgets 1, Gadgeteer 1, Mind Control 1 (Only with chipped humans; Duration 3; Targets 1; Restriction, Only with the proper equipment: see detailed list above -2; Restriction, Control is not complete: it guides emotions, not implants commands -2; Restriction, Target must be able to view the media broadcast without distraction -2) d, Mind Shield 1, Sixth Sense 1 (Use of Mind Control; Area 2)

Skills

Computers (Programming) 1, Cultural Arts (Any) 1, Electronics (Any) 1, Interrogation (Psychological) 1, Power Usage (Mind Control) 2, Social Sciences (Psychology) 2, Visual Arts (Sim) 2

Defects

Wanted OR Media Psychosis -2

Sim-spinners design, create, and change targeted media advertisements and stories. They are effectively simsense propagandists, and try to subtly spread the truth about the chips and the government to individuals without attracting the attention of the authorities. They are typically used for two types of missions: interrupting a major broadcast and tweaking the feed slightly to excite the emotions of the audience and counter misinformation, or acting in a targeted campaign designed to wake up a specific individual or small group. They require the use of computers, sim-recorders, media creation programs, and portable broadcast equipment in order to use their skills.

Customisation Notes

Sim-spinners often have customised chips (see Inert Chips, page 340), taking them as Items of Power. They often have Organisational Ties, and tend to focus on defensive fighting.

Sleepers

When someone is trapped on the Outside, it is hard to keep up with the news and critical updates from within normal society. Without a chip to allow access to certain types of broadcasts, sensitive security areas or important personnel, resistance groups and mercenaries alike can be left out in the cold. To combat this trend, some individuals volunteer (or are recruited) for sleeper duty. A sleeper is a person fitted with a fully operational chip and trained to exert great control over his or her thoughts, feelings, and physiological responses. They are typically under the influence of at least one bio-meme, and have been trained to identify and resist the effects of the bio-memes in order to avoid detection. Using abilities such as meditation, deep relaxation techniques, and other mind-altering methods, they work to remain in control of themselves (and under the government's radar) at all times, while they gather information and help their contacts on the Outside.

• SLEEPER •

Template Cost: 11

Body +1, Soul +2

Attributes

Heightened Awareness 1, Mind Shield 2, Sixth Sense 1 (Any appropriate; Area 2), Tough 1

Skills

Controlled Breathing (Slow Heart Rate) 2, Disguise (Any) 2, Driving (Car) 1, Etiquette (Any) 1, Interrogation (Psychological) 2, Intimidation (Any) 1, Social Sciences (Psychology) 1, Stealth (Any) 1

Defects

Chipped -3 (-6)*

* Sleepers have developed methods of resisting the effects of the chip. Consequently, while they are required to have the Chipped Defect at 6 BP, they get fewer Bonus Points for it.

Sleepers are usually lone agents, but sometimes they are assigned to work with team members. In addition to general information gathering, sleepers also function as up-front negotiators or as distractions for authorities while other agents handle the more physical parts of the job.

Customisation Notes

Sleepers may be specialised in a certain area, such as media, government, or foreign affairs. Additionally, some sleepers might focus on more physical activities, such as smuggling individuals or goods out to the resistance, or acting as undercover physical backup for urban missions.

Technopeasants

In most cyberpunk settings, the hacker is a virtual wizard, someone who can run off into a digital world using little more than wits, courage, and a slim wire connected directly into his brain. This is not the case in Daedalus. The government saw to that, putting a stop to any virtual reality plans for the Internet long before they ever came to fruition. At the same time, the government has claimed a monopoly on any technology involving an interface between brain and computer, deeming the field top secret research. Unauthorised civilian devices using direct brain/computer interfaces are destroyed when discovered by the government. Obstacles like federal repression and information lockdown are hardly barriers to a true hacker, though.

In Daedalus, the hacker archetype is represented by the technopeasants, a name that stems from an old information technology joke (technopeasants — they who work the LAN). Doing everything they do with an old-fashioned keyboard, phone line, and an intuitive understanding of both mathematics and the intricacies of the secret lives of computers, they act as on-site and remote spies in government and corporate computer systems. They send in invisible programs to map systems, get information, and play a little game of sabotage before skipping the trace and logging out.

Technopeasants are old-school hackers, writing code to crack encryption and slice through protections as easily as they draw breath. They know a thousand different ways to jam up a system or make it run as smoothly as silk over glass. From death pings to worms, spybots to backdoors, the hackers are the virtual eyes and ears of any resistance group worth the name — or any merc team that plans to stay alive. Technopeasants are based on the hacker archetype, page 18.

Customisation Notes

Technopeasants do not have access to truly autonomous, intelligent Agents in Daedalus, and must instead use Henchmen to represent their resident programs. Neural Jacks are not an option in this setting.

Typhoid Marys

The original Typhoid Mary was a woman named Mary Mallon, who was unfortunate enough to have contracted typhoid during some portion of her life. After recovering from the disease, which she never recognised as typhoid, she became what is known as a "healthy carrier," meaning that she was capable of spreading the disease even though she showed no symptoms. She worked as a cook, unwittingly causing up to 50 illnesses and five deaths during her tenure in various facilities.

The individuals on the Outside known as "Typhoid Marys" perform a similar function, only deliberately, and with a far more noble goal in mind. Typhoid Mary is the nickname for a type of person who designs and modifies chip program bio-memes. These bio-memes can be spread to other chips by means of the broadcast frequencies commonly used to control the chips. For more information on bio-memes and their use, see page 314.

Typhoid Marys are used to sow dissent, chaos, and unrest into society as a whole. Though they may sometimes choose specific individuals to target, it is difficult to keep from targeting others nearby as well. Once a bio-meme has been uploaded into a Mary's inert chip, his or her job is basically hands-free while the meme spreads itself, virus like, through everyone who comes within transmission range. Their abilities are usually backed up by significant combat expertise. They often act as lookouts or specialised fighters for the group as a whole.

• Typhoid Mary •

Template Cost: 15

Mind +1

Attributes

Gadgets 1, Gadgeteer 1 (Restriction, Bio-memes -1), Item of Power 3 (Inert Chip, see page 340), Mind Shield 1

Skills

Computers (Programming, Bio-memes) 2, Disguise (Any) 1, Electronics (Sensors, Communications) 2, Social Sciences (Psychology) 1

Defects

Wanted -3

Customisation Notes

Typhoid Marys often specialise in either creating tailored bio-memes or spreading them. The cost for the inert chips also varies depending on the power needed for a given situation, and the other features that might be included in that Item of Power.

Wingers

For those who don't have the proper identification, travel is a logistical nightmare in Daedalus. Driving a car is fine over short distances that don't require the disintegrating highway system, so long as you don't hit a checkpoint or otherwise get pulled over by the authorities. Public transportation requires a chip scan in order to debit your account and let you on board. Fundcards can be used for subways or other set stations, but buses are unable to take either cash or fundcards as a general rule.

You can hire a car and driver, assuming that you can find one who will deal with cash or has a card reader, but that is expensive and impractical for daily use. Airports and train stations require either chip scans or properly authorised paperwork in order to pass security and get aboard. The same is true for ship or ferry travel. There is no way to get from one place to another that isn't guarded by federal watchdogs, provided the distance is far enough to make walking or bicycling impractical — at least no legal way.

That is where wingers come in. Born mechanics and pilots, wingers live their lives with their vehicles the way most people live with their families. They understand vehicles inside and out, and can tell you the fastest, safest, or easiest

Computer Systems in Daedalus

Unlike in most cyberpunk settings, personal computers are not central to the world of Daedalus. They are very important, assuredly, and their use is widespread. They do not, however, form a ubiquitous presence in the setting. Your telephone, your toaster, your light switches, all are configured upon purchase to change their settings in reaction to the signals received from specific Daedalus chips by its sensors, not any overarching computer network or personal program. The systems are independent. A standard personal computer has no method of accessing such items, nor is it capable of running software to co-ordinate them. It does not communicate with the refrigerator in the break room, the door locks, the security cameras, or the automatic flusher on the toilet.

While the world is heavily automated, it would not be difficult to create programs capable of controlling one's automated environment with the right equipment. To avoid this, the government has ensured that this equipment is tightly controlled and very hard to come by.

Most home computers are self-contained items connected to a publicly funded and content-controlled Internet connection, with little more than a screen, mouse, and keyboard accessible by the user. One can download approved content onto a given machine, but physical media (disks, chips, etc.) cannot be used to transfer data to or from a standard off-the-shelf model. Workstations are adapted models of home units, with typically only one central server from which programs may be installed and network connections controlled. The default security systems for a workplace are chip sensors connected to a central memory bank, where valid signal signatures are stored on a closed system. The central computers for such systems come with the necessary software pre-installed and no external media storage.

Daedalus is a low-tech setting, with roughly the same level of centrally computer-controlled autonomous systems that we have in the real world today. This refers not to mundane items with a "computer chip" and sensors, but rather machines dedicated to running software that are controlled by a centralised facility, or are connected to an intranet of the Internet to share data.

It is important to realise that networks and hosts are not a central part of the Daedalus setting. Technopeasants perform a valuable service in their interactions with computer systems, but they are not the omnipotent controllers of everything inanimate. If they can discover a radio frequency signal that is legal for the system, they could create a transmitter that could let them in, but that requires a physical presence on site rather than elite programming skills. They cannot remotely control security, or open doors, or watch over the rest of the team as they infiltrate the buildings. They have far more use as a special-function team member, providing reconnaissance and sabotage services while providing back up fire support.

The hacking rules (page 137) work perfectly in Daedalus, with the caveat that the only active defence available is Tracer. Since there are no neural jacks, no active defences that attempt to attack the hacker through a neural jack are available. Neither Virtuality Nets nor Iconic Cyberspace are available.

route between any two places they've ever been. As productive members of society, wingers might have been chauffeurs, mechanics, commercial pilots, or held any of a number of similar jobs.

As wingers, though, they are the backbone of the black market, smuggling goods and people in and out of regions across the face of the land. Some focus only on live cargo, and run a barter or cash-basis taxi service, whether by air or land. Others work behind the scenes as chauffeurs and transport professionals for important individuals, both chipped and unchipped. Still others work specifically for a resistance movement and spend their lives as military pilots.

In addition, many wingers specialise in surveillance or "eye-in-the-sky" duties as well. Using remote-controlled drones equipped with cameras, weapons, or other useful items, a winger can stay in the vehicle and yet still keep on eye on what's happening with the rest of the group, offering assistance or a stealthy method of communication. Whether they focus on commercial, private, or military employment, wingers are considered to be some of the most valuable people the Outside has to offer. Wingers are based on the teleoperator archetype (page 25)

Customisation Notes

As with technopeasants, wingers do not have access in Daedalus to any sort of neural interface technology. They cannot directly interface with their vehicles or drones, nor can they control them on a neural level. For them, it's all done the old-fashioned way, with control units, video and audio feeds, and an intuitive sense for how it all works in relation to using a couple of small thumb controllers, a few buttons and a couple of triggers. The average winger would make today's best video game player seethe with jealousy.

Gear

The artificial suppression of some technologies combined with the rapid advance of others has combined to make some items that are unique to "Daedalus." While ID Chips are the most obvious expression of this, they are far from the only ones. We have a few of the more commonly encountered items listed here, but GMs should feel free to devise their own items as needed for their campaigns.

ID Chips

With the marriage of biological and artificial components to create the modern ID chip, the world was changed forever. Within the space of a generation, they became an integral component of every official transaction. Those without chips were barely considered to exist at all, and many times treated as criminals. It is only through submission to the federal government and getting an ID chip implanted that one can be regarded as an upstanding federal citizen and member of the community.

Characters who have a chip can hold jobs, engage in commerce, and automatically get past random ID checks and security checkpoints. They are allowed to travel freely anywhere under federal control, as well as into friendly nations with no additional paperwork. In short, they are considered full, law-abiding citizens and have access to all the rights and privileges that pertain thereto.

On the down side, the authorities can constantly track individuals with chips. Characters' vital signs are closely monitored, along with their behaviour. Anomalies are reported to the local religious or secular authorities, depending on the cultural group or religious belief system to which the individual subscribes. They have no personal privacy and are subject to bio-memes, sets of instructions to the chip that actively attempt to influence a character's behaviour and keep him or her in line. They function as temporary Attributes or Defects, and can be changed in accordance with the whims of the authorities, depending on the circumstances that surround the individual.

Chips themselves can also be changed to add or take away hardwired features. The surface port over the chip provides access to the chip without resorting to surgery, and the two-part structure of the chip allows the top section (the command centre of the chip) to be replaced or exchanged without disturbing the delicate tissues of the brain itself. While such procedures still require anaesthesia and immobilisation of the patient, they are far less invasive than completely replacing the chip each time an upgrade is needed or desired.

New Chip Attributes

Chips have a number of functions available, including limited Healing, Contamination, Heightened Senses, Mind Shield, and other Mind-based Attributes. These can be mixed and matched to get the desired combination of effects, though those who have standard chips implanted have no say in what functions are included in their chips. Members of resistance movements or those who seek out illegal chips have far more available to choose from, though the cost (in either money or favours) may be high.

GMs should invent their own Attributes for chips if needed. The Scramble Attribute is specific to chip/Item of Power use within Daedalus. It should be available for any inert chip, though at additional cost.

Scramble

Cost: 3 Points/Level
Relevant Stat: Soul
Required PMVs: None
Optional PMVs: None
Progression: Linear, +1 data type per level
Reduction: None
Restriction: Under certain conditions, flawed results

This Attribute represents an inert chip's ability to falsify the data that is transmitted, allowing it to appear to authorities as a normal, full-functioning chip. Instead of sending the correct personal data for the individual to whom the chip belongs, chips with Scramble will transmit false identities, false vital signs (always calm and healthy, for example), false location data, and so forth.

For each level of the Attribute, one additional data type can be affected. Available data types include: identity, vital signs, biometrics, GPS information, and license or permit information. Additional information types can be included as appropriate for a given campaign. In order to determine that information is being falsified, the opponent must have the gear to receive and interpret the information being sent by the chip. He or she must make a Mind Stat check, starting with an extremely difficult modifier. For each day the character's data is kept under direct surveillance, the difficulty modifier falls by one category to a minimum of average.

Inert Chips

Inert chips are chips that were harvested from individuals and then converted for use by the Typhoid Marys. The sensors and standard transmission data have been removed, replaced with extra memory and a modified transmitter. This transmitter sends out command codes and copies of programs constantly on the frequency used by authorities to recode the chips remotely.

Each inert chip can hold one program and one set of commands used to activate the function in other chips within transmission range. Once loaded, they begin a steady broadcast until deactivated by having their memory circuits magnetically wiped (a process typically carried out at headquarters or by a superior in the field). New carrier Typhoid Marys are typically given chips with low ranges and transmission areas by mentors in their profession, lessening the risk of losing valuable resources. As they get more experience, they can trade up to more sophisticated models that can transmit falsified personal data, broadcast over greater ranges, affect more targets at once, and so on. It takes no more than a few

seconds to upload a new program into a receiving chip.

Inert chips are extremely illegal, and having one on your person is enough to mark the character as a terrorist. Luckily, they appear identical to standard chips at a casual glance. It is only upon an in-depth scan that the difference becomes apparent.

Various types of inert chips are available, though almost all have the Contamination Attribute at various ranges and strengths. The chip listed below is a common model, though they can vary greatly depending on the Attributes included in the item. Inert chips are considered Items of Power, and must be purchased as such. Though they are implants, they can be removed or neutralised if the character is captured.

• INERT CHIP •

Attributes

Item of Power 3

Item of Power (Inert Chip) Attributes

Contamination 3 (Easy; Targets 3; Area 3; Spreads bio-memes to other chips; Effects vary, but commonly gives chipped subject a +2 to resist Mind Control; Restriction, Only works against standard ID Chips -3; Restriction, Easy to counteract: uploading a new program erases the old one -2)

Final Cost: 12 Points.

Customisation Notes:

- Inert chips allow for the broadcast of bio-memes from an unorthodox source.
- Emotional conditioning can be achieved through the Mind Control Attribute, with the Restriction: Control is not complete – it guides emotions, not implants commands 2 BP; often it also requires the Activation Time Defect, though the GM may wave this in more cinematic instances.
- Sensory stimulus can be achieved through the Attributes Contamination (making other chips sense whatever the broadcast chip detects, such as through Heightened Senses), Sensory Block, Mind Control, or even Telepathy.
- Pharmacology programming can cause chips to over or under medicate patients. This can be seen as a Special Attack, Sensory Block, or even potentially Nullify. Of course, the target's chip must hold a reservoir of medicine to be affected.
- Memory enhancements can provide (normally short term) Enhanced Mind, Heightened Awareness, or Heightened Senses. They can also be used to remove Defects such as Phobia or Recurring Nightmares.
- Subattentive tutelage can provide up to 3 Levels of Highly Skilled, though no Skill Level can be increased by more than 2 Levels.

Chip Statistics

The following lists the values for both standard and partial-function chips. These are handled as templates that are added to a character that takes the Chipped Defect (see page 336).

A chipped individual can be considered to be constantly affected by whatever abilities the chip possesses, and is at a -8 difficulty to resist suggestions from the chip's programming.

These chips are associated with a Defect, and as such are not considered equipment belonging to the character (except in the case of the custom inert chips, see *Typhoid Mary*, page 338). The character cannot access the information gathered by the chips or tamper with a chip while it is implanted. The Mind Control Attribute represents bio-memes used to control federal citizens. The level of Mind Control in the chip is variable, with different models available for those with varying resistances. Level 5 is the default.

For many Attributes, such as Mind Control or Healing, the Targets PMV is set to 0, for it can only affect the host.

• ID CHIP •

Standard ID Chip Attributes

Heightened Senses 1 (Program Transmissions), Mind Control 5 (Duration 7; Affects host), Special Defence 1 (Negative Emotions), Telepathy 4 [Affects host; Restriction (Does not pick up thoughts from subject, but instead reads and transmits detailed identification, physiological and location data; receives instructions from creators) -2]

Final Cost: 21

Optional Configuration Attributes

Healing 1 (Affects host; Restriction, Only works with neurological or mental illnesses -3, Heightened Senses 1 (Program Transmissions), Mind Control 5 (Duration 7; Affects host), Special Defence 1 (Negative Emotions), Telepathy 4 (Affects host; Restriction, Does not pick up thoughts from subject, but instead reads and transmits detailed identification, physiological and location data; receives instructions from creators -2)

Final Cost: 22

Partially Functional ID Chip Attributes

Special Defence 1 (Negative Emotions), Telepathy 4 (Affects host; Restriction, Does not pick up thoughts from subject, but instead reads and transmits detailed identification, physiological and location data -1)

Final Cost: 4

Neural Neutralisers

These items fit like collars around the neck, with a latch on the back that can only be unlocked by using a special key. Once in place, neural neutralisers attach directly through the surface port to the chip itself, overriding its standard functions. Targets affected by neural neutralisers must make a Mind Stat check, with a -10 modifier to resist. If the character fails, he or she is rendered docile and passive, and will be incapable of aggressive action. Major Gadget.

Sniffers

These tools are used by all major groups in "Daedalus," resistance, mercenaries, and government alike. Rather than inanimate objects, these are chipped specially trained animals. They can be birds, dogs, or any animal that can be easily trained and transported. Dogs and birds are the most popular. While they are called sniffers, they don't actually sniff anything. Instead, they've been trained to recognise specific frequencies outside the range of human perception — Heightened Senses (Electromagnetic) — and to track those broadcasts down to their source. Major Gadget.

Themes and Adventure Hooks

"Daedalus" has a number of tried and true cyberpunk themes at its heart: the struggle for man's humanity; the fusion between technology and human and the resulting dissonance that creates; the erosion of inter-personal relationships; the betrayal of the individual by the system; the worth of free will in a morally bankrupt world. Corporate imperialism is no longer the major bogeyman, but the average person's insidious acceptance of the will of the authorities as something "for their own good," is still as strong as ever, as is the isolation and emotional numbing that comes from constantly struggling against the status quo. The fight of the individual against society, and what that individual is willing to do to maintain his self-determination, is at the heart of this setting — following in the footsteps of some illustrious literary and gaming predecessors.

Games set in "Daedalus" can easily be used to look more deeply into these themes, as well as to just have a good time fighting back against the man. The following adventure hooks are designed to give your game a jump-start into this world, as well as allowing you to focus on a specific cyberpunk concept.

Alienation

What happens when your chips stop working, and no one knows why? The characters are all normal citizens living their daily lives. One day, for various reasons (injury, illness, sudden implant rejection, mysterious causes) their implants quit working. Some black out and are taken to the hospital, while others may suffer accidents that cause head trauma. Regardless of how they get there, though, they all wake up in the hospital with bandaged heads and a seemingly familiar but now foreign world. How do they deal with the change? Do they seek to regain their old lives, or go in search of new ones?

Tech Overload

Randall Smithson, one of the section leaders of the Warriors of Nature, has contacted La Liberte and other groups in the Western and Central Regional Patrols with information of an alarming nature. It seems that one of their research techs, known as Elijah, has been working on creating an effective EMP for use against chipped federal agents. He received word a few months ago that his granddaughter died during an implant procedure and that seemed to drive him over the edge. He left the Warriors of Nature, taking his research with him, and vanished into the wilderness.

Now, the Warriors of Nature have received a strange one-line message that is purportedly from him. It reads, "4/12, Sarah's birthday — They and their drones will pay." That's two weeks from now. The Luddites believe that he plans to set off an EMP in an urban centre that day, potentially injuring or killing thousands of innocents. Can he be stopped in time? Should he be?

Fight the Power

Bryn Keung, a charismatic member of La Liberte, has been trying to gather support recently for a strike against Daedalus itself. She argues that without striking at the head of the problem, the resistance movements have no hope of winning against the federal government. She's getting some support, and the political stress this is causing between the line troops and the command structure is threatening to cause a rift in the organisation. There are those who believe that Bryn is a Daedalus plant, however — an undercover agent designed to infiltrate and spread dissent through the ranks. Who's right, and who is covering up?

The Fall of Icarus

Renee Bonnevie, renowned author and playwright, has been played up in the media of late, both for dating a powerful senator and as an ardent supporter of the federal government. She is the leading media darling, and has recently taken on the role of spokesperson for the Federal Citizenship Initiative, a program designed to push for the "reclamation" of non-citizens and the immunisation of children.

Renee hides a potentially ruinous secret, however: her sibling is among the resistance, and Renee still communicates with him/her when she can. The characters stumble across this secret (perhaps one of them is Renee's brother/sister), and have a choice to make. Will they bring down a Daedalus figurehead and risk hurting one of their own in the process, or will they allow Daedalus to continue with its patriotic reign of terror?

• Zenia •

Sim-Spinner; 110 Character Points

Stats: Body 4, Mind 11, Soul 7, ACV 7, DCV 10, Health Points 55, Shock 11

Attributes: Defence Combat Mastery 5, Extra Defences 1, Divine Relationship 2, Gadgets (Deck, sim-recorder, media creation program, portable broadcast equipment) 5, Gadgeteer 2, Highly Skilled 5, Item of Power (Inert Chip) 3,Mind Control (Only with chipped humans; Duration 3; Targets 1; Restriction, Only with proper equipment, 2 BP; Restriction, Control is not complete; guides emotions only, 2 BP; Restriction, Target must be able to view media broadcast without distraction, 2 BP) 3, Mind Shield 3, Organisational Ties (La Liberte) 6, Sixth Sense (Use of Mind Control; Area 3) 1

Enhancements: Inert Chip (Scramble 2: Identity, biometrics; Restriction: only lasts for 1 hour, 1 BP; Heightened Senses 1: Radio Reception; Sensory Block 2, audio/video detection, Area 3, Duration 4) 15 Points.

Skills: Computers (Programming) 4, Cultural Arts (Advertising) 4, Electronics (Communications) 4, Interrogation (Psychological) 1, Power Usage (Mind Control) 2, Social Sciences (Psychology) 2, Visual Arts (Sim) 2, Ranged Defence (Personal) 1

Defects: Ism (No chip; Outsider) 3 BP, Wanted 2 BP

• JACE •

Ninia Tech; 105 Character Points

Stats: Body 9, Mind 9, Soul 6, ACV 11, DCV 8, Health Points 75, Shock 15

Attributes: Attack Combat Mastery 4, Combat Technique (Accuracy, Blind Shooting, Concealment, Weapons Encyclopaedia) 4, Defence Combat Mastery 2, Extra Defences 1. Gadaeteer 2, Gadgets 5, Highly Skilled 8, Heightened Awareness 5, Item of Power (Inert Chip) 1, Organisational Ties (La Liberte) 6

Enhancements: Inert Chip (Scramble 2: Identity, biometrics; Restriction: only lasts for 1 hour, 1 BP) 5 Points

Skills: Buralary (Breaking-and-Entering) 4, Climbing (Walls) 2. Computers (Intrusion/Security) 3, Demolitions (Artificial Structures) 4. Electronics (Security) 3, Mechanics (Gunsmith) 3, Stealth (Camoflague) 3, Gun Combat (Pistol) 2, Ranged Defence (Personal) 1

Defects: Significant Other (Amanda) 1 BP, Wanted 2 BP

• CAMILLA WASKOWSKI •

Suit; Technopeasant; 75 Character Points

Stats: Body 5, Mind 9, Soul 7, ACV 9, DCV 6, Health 60, Shock 12

Attributes: Attack Combat Mastery 2, Defence Combat Mastery 1, Gadgeteer (Restriction, Programs and computer, 1 BP) 1,Gadgets (Various, computer hardware, vehicles, etc.; Conditional Ownership 1 BP) 4, Henchmen (Software) 3, Heightened Awareness 3, Highly Skill 5, Organisational Ties (Domestic Bureau) 4, Wealth 1

Enhancements: Standard ID Chip: Heightened Senses (Program Transmissions) 1, Mind Control (Duration 7) 5, Special Defence (Negative Emotions) 1, Telepathy (Restriction, only targets host) 4

Skills: Area Knowledge (Downtown) 1, Computers (Database, Intrusion/Security) 2, Etiquette (Upper Class) 2, Forgery (Electronic Documents) 2, Gaming (Military Simulations) 1, Interrogation (Drugs) 2, Intimidation (Political) 2, Languages (Any two) 2, Law (Political) 2, Management & Administration (Government) 2, Performing Arts (Public Speaking) 2, Street Sense (Territorial Divisions) 2, Urban Tracking (Corporate) 2

Defects: Chipped 6 BP, Owned (Domestic Bureau) 1 BP, Red Tape 1 BP

• CAPTAIN ULYSESSES • BRADON

Duke; 100 Character Points

Stats: Body 10, Mind 10, Soul 3, ACV 13, DCV 9, Health Points 65, Shock 23

Attributes: Attack Combat Mastery 6, Combat Technique 6 (Accuracy x2, Hardboiled, Lighting Reflexes x2, Weapons Encyclopaedia), Defence Combat Mastery 4, Gadgets 4 (Various weapons and armour, such as tactical armour, assault rifle, and automatic shotgun), Heightened Awareness 3, Highly Skilled 5, Massive Damage (Guns) 1, Organisational Ties (Regional Patrol Commander: Central Region) 6

Enhancements: Standard ID Chip: Heightened Senses (Program Transmissions) 1, Mind Control (Duration 7) 5, Special Defence (Negative Emotions) 1, Telepathy (Restriction, only targets host) 4

Skills: Acrobatics (Balance) 1, Intimidation (Street) 1, Military Sciences (Tactics) 2. Stealth (Silent Movement) 2, Urban Tracking (Residential) 2, Gun Combat (Rifle) 2, Ranged Defence (Personal) 2, Unarmed Attack (Strikes) 2, Unarmed Defence (Strikes) 2

Defects: Chipped 6 BP, Owned (Regional Patrol) 2 BP

• MEMORY ALTERATION • MACHINE

This device consists of a chip reader (to monitor the patient's chip) and a chip transmitter, as well as deck, outfitted with appropriate bio-memes and instructions.

It can operate within a range of 1 metre.

While a bit primitive, and not capable of a great deal of finesse, when combined with emotional manipulation from the chip, it can be extremely effective. The subject must have a working chip.

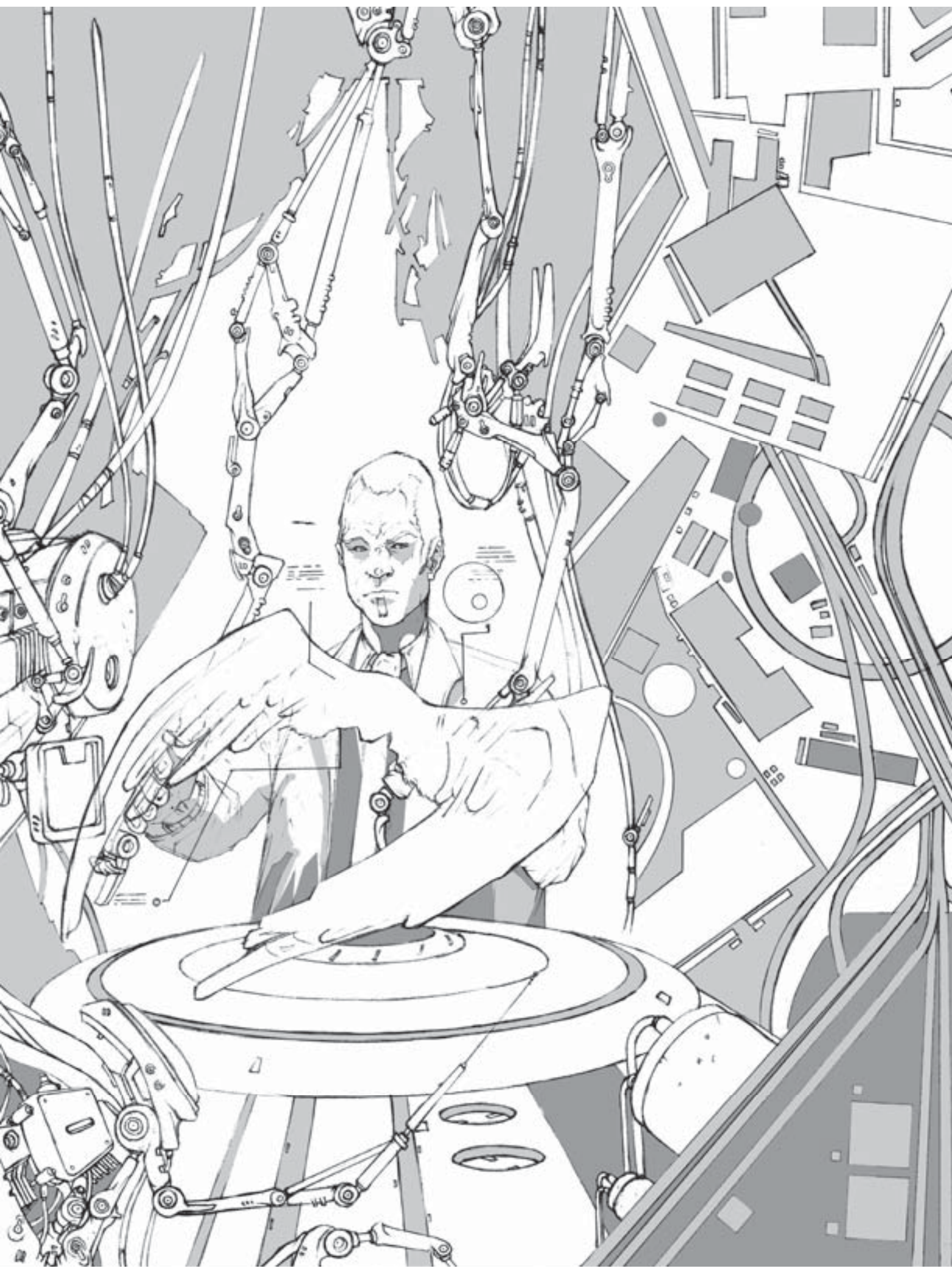
Attributes

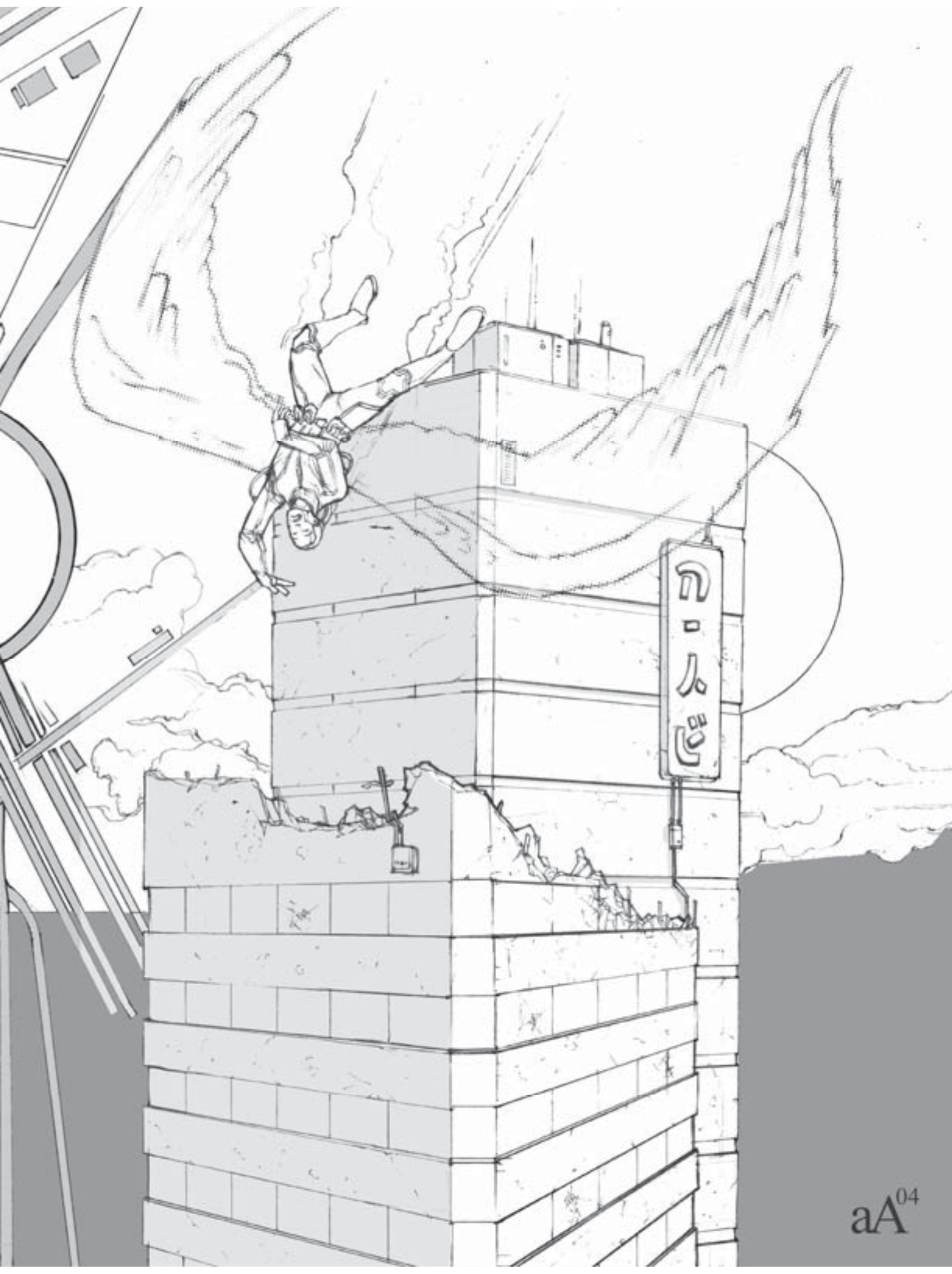
Item of Power 2

Item of Power (Memory-Alteration Machine) Attributes

Telepathy 8; Only people with working chips; Area 2, Targets 1; Activation Time (1 hour) -6, Concentration -3, Restriction (Requires Social Sciences: Psychology Skill check) -1, Restriction (Requires a deck, or equally powerful computer) -1]

Final Cost: 6 Points





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4 1970s, Recycled Doomsaying, Mark I:
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Appendix
Author Bios

Bruce Baugh



I live in the Pacific Northwest, much preferring the cool wet weather to the Southern California heat and smog I grew up with. I've been writing full-time in role-playing games since 1997, and have enjoyed getting paid to write about ghosts and vampires and girls who are the incarnation of the Internet and a whole lot more; my inner thirteen-year-old thinks this is the coolest job ever.

Whenever a fad passes, there's a period of overt reaction to it, and then neglect, and then the chance to appreciate it again in a different light. *Ex Machina* came along just as I was doing that with cyberpunk, and realizing that more of the fundamental motifs still apply than they're sometimes given credit for. I also wanted to run wild with extrapolations based on more recent technology and social speculation. So this was very much the right project at the right time for me. Rather than try to bring the early '80s back again, I hope that we've brought the sense of cutting edges, cool style, and harsh moral choices forward to be vivid again in these new contexts.

Rebecca Borgstrom



Rebecca Borgstrom is a freelance writer living in Seattle. She wrote the Nobilis RPG and has contributed substantially to the Exalted and In Nomine product lines. She updates http://rebecca.hitherby.com with new short fiction 20+ days a month. She plays the piano poorly, draws poorly, and sings soprano in a fashion arguably reminiscent of an alien horror. She drinks tea every morning with her landlady, attends an anime showing at a friend's house every week, exercises on the treadmill, and is no longer insanely impoverished. Her idol is Jack Vance. She can't quite remember what she did last year before months of hard labour in the role-playing game wordmines, but assumes it was incredibly exciting and would have all of your mouths dropping open with awe. She's actually done some notable stuff, too, but it would take too long to explain.

You'll have to guess!

Christian Gossett & Bradley J. Kayl





Christian Gossett has been an award winning illustrator and writer since childhood; professional by age nineteen. In 1994, working on *Tales of the Jedi* Gossett's work helped define the Old Republic itself. Gossett submitted the first ever concept drawing of a double-edged lightsabre to George Lucas in 1994. This design was approved by Lucas himself, and would later be made famous by Darth Maul in *The Phantom Menace*. Gossett is also the creator of *The Red Star* a Mythology of the Soviet Union that will see the release of its first videogame for the XBOX and PS2 in September, 2004.

Brad Kayl graduated from California State University at Northridge with a degree in Environmental Biology, and as a lifetime member of the Golden Key National Honors Society. Incorporating his knowledge of the physical world with his interest in the abstract, he has achieved success as an internationally published author in fields ranging from graphic novels to short stories and poetry. He has written for Archangel Studios (*Assassin*, *The Red Star*, *Dramatis Personae*), Chaos Comics, Marvel Entertainment, Humanoids Publishing, and of course Guardians of Order (*Path of the Just*, *Ex Machina*). Currently, he is working on a scathing parody of the Bush administration entitled Tex.

Michelle Lyons



When I started writing "Daedalus," I thought I was taking a few strong elements from current events and spinning them off 90 degrees from reality. As I read over it again, months later, I find it seems to hit much closer to a real-world target than I ever intended. While I find this worrisome, as "Daedalus" is not a world or a place in which I'd want to live, I'm also very proud of it. It isn't a world that hits you over the head defining right and wrong. It's a subtle form of cyberpunk, forcing players to make choices along a spectrum of grey; is being on the Outside virtuous or just rebellious? Is it envy or righteousness that drives the resistance? Are those who live under the rule of Daedalus bad people, or simply willing to make compromises to get what they desire?

I don't have an answer for that. And that's probably the scariest thing of all.

Michelle Lyons is a freelance writer and editor who has worked in the RPG industry since 2000. She got her start as a full-time editor for FASA Corporation, after leaving behind the world of tech support forever. She has worked with Fantasy Flight, FanPro, FASA, Guardians of Order, White Wolf, and Wizards of the Coast, among others. Her recent credits include *Ex Machina*, *Races of Stone*, *Orpheus: Shades of Grey*, *Slayers D20*, and *Ultimate Adversaries* (for the *Star Wars RPG*). She is married with two sons, and lives in southwest Oklahoma.

EX MACHINA
Tri-Stat Cyberpunk Genre

CHARACTER SHEET

Character Information

Player's Name: _____ GM's Name: _____
Character Name: _____
Affiliations: _____
Occupation: _____ Territory: _____
Age: _____ Gender: _____ Height: _____ Weight: _____
Physical Description: _____

Statistical Information

Character Points: _____ Skill Points: _____
Advancement Points Earned: _____ Unused Advancement Points: _____

Body	Mind	Soul	Health Points	Shock	ACV	DCV

Damage Percentage

2d8 Dice Roll	Damage percentage
2-4	100% Maximum Damage
5-8	75% Maximum Damage
9-13	50% Maximum Damage
14-16	25% Maximum Damage

Attributes

Attribute	Type	Level	Cost/Level	PMVs	Total Cost	Notes

Skills

Defects

Defect	BP	Notes

Gadgets/Items of Power/Notes

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