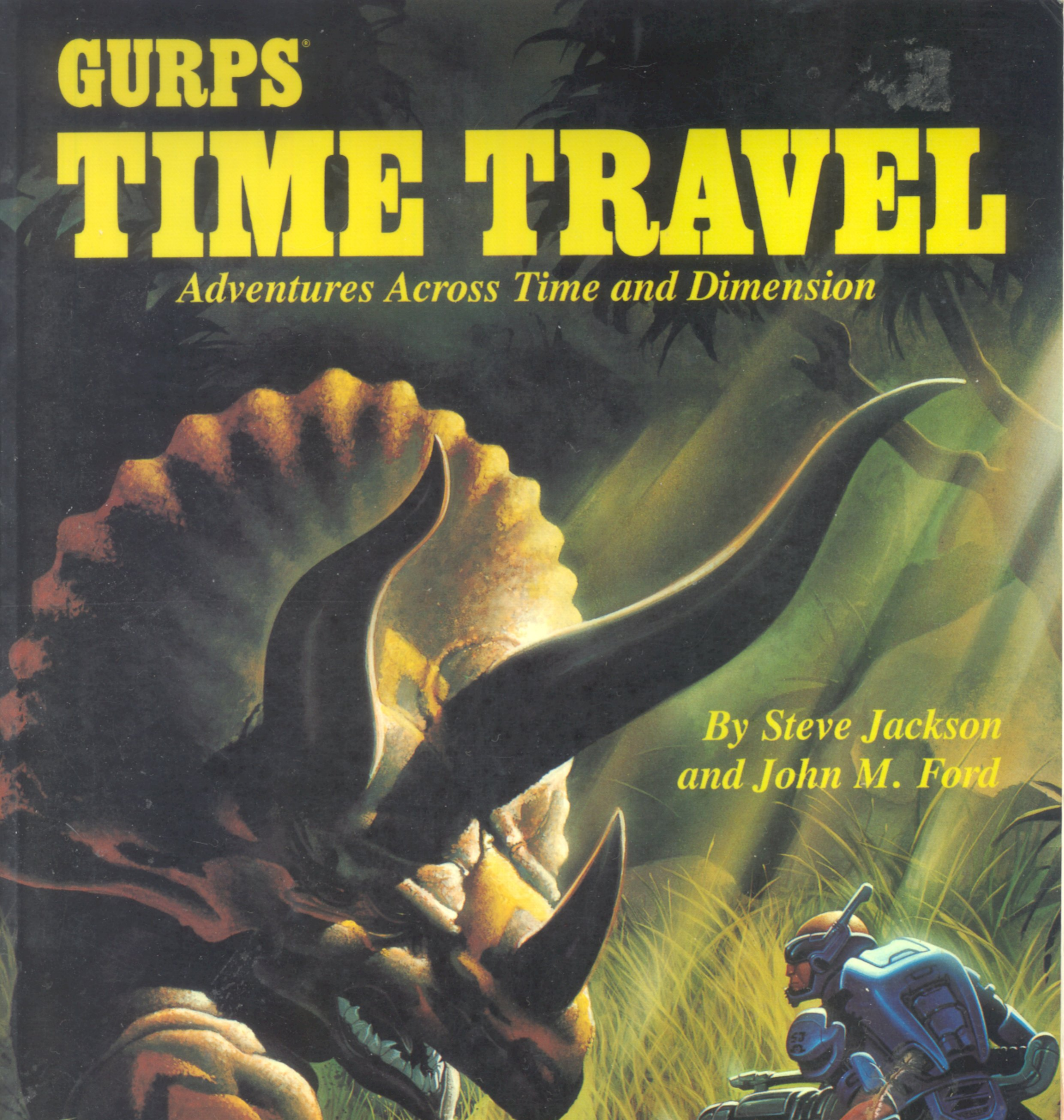
GURPS®

TIME TRAVEL

Adventures Across Time and Dimension



By Steve Jackson and John M. Ford

STEVE JACKSON GAMES

GURPS®

TIME TRAVEL

Adventures Across Dimensions and in the Past

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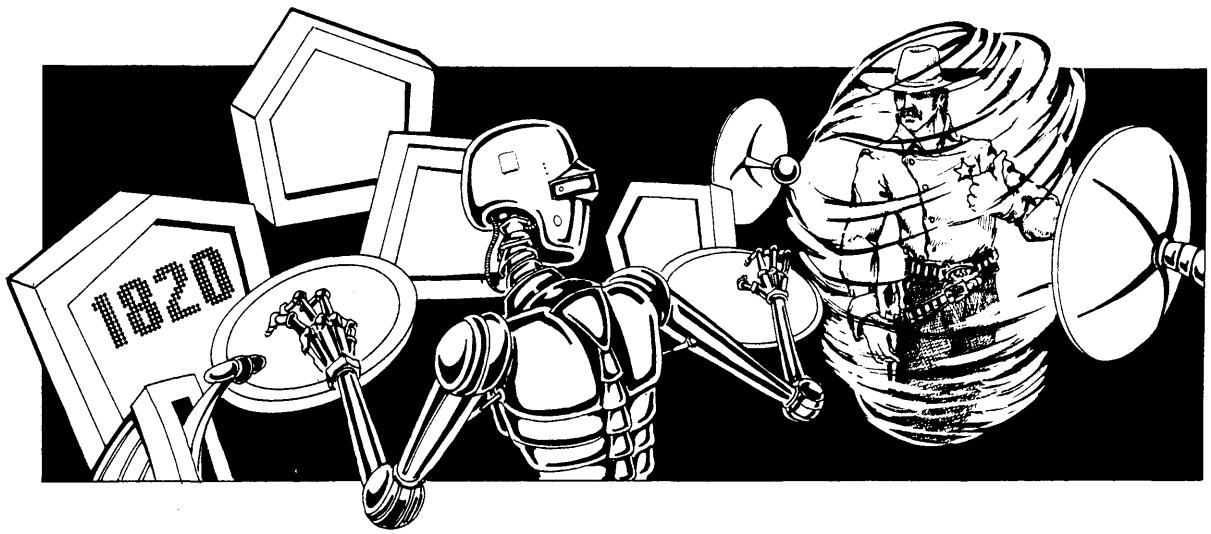
The authors would like to thumb their noses at the Stopwatch agents who, for over three years of our personal time, have frustrated our attempts to finish this book. It's finally done. So there.



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The moving finger writes, and having writ,
Moves on: nor all thy piety or wit
Shall lure it back to cancel half a line,
Nor all thy tears wash out a word of it.
— Omar Khayyam

About GURPS

Steve Jackson Games is committed to full support of the ***GURPS*** system. Our address is Box 18957, Austin, TX 78760. Please include a self-addressed, stamped envelope (SASE) any time you write us! Resources now available include:

Roleplayer. This bimonthly newsletter includes new rules, variants, new races, beasts, information on upcoming releases, scenario ideas and more. Ask your game retailer, or write for subscription information.

New supplements and adventures. We're always working on new material, and we'll be happy to let you know what's available. A current catalog is available for an SASE.

Errata. Everyone makes mistakes, including us — but we do our best to fix our errors. Up-to-date errata sheets for all ***GURPS*** releases, including this book, are always available from SJ Games; be sure to include an SASE with your request.

Q&A. We do our best to answer any game question accompanied by an SASE.

Gamer input. We value your comments. We will consider them, not only for new products, but also when we update this book on later printings!

BBS. For those of you who have computers, SJ Games operates a multiline BBS with discussion areas for several games, including ***GURPS***. Much of the playtest feedback for new products comes from the BBS. It's up 24 hours a day at 512-447-4449, at 300, 1200 or 2400 baud. Give us a call!

Page References

Rules and statistics in this book are specifically for the ***GURPS Basic Set***, Third Edition. Any page reference that begins with a B refers to a page in the ***Basic Set*** — e.g., p. B102 means p. 102 of the ***Basic Set,*** Third Edition.

Everybody Talks About The Past, But Nobody Does Anything About It

Time travel is an intellectual game with overtones of wish-fulfillment, and tying it too closely to the mechanics of the real world is neither productive nor very useful. This is not a criticism of anyone's imaginings, just a practical observation.

Now, before the physicists in the audience can protest, we do indeed know about relativistic effects, Tipler cylinders, and lots of the other proposed ways around the "time barrier." But it's just as easy to argue that there is no "barrier"; there is no place where Alexander and Shakespeare are still physically alive and available for conversations. I certainly can't say that time travel is forever impossible. But I respectfully suggest that one's attitude toward its possibility (my own included) says more about one's own philosophy than about the real world.

So everything that follows is, to one degree or another, fantasy. If I knew how to build a time machine, I'd be on my way back to 1450, to put a couple of gold double eagles in the Medici Bank. When I got home, compound interest would have made me the richest rules writer on earth.

That said, time travel is a *great* fantasy, probably as universal as the dream of flying. I would trade a very great deal to visit Samuel Johnson's London, even though I know very well that it was crowded, filthy, plague-ridden, and stank to high heaven; I would jump at the chance to ride the Orient Express of the 1920s; I would not hesitate to strangle Hitler and Stalin in their cribs.

And great fantasies are what roleplaying is all about.

— John M. Ford

Reeling In The Timeline

This book has been a long time in appearing, for several reasons. The greatest of these, as JMF points out above, is that the whole idea of time travel fails the reality check. And if you make assumptions that give a *chance* of avoiding paradox, you either get unplayable complexity ("Sorry, guys. Come back tomorrow after I resolve this causal loop") or unplayable simplicity ("Whoops. You created a paradox. You don't exist any more and neither does the world you came from").

So the project was not a quick one. We all got very tired of the joke "Why don't you just travel to the future and pick up a copy?" But at long last, it's done: a choice of campaign backgrounds to fit any taste. The PCs become Time Agents, fighting to save their history, with a playable treatment of paradox and history-changing. Or they can just romp through history with gun and camera (or maybe just with very big guns) in one of the other backgrounds.

This book is also aimed at the GM who wants to design a unique time travel campaign. There's a detailed discussion of time travel "theory and practice," with several alternative treatments of causality and paradox, "rubber physics" though they be. And there are alternative campaign frames, too, including some suitable for lower-tech campaigns.

Finally, the bibliography describes several dozen important time-travel and

alternate-world stories (out of *thousands* that have been written), as further sources for inspiration.

But there's more. There's a closely related genre that offers all the fun of time travel with none of the paradoxes: *parallel worlds*. You can travel to a parallel 1905 Germany and strangle little Adolf without creating any paradox at all; it's not *your* past. So this book also includes the "official" ***GURPS*** cross-universe campaign background. This can take the campaign, not just to historical worlds, but to not-quite-historical worlds and outright weird parallels. (And, because the "Keep Them From Changing History" adventure is so popular, we've worked in a variation on that theme: enemies who are trying to change the flow of history on the parallel worlds. Who says you can't have your cake and eat it too?)

Finishing this project meant a lot to us. ***GURPS Time Travel*** is the book that fulfills the original potential of the system! If you like, you can create a super-team from across history and fiction (say, Merlin, Conan, Miyamoto Musashi, Erik the Red and Flamin' Jane) and send them on any mission from any period or any genre.

So one way or another, I'll see you last week.

— Steve Jackson

Alternate Worlds in Other Campaigns

Past times and alternate worlds can also be used for a "change of scenery" in other campaigns that have begun to get too familiar. When powerful characters have conquered everything in sight, saved the world against all comers, and have more wealth than they can spend . . . flip them into an alternate reality where they have no assets but their skills and what they're carrying, and "everything they know is wrong." Homeline allies could be enemies, and vice versa; there might even be alternate versions of the PCs themselves — who might not be heroes!

Some ways to do this are discussed on pp. 10-12. It is entirely up to the GM whether the PCs can ever return, or whether they'll have to carve out a new niche in the new world.

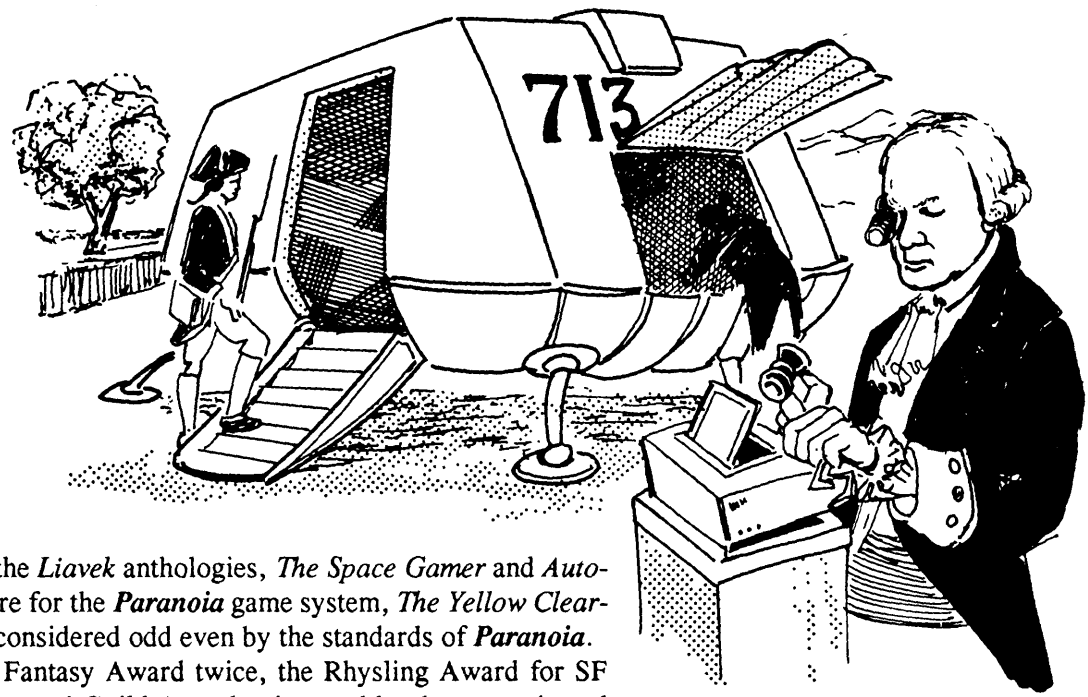
The farthest-out possibility is travel to alternate worlds in which actual physical laws are different; the standard example is the group of modern-day people who find themselves in a heroic fantasy world. This is very much a matter of personal taste (the idea of machine-gunning dragons seems rather unfair, once the novelty wears off). But it is one of the things that ***GURPS*** was designed to make possible.

About the Authors

Steve Jackson has been devouring time-travel and parallel-world science fiction since he was about seven years old, and jumped at the chance to inflict his own contribution on the field.

He is the founder and editor-in-chief of Steve Jackson Games, but, as shown by the present book, occasionally still manages to *write* something. He hopes to do it again soon.

Steve lives in Austin. He enjoys science fiction conventions, gardening, computers, tropical fish, and — oh, yes — gaming.



John M. Ford is the author of more than a dozen books, including the alternate-history novel *The Dragon Waiting*, the multiple time-track story *Fugue State*, and two "Star Trek" novels, *The Final Reflection* and *How Much For Just The Planet?* His next book will be the hard (or maybe semirigid) SF novel *Growing Up Weightless*. His short fiction has appeared all over the place, including *Omni*, the *Liavek* anthologies, *The Space Gamer* and *Autoduel Quarterly*. His adventure for the ***Paranoia*** game system, *The Yellow Clearance Black Box Blues*, was considered odd even by the standards of ***Paranoia***.

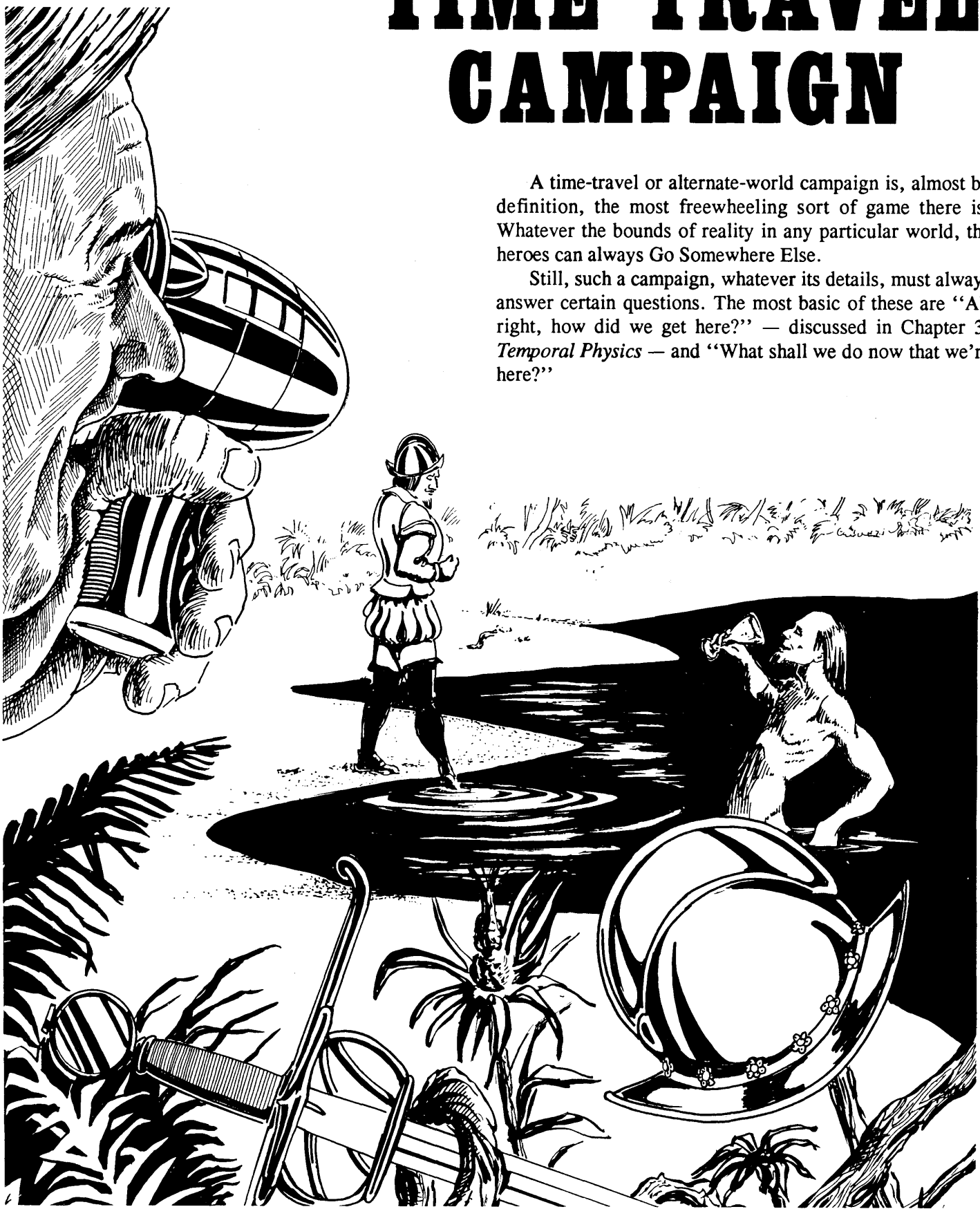
He has won the World Fantasy Award twice, the Rhysling Award for SF poetry once, the Game Designers' Guild Award twice, and has been nominated for a Nebula Award.

He lives in Minneapolis, where the fabric of reality has been worn thin in numerous places.

1 THE TIME TRAVEL CAMPAIGN

A time-travel or alternate-world campaign is, almost by definition, the most freewheeling sort of game there is. Whatever the bounds of reality in any particular world, the heroes can always Go Somewhere Else.

Still, such a campaign, whatever its details, must always answer certain questions. The most basic of these are "All right, how did we get here?" — discussed in Chapter 3, *Temporal Physics* — and "What shall we do now that we're here?"



Roleplaying is about solving problems and taking actions inside a framework of rules. So this book has rules for time travel, of several different flavors. But it's very important to understand that the "laws of time travel" we provide are designed to be (we hope) reasonable and consistent, like any good science fiction. But they're *imaginary,* intended to get the players to use their heads to accomplish their missions. If they don't suit your game or your group, tweak them to fit.

Campaign Plans

On the last two pages of this book are Campaign Plan forms — one for a time-travel campaign, one for an alternate-worlds campaign. The GM will find these very useful. The process of filling out the campaign plan will make sure that all the most important questions are considered in advance. And by giving a copy of the completed plan to each player before the first game session, the GM answers all *their* most important questions at once.

Mission Types

Time travel adventures fall into four general categories. The first three may be actual "missions" in the sense that someone assigned them to the party. But the characters may also find themselves caught up in events by accident, or even tricked by NPCs into performing some sort of dangerous task.

Research Missions

Research missions are sent to find something out: who was Jack the Ripper? Who really wrote the Zinoviev Letter? What happened to the crew of the *Marie Celeste?* Researchers are usually not supposed to change the past; they are supposed to observe, measure, photograph, perhaps even conduct interviews, and then return, without having any effect on the timestream.

By itself, researching isn't very adventurous. Getting into a fight usually means things have gone very badly wrong. But a research mission doesn't have to be dull. The suspense and excitement come, not from a string of combat encounters, but from meeting obstacles (some expected, some by surprise) in the path of getting the data and getting back with it.

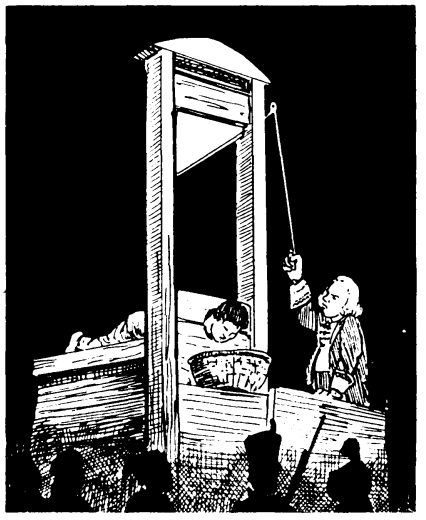
Often, the PC party will not be cast in the role of researchers, but of guards and guides to the researchers. The scientists themselves may have hidden goals or personalities that endanger the mission.

Cross-time or cross-world *espionage* is a special category of research which *can* quickly become dangerous, since the spies may be opposed, not only by "native" security troops and counterespionage, but also by opponents from their own time or world.

Repair Missions

Repair missions have the specific objective of making changes to the timestream. Assuming the characters are the "good guys," this usually means that the past has already been altered, by enemy action or accident, and has to be returned to normal. There are other possibilities, however. The travelers may be present at a historical event — say, on campaign with Julius Caesar in Gaul — in which the outcome of the larger campaign is known, but individual, unrecorded skirmishes may have unknown results. Or the team may be "agents in place," guarding a historical divergence point such as the Normandy invasion against interference by enemy agents.

Or the status quo may be intolerable to the time travelers — say, a small group of researchers discovers a time-gate, and hopes to use it to overthrow the oppressive regime.



The Bad Old Good Old Days

"The past is another country; they do things differently there." There are many everyday details of historical life that we would find distasteful, barbaric, horrifying. Description of such details — the crowding and smell of a city street before modern plumbing, for instance — is necessary and useful in making the players accept the environment as "the past," and not just a Hollywood imitation.

Unpleasant details are also useful plot and characterization devices. A group of travelers confronted by a bullying nobleman might follow their natural impulse to teach him a lesson — only to find themselves hip-deep in trouble for it. Someone who loves horses might gain points for demanding that a drunken coachman stop whipping his animals — and even more points if he found a way to do it that would not offend the customs of the time.

But, as with any other device, don't overdo it. A little of the griminess of medieval towns, or the horrors of the Inquisition, or the mistreatment of one class or race by another, goes a long way, no matter how historically correct it is. If the GM constantly describes cruelty and abuses that the characters cannot stop without endangering their mission, the players will quite rightly start to think that they are the ones being provoked. Just say something like, "There's a crowd gathered to cheer the public flogging — but you're professionals; you just look past and keep on walking."

Magic in History

In the past, people believed in magic. Some still do. There are several approaches to including magic in a time-travel campaign:

∞ Assume that magic is very secret, but real, and available to player characters with the right connections, as in ***GURPS Horror***.

∞ Assume that mana, the energy behind magic, has become depleted in modern times; but centuries ago it was strong, and wizards' powers (some wizards', anyway) were real. The PCs may or may not be able to learn magic; its reality may come as a terrible shock the first time they encounter it.

∞ Magic does not in fact function in "our" world, but the time machine can reach parallel worlds where it does.

∞ Magic is and was fake: either conjuring tricks done by a local pretending to be a wizard, or other time travelers using high-tech gadgets to simulate magic powers (usually for nefarious purposes).

Continued on next page . . .

In the alternate-worlds background presented in Chapter 7, a party may be sent on a "repair mission" to undo sabotage by the agents of Centrum. This is not time travel — in that background, they can't undo the past — but an attempt to re-direct the events of the present into the kind of sequence they would have taken without the original interference.

Recovery Missions

Recovery missions are sent to bring something back (forward?) from the past, either for temporary study (in which case another mission may be necessary to replace it) or to save it from destruction. The agents may need to plant a copy of the item, or otherwise create a diversion from the burglary; sometimes, history itself — the eruption of Mt. Vesuvius, the Chicago Fire, the bombing of Berlin — may cover their tracks.

Time thieves, of course, are also on a "recovery" mission! They may face the additional hazard of law enforcement from their own world, especially if their thefts have the potential to change history.

A specific and challenging type of recovery is the *rescue* of an individual who history says is dead. Time-travel organizations recruit some of their best agents this way. Rescues work equally well in a historical "echo" world (see Chapter 7) where someone's death can be predicted accurately.

In an alternate-worlds campaign, actual trade and exploration missions will become possible.

Survival

A fourth type of adventure is the non-mission, in which the travelers had no intention of visiting another time or another world (at least, not the one they arrived at). Their problem is simply to survive. There may be a hope of rescue, or they may be doomed to live their lives in the past.

Depending on the physics of the situation and their particular resources, their best strategy might be to blend in and not make waves, or to set themselves up as teachers, magicians or gods. See *Expatriate,* p. 22.

Mission Control

Remember *The Time Tunnel*? While the two heroes were lost in the past, trying to prevent stock-footage disasters, the Tunnel technicians were digging through their files and throwing switches on their blinking consoles, trying to help them out. (Well, it was two technicians and a General. It was a low-budget show.) How about *Search*? The field agent carried an implant radio and a button-sized TV camera that kept him constantly wired into a roomful of database analysts, language experts, medical monitors, and so forth; at least, as long as nothing went wrong with the equipment.

Handled with some restraint, the idea of Mission Control works very well in a roleplaying campaign. In fact, it solves one major background problem: the agents no longer have to know absolutely everything about all of history. They still have to have basic area knowledge — especially if the link goes out — but Control can provide on-the-spot information.

The suggested limits are:

Only information moves, not objects. Control can receive pictures, and possibly transmit them (useful for sending maps), but if the agents run out of bullets, they're out of luck.

Establish search times. However long it takes Control to find the answer to the agents' question is the amount of time that passes in the field before the answer is received. The limiting factor is then not whether the information exists, but whether it can be recovered in time to be any use.

Some information isn't available. If no one drew floor plans of a building, and the building no longer stands, the team will just have to search it the hard way.

Control and Research in a Parallel-World Campaign

In a campaign in which, instead of time travel, the agents are traveling between parallel worlds, the job of Control becomes different. On the one hand, nobody can be *sure* what will happen next in the parallel world. It may seem similar to our history, but nobody really knows for sure.

On the other hand, if there are lots of similar parallel worlds, some types of research become much easier. If the agents must free a comrade held in tightly-guarded Castle Wolfram, Control need only dispatch a team to a similar timeline where Castle Wolfram lies empty. Presto . . . complete and accurate maps — they hope. (Of course, this only works when there are *lots* of very similar timelines. In the cosmos of Infinity Unlimited, described in Chapter 7, this kind of trick could be used for research on the "echo" timelines, but very few of the others are similar enough to make it worthwhile. And the echoes have their own hazards!)

Magic in History (Continued)

Using "real" magic requires a magic system, either "limited" (as described in ***GURPS Horror***) or "full" (as in ***GURPS Magic***). For maximum "realism," if magic is a surprise to the characters, the *players* should not know the magic rules in the beginning!

One last note: if PCs are thrown all unknowing into a situation where magic works, it can make the game much more interesting if one or more of them has, all unknowing, the advantage of Magical Aptitude! The more so if there is a chance that magic will still work "back home." If the GM does this, then, to be fair, he should consider giving each of the other characters some advantage the *player* doesn't know about.

Time Travel in the Magical Campaign

Of course, if the campaign *starts* in a magical world, there's no question that magic exists. The question is "Does it also exist in other worlds and times, and in what form?"

The simplest answer is to say that magic does exist on some worlds, and doesn't on others, depending entirely on their mana level. Where it does exist, it always works about the same way, though different spells may be known in different worlds. And mana can change over time . . . a medieval wizard might be disappointed to see how little mana is left in the 20th century.

A more complex but more interesting answer, especially in an alternate-worlds campaign, is to say that magic can be completely different in some worlds! This is especially good for the GM who likes to experiment with variant systems — see ***GURPS Magic,*** the upcoming ***Grimoire*** and back issues of *Roleplayer* for some ideas.

In that case, magic-using travelers will have to adapt quickly. Maybe their magic is valid in the new world — in which case they will attract a lot of attention. And maybe it doesn't work at all — in which case, to remain wizards, they'll have to start their training all over again.

See p. 47 for a magical Time Travel spell. Magic "Gates" to parallel worlds can be created by a similar spell, or just allowed by GM fiat.

Turning A Historical Campaign Into Time Travel

The Timepiece campaign rules assume that the PCs, and their organization, live at the Absolute Now. Most other time-traveling campaigns will involve meddlers from the future, visiting the past. But this doesn't have to be true, especially at the beginning of a campaign.

Time Travelers as the Enemy

For instance, a Cliffhangers or Espionage campaign could start with the PCs investigating mysterious thefts and disappearances. The culprits, of course, are from the future; the PCs live in their foes' past. How can you deal with thieves who know the future? It's not easy . . . but remember, they can't know their *own* future.

As the adventure develops, the PCs may be contacted by other time travelers; if they were originally fighting Jumpers or other independents, they may be recruited by the official "time patrol" — or vice versa! Since future time agents has no respect at all for past-time regulations, an agent on a mission may seem like a real criminal. If he recovers a painting from a museum that's set to burn down, recruits a policeman who would otherwise have been burned beyond recognition in a car wreck, and eliminates an enemy time agent, he's just committed grand theft, kidnapping and murder. Naturally the local police will want to talk to him!

Eventually, the PCs could become full-fledged time travelers, recruited and trained by some group from their future. They could wind up either traveling through time or staying in their home time as agents-in-place.

Wonder What This Gadget Does?

It's also simple to turn any campaign into a crossworld or crosstime romp just by letting the PCs find a time gate (see p. 11) or any sort of time machine. Plan its limitations carefully, in advance, because PCs are *very* ingenious!

The Hardware Dilemma and the Software Mismatch: or, Why the Biggest Problem Isn't So Big

The future can hit the past pretty hard. Imagine the effects of a squad of modern NATO infantry, with their assault rifles, grenade launchers, Kevlar body armor, and so on, against a Roman legion. Add in some mortars or medium machine guns, never mind vehicles, and it gets even grimmer. Military analysts Trevor and Ernest Dupuy, attempting to calculate the "absolute lethality" of weapons, have concluded that a rifle is *hundreds* of times more deadly than a sword.

Because of this imbalance, most game approaches to time travel have tried to come up with some mechanical limitation on the firepower that time-tripping characters may carry into the past. (One rarely sees contemporary characters going into the future and being mown down by combat lasers.) Sometimes the travelers are forbidden to carry metal, or an arbitrary "energy scale" (like the Dupuys' numbers) is imposed.

But this misses the point: the difficulty is not one of controlling hardware, but matching software — making certain that the Game Master's intentions suit the expectations of the players.

If what the players really want to do is face off with SMGs against Legionaries, then any arbitrary rules designed to prevent them are going to be resented and dodged. Conversely, if the players are interested in solving historical mysteries with as little violence as possible — and when it's necessary to fight, meeting the opponents on their own terms, sword to sword, rather than simply blowing them away with futuristic firepower — then a lot of restrictions aren't necessary; the Time Service (the GM) simply says "it's important that you possess or do nothing that would give you away as time travelers," and that's that.

This is not an argument that one sort of play is "better" than another (though problem-solving is more interesting than gunfights, and will get more attention in this book). It is an argument that the GM and his players need to agree on the sorts of things they want to happen in the game, before launching into adventures.

The campaigns given in this book offer both kinds of approach. In "Eternity's Rangers" (p. 69), you *can* use high-tech hardware to blow away the natives — at least, some of the time. In "Infinite Worlds" (Chapter 7), anything goes in some worlds . . . but in others, changing the timeflow will make it very hard for the travelers to get home.

Through the Rabbit-Hole

One important sub-genre of cross-world or cross-time adventure is that in which the heroes have access to a "gate" between two worlds — and only two. Sometimes they don't even control the gate . . . they just fall (or are pushed) into another world. That is still enough for high adventure!

This book doesn't include any detailed backgrounds for that type of adventure. Instead, we'll offer some general discussion, confident that the GM who likes the idea will be able to create all the details he needs. That's because paradoxes, gadgetry and so on are much less important. What's important is what happened: the party was *here*, and now they're *there*. What do they do next?

Accidental Transport

The party is pulled across time or into another world by forces beyond their control. They'll probably never be able to get back, because they'll probably never understand what happened to them.

The ***GURPS Fantasy*** world of Yrth contains this sort of effect. The magical "Banestorm" has been snatching people from our Earth for hundreds of years, singly and in groups, and bringing them to Yrth. It could happen to the party tomorrow . . .

The "Unstuck In Time" sidebar describes a campaign where this happens over, and over, and over . . .

Alternatively, the party could be given some *very short* warning that they are about to be taken to another time or world, perhaps never to return. What will they do in their last day on Earth? What will they pack?

Summonings

Perhaps the party's transport was deliberate . . . but not on *their* part. They've been snatched from their own time, by magical or ultra-tech means, to perform some mission. Maybe it's fairly trivial (the wizard just needed hirelings with specific talents). Maybe it's apocalyptic (only they can save the universe).

This works well with a Crosstime Recruitment gimmick. The campaign is based in any familiar genre — fantasy, space, whatever — but the characters may be drawn from anywhere! Whoever brought them together wanted certain specific talents, and got them. A party might consist of a Roman legionnaire, plucked from a random battlefield, a Victorian mathematician, a Roaring '20s private eye, a cop from the streets of New York in 2010, and an android artist from 2200. A lot of the playing time will be spent just letting the characters interact!

Gates

A special and limited kind of cross-universe campaign can be created by using *gates*. A gate is a portal to . . . somewhere else. One or both sides may be portable. A gate may work all the time, or only part of the time, or only when someone says the code-word . . . Gates may be technological, magical, natural, or just *there*. Since the creators of a gate would be at Tech Level 15 or better, it is usually best for the campaign if the gate, or gates, simply exist, with no real

Crosstime Recruitment: Horror

Larger than a dozen planets, a dark cloud of Probability Particles has enveloped Earth. Strange gates, closed before man emerged from the Stone Age, are now reopening. Dark creatures, beings from feverish hallucinations and drug-induced nightmares, emerge from the opened portals to feast upon the soft flesh of mankind. Other doors open, snatching beings through time itself. Only those who have fallen through time's void are completely immune to the mind-numbing psychic powers of the dire beasts! The mixed bag of adventurers is drafted into the ongoing battle to save the Earth.

Unstuck in Time

Somewhere, somewhen, somehow, something has gone horribly wrong . . .

In this campaign the characters are a random assortment of ordinary folks (from one time and place or several) who have, for reasons completely mysterious to them, been pulled out of their own era(s) and cast adrift in the timestream. One moment they're going normally about their business, then suddenly they find themselves in ancient Sparta, or the Bolshevik revolution, or Charlemagne's court, or . . .?

At random intervals thereafter (though usually at the end of an adventure), the group will shift (all at the same time) to a new time and place. They have *absolutely no control* over their jumps, and take with them only what they are carrying at the moment — to give the poor sucker who shifts while he's in the shower a fair shot, after the second or third shift the GM may allow the PCs to feel a "tingling sensation," which gives them 3d minutes warning when a shift is imminent.

The travelers cannot consciously choose to bring a new individual along with them, but the effect can be "catching," in a random and unpredictable way, allowing the introduction of new PCs, or the inclusion of a particularly interesting NPC in more than one adventure.

Continued on next page . . .

Unstuck in Time (Continued)

The catchword in such a campaign is "keep them guessing." The PCs should have no idea whatsoever when and where they're going to, how long before they go, what they will have to do there, or (most importantly) *what in the world is going on.* Sometimes it *almost* seems like there's some bizarre pattern to the jumps, other times it seems like they're caught in some cosmic blender set on "puree."

The GM may give them a clue or two to start out . . . that secret government research lab on the edge of town, the hovering UFO that they sighted before the first jump, a half-remembered but terrifying dream, an earthquake . . . Or he can leave them totally in the dark.

This campaign is almost completely immune from those pesky temporal tricks and paradoxes that a clever player can bedevil a poor GM with. Minor arbitrary controls and fixes are rendered obsolete by the *big* arbitrary fix of the GM's absolute control over the party's jumps. Also, the GM never has to worry that the adventurers will hop to a period or place that he feels unprepared to referee. Paradoxes can be allowed or disallowed at the GM's whim.

The drawback here is that players like to feel they have some kind of control. The random and arbitrary nature of the campaign may quickly become an annoyance. The first requirement for making an "unstuck in time" campaign work is to have a good GM who does his historical homework and knows how to keep things moving, and good, flexible, patient players with a sense of humor. It also helps if, eventually, there's some explanation for the party's temporal incontinence (the GM doesn't have to know what the reason is at the start of the campaign, just that there *is* a reason), and let the PCs piece the reason together, bit by bit. This gives them a tangible, achievable goal. When they finally do figure out what's going on, the GM may either 1) return them home and end the campaign, 2) settle them in some particularly adventure-rich era for an ongoing campaign there, or 3) give the time travelers control over their powers.

explanation. The PCs stumble onto, and through, a gate, and what they do next is up to them!

This device works well with the "players as PCs" gimmick. If *you* found an alternate dimension in *your* closet, would you go in? Who would you tell about it? What would you take?

Time Gates

A time gate exists in two times at once. Anyone who travels through one side of the gate comes out in the other time — and possibly in another place as well. A gate might come into being, say, between Lourdes Cathedral in 1850 and the bathroom of a Chicago tenement in 1990. It will last 20 years, until the tenement is torn down. During that time, anyone can step through that closet door and be in Lourdes *precisely* 140 years, 19 days and 6 hours earlier, and vice versa.

World Gates

A world gate is simply a connection between two parallel (or not-so-parallel) worlds. Depending on what worlds it connects, it can be incredibly valuable, a mere curiosity, or totally worthless. Any worlds can be connected; the heroes of a ***Cliffhangers*** campaign could explore an ancient temple and find a gate to the prehistoric world, or the era of ***Swashbucklers,*** or medieval Japan, or modern/medieval Yrth . . .

A world gate can be used to make a permanent change in a campaign, or it can open once, for a single adventure, and then close again. The PCs will be able to keep whatever items, knowledge or companions they picked up on the other side. (Or, if they're on the other side when the gate closes, they're stuck in a new world.)

If several world gates connect to the same place, a "portal dimension" (p. 78) is formed.

One-Way to the Future: Time Stasis

This is a different sort of campaign, though it has much in common with the rest of the "thrown into a strange world" genre. The basic assumption is that the hero, or heroes, are somehow frozen (perhaps literally) and awaken in the far future. This future can fit any sort of genre . . . up to and including fantasy. In a million years, after all, magic might be loosed on the world!

If a campaign is getting a bit stale, and the GM wants to make sure the heroes survive but *never* get back where they were, just freeze them for a few hundred years, or a few million.

Fictional devices that have been used for this purpose include being trapped in a glacier; being shot into space; various suspended-animation devices; various side-effects from experiments gone awry; and of course the ultimate time-stopper, the "stasis of time" which was used by Golden Age writers like E.E. "Doc" Smith and John Campbell, and which has also figured in the "Known Space" stories of Larry Niven.

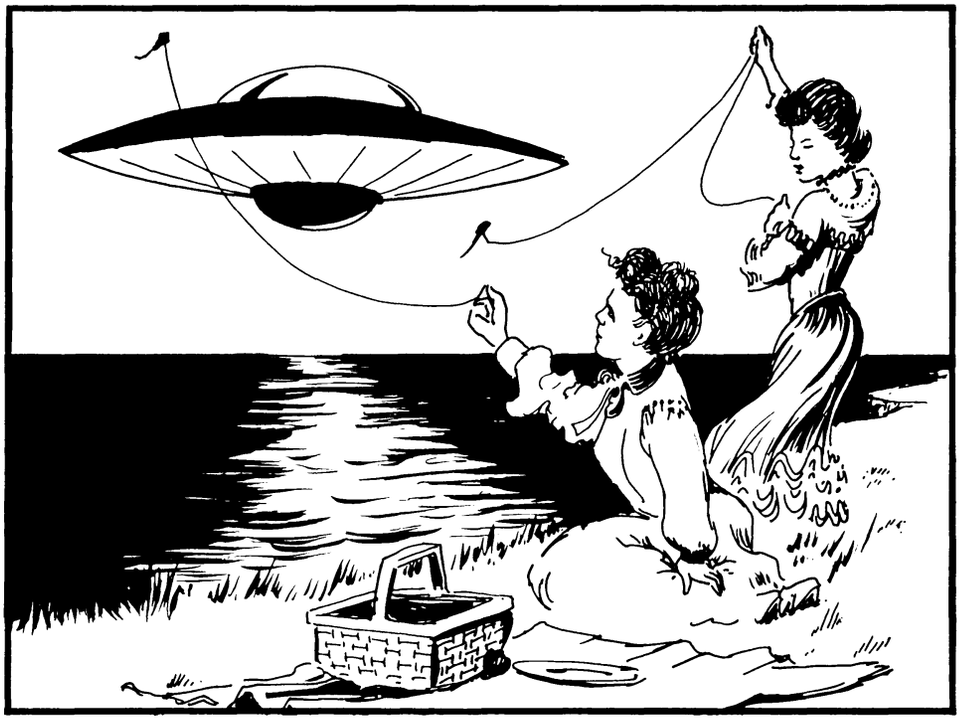
A fictional method which is approaching reality is *cryonics:* have yourself frozen, and hope the future is able and willing to thaw you out. Heinlein used this in *The Door Into Summer.* Niven has speculated on some of the things that could happen to these "corpsicles" in a future they can't control!

Space Travel

If you can move in time, there's no reason you can't move in space. In fact, one had better be able to, because the Earth, and the Solar System, and the Galaxy, are all in continuous motion. An "absolute" time transfer of even a few seconds would leave the traveler in empty space.

Giving the travelers the freedom of space as well as time produces a campaign of the broadest possible scope. It's kept *Doctor Who* going for over 25 years now.

A space-time campaign may visit a new world with every adventure, only occasionally coming back to Earth (past, present, or future) for variety. Such worlds will probably not be created in much depth. The travelers arrive in the middle of a local problem, determine what it is, do their best to solve it, and move on, never to return. This is especially suited to a cinematic approach to the game.



The Scam

This might be more suited to a one-shot adventure than to an ongoing campaign. Suppose that the party learns about an incredible secret . . . a time machine. The catch is, it's not true!

There are lots and lots of ways, ranging from harmless to deadly, that a sharp conman could convince his victims that he had traveled to the past or future. He might even convince them that *they* had traveled to the past or future! If we listed them here, the players would be ready for them. So, wicked GMs . . . think about it.

Things to Invent

There are a number of simple devices, processes and compounds that can make a traveler rich at the right time in the past, or in a primitive alternate world. (Note that if temporal contamination is possible, the introduction of any of these things will do it. By definition, anything that is enough to make its inventor rich is enough to change history.)

Of course, many other things can easily be re-invented . . . by some people. An electronics technician might well be able to build a radio in the year 1400. This sidebar lists things that could be created by *anyone,* or things so easy to explain that a skilled person could create them from any layman's explanation. To re-invent a specialized device using your own technical or scientific skills, see the *Gadgeteering* rules on pp. 13-19.

Simple Machines and Basic Concepts

If these devices aren't in use yet, you can raise the local technology by a whole TL in about 20 minutes.

Fire
Wheel
Lever
Container (could be pottery, but could as easily be hollowed-out wood, or even a bag made of leaves)
Writing or written mathematics
The zero
Domestication of animals
Agriculture
The bow
The printing press, adding movable type as soon as possible
The steam engine

Continued on next page . . .

Things to Invent (Continued)

Office Supplies

Don't underestimate the historical impact — and the financial value — of simple inventions that make office work easier. Each of the creations below certainly seemed obvious *after* it was developed, and made its inventor a lot of money.

Paper clip (Test yourself. Can you draw it exactly right, from memory?)

Hole punch

Adhesive tape (For this and the following items, you'd have to hire a chemist to develop the invention from your description, unless you possess Chemistry skill at 16 or better, or are a Gadgeteer.)

Carbon paper

Self-sticking note pads

White-out

Pencil eraser

Simple Comforts of Home

These innovations may not change the entire society, but they'll still be useful and make their creator wealthy if they are properly exploited.

Fermentation, to turn perfectly good grape juice or grain into (gasp) alcohol.

Distilling (the most obvious use is to make strong alcoholic beverages from weak ones, but there are many industrial applications).

Glass lenses. These require the existence of glass, of course. Glass itself is relatively easy to create if sand, soda and fire are available. Lenses are valuable first for improving vision, then for telescopes and binoculars, and eventually for microscopes and other scientific applications.

The rest of this category is left as an exercise for the traveler!

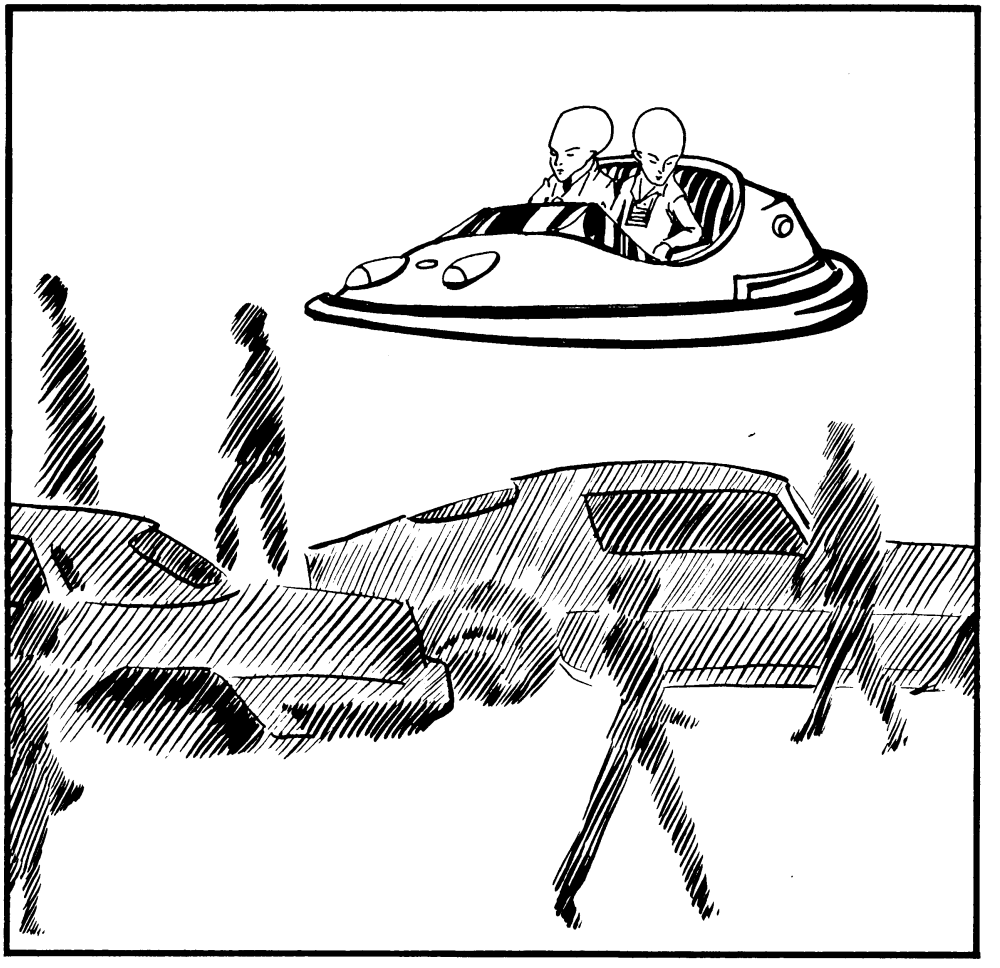
Don't Waste Your Time . . .

Some devices, though, are *very* hard to get right. Only a very skilled mechanic or gadgeteer should attempt to build (for instance) a clock of any kind, a typewriter or typesetter, or anything else involving a great number of precisely-machined moving parts.

Or the GM might develop a consistent "future history," reaching from humanity's first trips off Earth, through the development of a spacefaring culture and the creation of a vast interstellar society incorporating humanity and many friendly alien races. The characters, acting either on their own or as operatives of a Time Patrol, would jump from one critical point to another, "helping" the society along, sometimes encountering historical accounts of their own actions centuries in the absolute past. There might be recurring villains, such as a competing society intent on conquering or destroying "ours;" there might also be evil time marauders working directly against our heroes.

When these adventures take place in Earth's past, they are no different from the historical adventures we discuss elsewhere in this book. When they take place on other worlds, or in the future, they are science-fiction adventures in which the characters arrive by time machine instead of spaceship; a worldbook such as ***GURPS Space*** will provide the detail needed here.

If the combination of time travel and space travel seems a bit too powerful, see the sidebar on p. 43 for some ways to tone it down.



Cross-Time Inventors

An important theme in both time-travel and parallel-world stories is the traveler, usually involuntary, who finds himself in a primitive world and starts a one-man campaign to modernize it. *A Connecticut Yankee in King Arthur's Court, Lord Kalvan of Otherwhen, Lest Darkness Fall,* and, most recently, Leo Frankowski's "Conrad Stargard" stories all fit this category.

This can be a great theme for a roleplaying campaign, too . . . and, of course, a *party* of travelers will have a much better chance of surviving and spreading their knowledge.

Raising Local Tech Levels

Travelers lost in a primitive world will probably want to build up the local technology, whether overtly or by behind-the-scenes manipulation. Rules for this are given on pp. B186-187.

Gadgeteering

Cleverly improvised devices are important in many time-travel adventures. The explorer from the future uses his advanced knowledge to build useful gadgets with the materials at hand. Or travelers trapped in an alternate world can amaze the locals with their expertise as inventors.

So, in keeping with the genre, players may create a "gadgeteer" hero able to re-create high-tech weapons, tools, armor, etc. according to the rules that follow. Someone with the Gadgeteer advantage (p. 30) modifies the "new inventions" rules on pp. B186-187 as follows:

The Gadgeteer's "conception" roll is not made at Skill-15, but at *straight* Skill. Often this will mean the Gadgeteer can proceed directly to development.

The Gadgeteer's "development" roll is made as described below under *Development Rolls and Time Required;* it is also a roll against straight skill, and the time required will depend on the complexity of the gadget.

The Gadgeteer can attempt to re-create *any* device, of up to his own tech level, as long as the GM agrees it might be vaguely possible!

The Gadgeteer can also try to develop a *new* invention of his own TL or higher. Since devices higher than the campaign's TL may distort the campaign, the GM may make these very hard, or forbid them entirely.

Example: Any traveler could attempt, for instance, to re-introduce gunpowder. Anyone with appropriate skills (Engineer/TL4 or 5, History with a military specialization, or possibly others) could improve the lock mechanism on a black-powder weapon. But only a gadgeteer could build a .45 automatic in a TL5 armorer's shop. And even a gadgeteer builds only that technological equipment that the GM feels can be reasonably accomplished.

The Gadgeteer advantage reflects the character's aptitude in creating *new* equipment or modifying existing equipment. It doesn't merely mean the hero is unusually smart or knowledgeable; it represents a broad, intuitive capacity for inventing or for re-creating inventions with what is at hand.

Skills Required

Every gadget has a specific area of knowledge required to create it. A gadgeteer may wish to specialize in one or two areas to start, then expand his horizons as he progresses in experience. The GM will assign the prerequisite skills for each gadget. When dealing with a Gadgeteer character, the GM should be *liberal* in allowing the use of defaults and related areas of knowledge.

The complexity of the device (which is decided by the GM) may give a skill penalty:

Simple gadget, such as a cigarette lighter: no penalty

Average gadget, such as a gun: -2 to skill

Complex gadget, such as a radio or clock: -4 to skill

Amazing gadget, such as a computer: -8 to skill

A gadgeteer gets a +5 to duplicate something that is "historical" to him, and a -1 for every TL it's below his period of familiarity.

Example: Someone trying to re-invent the Uzi *must* have Engineer/TL7 (Guns), or a related Engineer skill and personal familiarity with the Uzi, in order to succeed. It's an average gadget (-2 to skill), and already exists (+5), so a gadgeteer would have a +3 to create it. (A TL8 gadgeteer not familiar with the world of TL7 would have a further -1 penalty, and so on.)

Black Powder

At any time before its historical appearance in the 14th century, black powder is one of the most spectacular introductions a traveler can make. Superstitious natives can be overawed with nothing more than fireworks. Simple gunpowder bombs and mines could probably break most medieval armies, and even the Romans or Huns might not stand up to actual cannon. But remember that the secret of gunpowder is so *simple* that, once introduced anywhere, it will spread.

See H. Beam Piper's *Gunpowder God* and its sequels for the classic treatment of this situation.

The Formula

If you, the reader, ever expect to be dropped into a primitive time or timeline, memorize this . . .

To make black powder, combine 10% sulfur, 15% charcoal and 75% saltpeter. Mix well and powder carefully without producing sparks. This produces "flash powder" — it will prime a gun but won't explode.

Wet the flash powder to form a paste. Air-dry in kernels of the desired size for the job (you'll have to experiment, based on your desired application).

Finding the Ingredients

Sulfur is an element, a yellow powder. In nature, it occurs near hot springs and gives the water a bitter flavor.

Charcoal is produced by burning wood. Different woods, and different burning methods, give different results. Experiment.

Saltpeter (potassium nitrate) is a crystalline white compound. In a primitive milieu, the easiest way to find it in small amounts is to remove a well-aged pile of manure. The saltpeter is leached out of the manure by rainwater and collects on the ground.

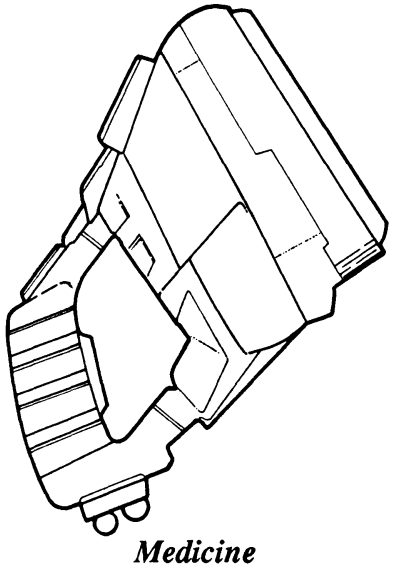
Using Black Powder

Now that you have it, what do you do with it? Sadly, the warlike applications outnumber the peaceful ones. Fireworks and civil engineering are very nice, but the main impact of black powder will be for weaponry.

Almost no skill will be required to create "mines" and simple "shells" — powder kegs to be lobbed at the foe with simple siege-engines. Mortars and cannon will be more difficult, requiring skill in metalwork; handguns will be harder still. But any general who sees what black powder can do will be motivated to help your research . . . or to have you destroyed.

Other Weapons Technology

For a guide to weapon development through the ages, see ***GURPS High-Tech.*** Many weapons — fuel-air explosives, for instance — *could* have been built long before they were actually invented. Military *science* also develops. A traveler with a good grasp of military history will have dozens of innovations to offer, if the natives have the wit to listen.



Medicine

Introductions in medicine are probably the most difficult of all. The existing medical "establishment" will — often with the best of motives — resist any innovations from an outsider as untried, dangerous, heretical or actually inspired by Satan. Just try convincing a medieval physician that he should throw away his leeches and start washing his hands between patients! Any reaction roll by a doctor to unusual "outside" suggestions will be at a -2 or worse.

A full treatment of the subject would be as long as a history of medicine; in fact, it would *be* a history of medicine. But a few key medical introductions would include:

Antiseptic medical procedures, especially for childbirth and amputations

Proper urban sanitation, and the germ theory of disease. Regular *handwashing* can save lives.

No bloodletting

Toothbrushing

Regular baths

Delousing of clothes and beds; mosquito control

Proper snakebite treatment

Nutrition, and treatment of deficiency diseases — citrus fruit for scurvy

Surgical anesthesia

Scientific Explanations

Re-inventing a gadget from the gadgeteer's own time or world (or earlier) requires no explanation from the player. Players who want to create a *new* gadget must have an explanation for its operation, and must describe it to the GM in a logical manner. The GM is free to accept or reject the design depending on its feasibility. If the item would violate any laws of nature or go totally beyond known science, it has moved into the realm of super-equipment. Unless the campaign is using ***GURPS Supers*** and is open to comic-book super-science, the GM may disallow any such suggestion.

Development Rolls and Time Required

A Gadgeteer can build a simple gadget in only 1d-2 (minimum 1) days — the GM rolls at the start of the project, without telling the player. Average complexity calls for 2d days, a complex gadget takes 1d months, and an amazing gadget takes 3d months. These times assume that the creator works eight hours a day on the invention. If he works 16 hours a day, time is halved, but he must make a HT roll each morning or lose fatigue as if he only got a half-night of sleep (see sidebar, p. B134). Fatigue lost in this manner can't be regained without taking a break from the project, which will add 1d days to it!

At the middle of the project, the gadgeteer rolls against the skills the GM required for the particular gadget. A failed roll adds 50% to the time needed to complete the gadget. On a critical failure the gadget is destroyed — all work is lost and the development cost (below) must be paid over again. A critical success means that the item is finished immediately!

Expenses

Creating new gadgets is very costly. Tools, raw material, unusual parts, laboratory space, etc., all require money. The GM will assign two costs to an item — *development* cost, which must be paid before the first working model can be created, and *production* cost, which must be paid for *each* item built.

No general rule can be written for these costs; the GM must simply make a ruling. The development cost for a flint ax would be nothing more than "find a piece of flint." The development cost for a ground-to-air missile would include electronics, explosives, a testing area and some practice drones!

In general, if a simple item costs $50 to develop, an average item would cost $100, a complex one $250, and an amazing one $500.

For production cost, if the gadget exists in any ***GURPS*** book, use the cost of the item as a base production cost and double it for each difference in tech level, *accumulating* the cost! Thus, an item that costs $4,000 at TL7 would have a production cost of $12,000 ($4,000 + $8,000) at TL6.

Duplicating Strange Gadgets

Occasionally, a gadgeteer will be required to deal with high-tech creations that *aren't* his own. A 1940s gadgeteer, trying to help out a stranded visitor from his future, would need all his talent! The time and skill roll required to successfully figure out an item from a knowledgeable *description* is the same as would be required to create it. Allow +1 or +2 for a damaged sample, +3 for a working sample, +2 (cumulative with either of the above) for a readable technical manual. A critical success on this roll will yield an improvement over the original model!

To *modify* someone else's gadget requires 1d hours, and *two* such successful skill rolls! The GM will have to use his judgment to decide what modifications could reasonably be made in each particular case. The result of a failed modification can be amusing, destructive or fatal.

Quick Gadgeteering

Some GMs will not be satisfied with the standard gadgeteering time and costs. Rather than spending days of work and huge amounts of money, they want to run PCs who can throw together a working set of walkie-talkies in less than an hour, using only the contents of an 1870s drugstore. This "quick" gadgeteering is best suited to a highly cinematic campaign.

The GM should increase the cost of the Gadgeteering advantage (p. 30) to 50 points if he is going to use these guidelines.

Necessary Skills

Skills are chosen by the GM as for normal gadgeteering, p. 15.

Required Materials

The cinematic gadgeteer is a master at cannibalizing parts and scrounging bits and pieces from other equipment. The GM should allow a roll against any appropriate skill to locate usable components. For example, if the only thing available is a wrecked '65 Mustang, the GM might require a roll versus Mechanical Engineering or Mechanic to find the parts necessary for the gadget under construction. The Scrounging skill can be substituted for *any* other skill, if the gadgeteer has *some* level of that other skill (so he knows what to look for).

This roll should be modified as follows:

Simple Gadget: no penalty
Average Gadget: -2 to skill
Complex Gadget: -6 to skill
Amazing Gadget: -10 to skill

Packing for a Trip to the Past

If you could travel to the past — or to a parallel world — with only what you could carry in your hands, what would you take? Of course, it would depend on where and when you were going. But suppose you didn't know? Here's our suggestion for a time-traveler's emergency kit. With this and your native wits, you should have the best chance possible to survive, get rich, and/or attract the attention of friendly travelers.

This listing assumes you are leaving from 1990 or thereabouts. If your native tech level is higher or lower, adjust accordingly.

Books and Information

If you can carry only a few books, here are some important ones:

The Way Things Work — both volumes

A Barefoot Doctor's Manual (a modern Chinese guide to medicine for the people in the countryside)

Any of the extensive guides to formulas — *Henley's Formulas* is one good one

Any concise history of the time and place you *hope* to visit, for obvious reasons. But don't get caught with it!

If you're visiting the recent past, a list of sports winners: racing, soccer, football, baseball, boxing. You'll be able to make money quickly by gambling . . . except you won't really be gambling!

If you can arrange for a microfilm reader, or some higher-tech equivalent, you can take a *lot* of useful data. Consider microfilmed stock market information, blueprints of valuable inventions . . . and maybe a few hit tunes that won't be written for at least 30 years.

Continued on next page . . .

Packing for a Trip to the Past (Continued)

Tools and Weapons

Start with a Swiss army knife and sharpening stone, magnifying glass, matches, a reliable pen, and the most permanent cigarette lighter you can find.

A solar-powered calculator would be worth far more than its weight in gold.

A small flashlight, to remove the terrors of darkness, is *incredibly* useful. One type is powered by hand-squeezing and lasts almost forever if treated well.

A small pair of binoculars might be worthwhile.

Weaponry depends on your own skills, the place you're going and your plans on arrival. A heavy walking-stick won't attract much attention. A utility knife, scabbarded on the belt, will be legal more places than not. A gun is risky . . . but if you carry one, remember that a gun without ammunition is worthless, and that .22 long-rifle ammunition has been around for more than a hundred years.

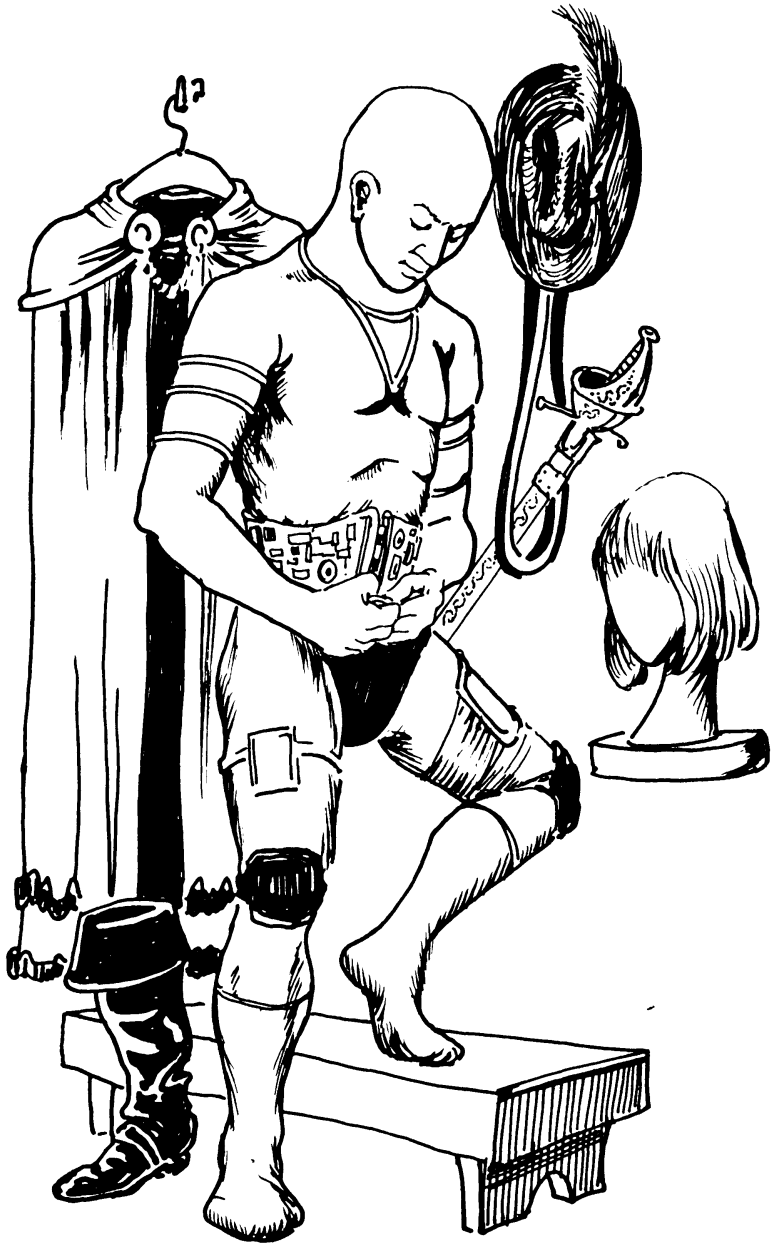
Et Cetera

Medical kit: penicillin, snakebite kit, aspirin. The more you know about medicine, the more it is worthwhile for you to carry.

Clothing: If you don't know where you're going to wind up, a costume of plain boots, denim jeans, cotton shirt and leather jacket will not be *too* conspicuous anywhere in Western civilization for the past few hundred years. A simple, shapeless khaki or leather knapsack is safe, too.

Currency: Gold and small jewels are almost always money. But don't carry coins with dates on them! Gold in ring form attracts less attention.

Of course, there's always the argument that you should plan to arrive *naked*, with *no* equipment, and act like you have no idea what's going on. Your arrival will be a "normal" sort of mystery, and if people are at all civilized, they'll look after you. Or perhaps your method of time travel *requires* that you carry nothing; see p. 46.



Time Required

A simple gadget will only take 2d minutes to assemble from the needed components. Average complexity calls for 1d-2 hours (a roll of 1 or 2 indicates a 30-minute assembly time). A complex gadget requires 1d hours to assemble, and an amazing gadget will take 4d hours.

The inventor doesn't roll against the required skills until the *end* of the project. A failed roll indicates that he must start over. A critical failure means that the parts were ruined — new ones must be found before construction can resume.

Expenses

If the inventor can scrounge the necessary parts, costs are minimal. If he must *buy* the needed items, the cost is 1% of what the GM feels would be "reasonable" if the campaign were realistic — remember, the inventor is improvising!

Duplicating Strange Gadgets Quickly

Use the standard "quick gadgeteering" times, and the modifiers above, to copy a newly-encountered device.

To modify such a device takes only 1d×10 minutes (plus normal Conception and Development skill rolls, as per p. 15).

Optional Rule: "Gizmo" Gadgets

In some pulp stories, the hero always seems to have the right piece of gear at the right time ("Lucky I happened to bring the grapnel gun, Doctor, or we never would have gotten off that dirigible!"). To emulate this in a cinematic ***Time Travel*** game, the GM may allow a gadgeteer to use a *gizmo* during his adventures. This may be *any* device the PC *could* have reasonably been carrying. It remains undefined until he uses it. The GM maintains veto power over any gizmo that seems unreasonable!

Example: Time Agent Fnord, the Unseen Menace, normally carries an assortment of useful devices, including one gizmo (an undefined gadget). During an adventure, he is trapped in an alley by enemy agents, who use knockout gas in an attempt to take him alive. None of his "normal" devices is any use. Fnord tells the GM that his gizmo is a collapsible breathing mask with 10 minutes of air. The GM rejects that as too large, but allows 3 minutes. Fnord accepts this, roleplays a heroic last stand, collapses dramatically, and uses his stun pistol to knock out the enemy agents when they approach him.

Only gadgeteers are allowed to use gizmos, even if other PCs are carrying high-tech or anachronistic gadgets.

Point Costs

The number of gizmos a character can use *per game session* is determined as part of the cost for the Gadgeteer advantage. Each gizmo adds 5 points to the cost, up to a maximum of three gizmos (15 points).

Example: A normal gadgeteer (25 points) wishes to be able to carry two gizmos per game session (10 points), for a total cost of 35 points. A quick gadgeteer (see above) would pay 60 points for the same privilege.

Limitations

The gizmo must be an existing technological device, which may include any new device that the gadgeteer has already developed and built. Obviously it must fit the space that the gadgeteer had available — no autogyros in coat pockets. Essentially, if the gadgeteer has built 20 different devices that would fit in the trunk of his world-hopping Model T, he may open the trunk and produce any of them as a gizmo.

Other Sources: A Shameless Plug

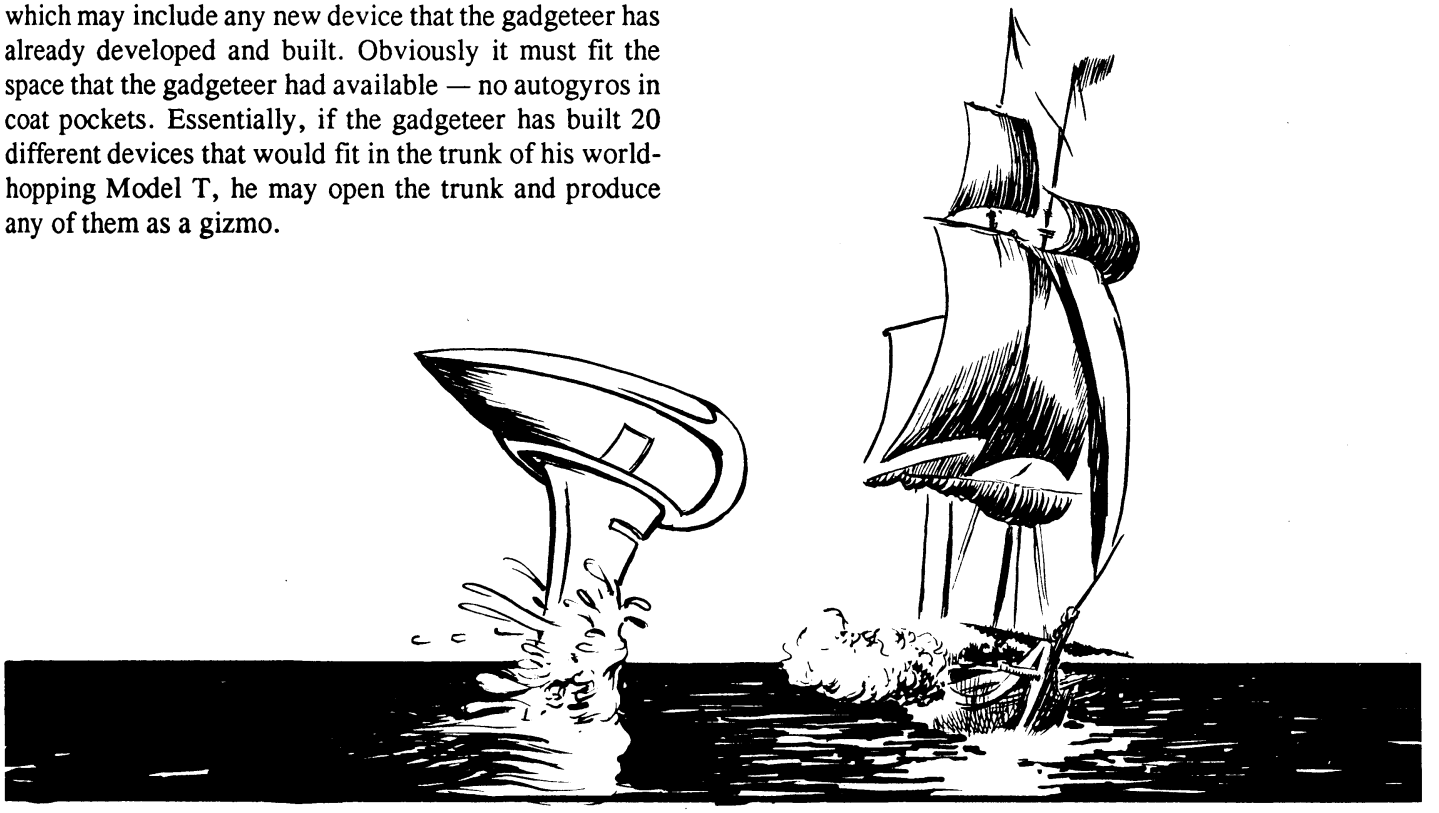
It would be very strange if, in a multi-genre system as extensive as ***GURPS,*** we had *not* already published several other books that could be of use to the GM running a time-travel or alternate-worlds campaign.

GURPS High-Tech has already been mentioned as a reference for historical weapons; it covers other sorts of technology as well. This is the reference to use if you want to know exactly what sort of hardware would be extant in any particular time and place.

For campaigns that start in the future, ***GURPS Ultra-Tech*** and ***GURPS Cyberpunk*** offer a wide variety of science fiction gadgetry.

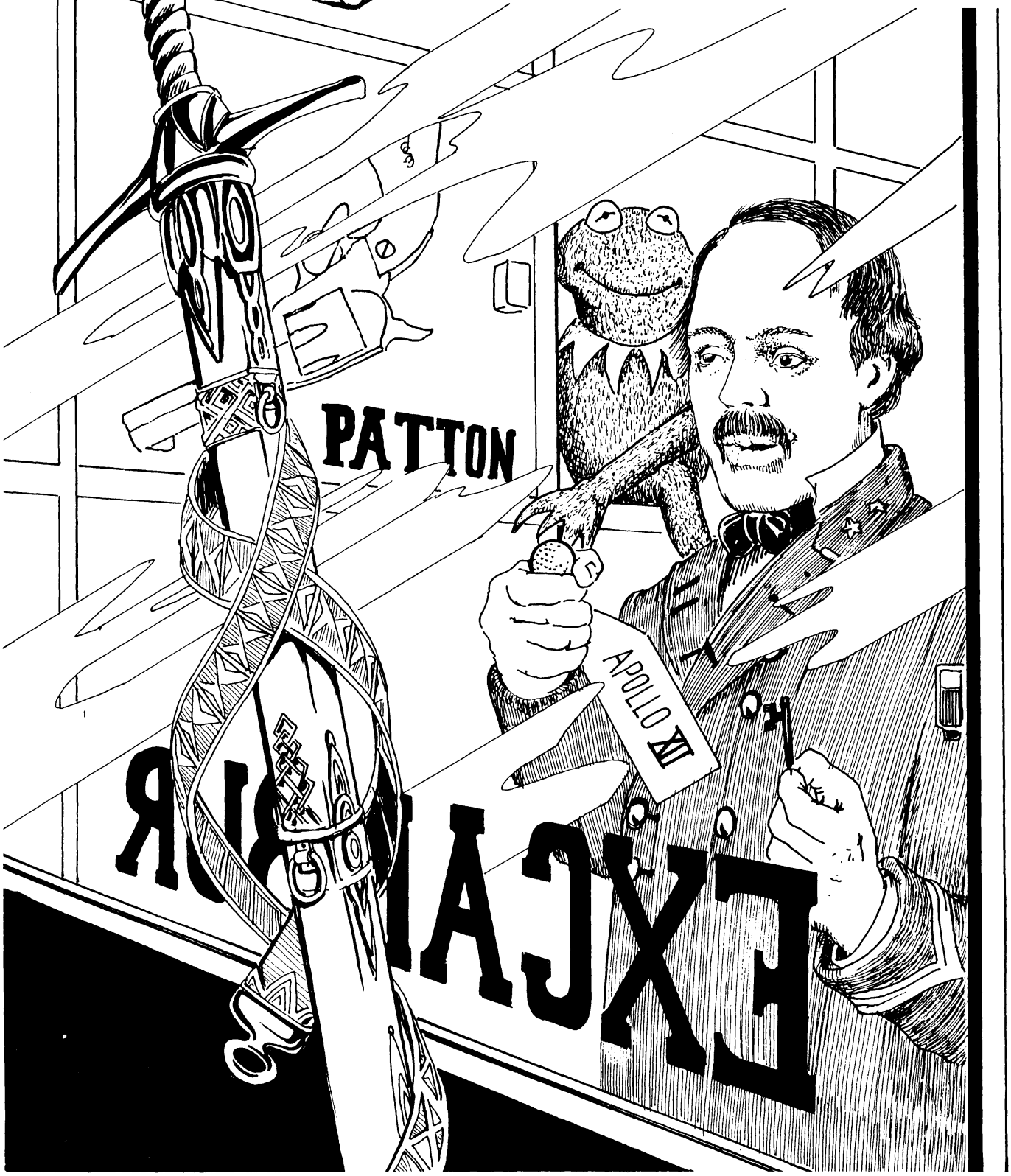
GURPS Witch World is based on the idea of travel to an alternate world through magical Gates. It includes spells for creating and controlling those dimensional Gates.

And of course, there are more than 20 "worldbooks" describing interesting Places to Go, from historical (***Camelot, China, Japan, Old West, Ice Age, Swashbucklers, Cliffhangers*** and the three periods described in ***Horror***), to fantasy (***Conan, Fantasy*** and the various Yrth supplements) and *lots* of science fiction (***Autoduel, Humanx, Terradyne, Horseclans, Uplift, Riverworld, Wild Cards, International Super Teams, Unnight, Psionics, The Prisoner***).



2 CHARACTERS

A time-travel or cross-dimension campaign allows for the widest possible variety of characters — not just NPCs, but player characters as well. Characters can be drawn from *any* world . . . past, present, future or wholly imaginary . . . all in the same campaign!



Player characters can be built on a 100-point base, with up to 40 points of Disadvantages and 5 points of Quirks. Games based on "pulp" science fiction can also work as Cinematic campaigns (see p. B183), with 150- or even 200-point characters.

Character backgrounds will depend on the campaign frame. In a campaign built around the missions of a Time Patrol or similar cross-universe agency, the PCs will be highly-trained Patrol members; some will be technical specialists and historians, while others will be "agent" types. If the adventures concern freelance time meddlers who acquired their machine by accident, the characters may be from almost any background.

The one thing all travelers need is versatility. One never knows when one will have to ride a horse, drive a Persian chariot, or fly a P-51 Mustang against the Luftwaffe — maybe in the same adventure. Interpersonal skills are also very useful . . . for instance, when trying to convince the captain of the *Titanic* that his ship is about to be penalized for icing.

Advantages: Immunity to Disease is a big help before modern medicine. Language Talent is also very useful. Danger Sense and Combat Reflexes can keep you alive in hostile eras.

Disadvantages: Travelers with vision problems will need to keep their contact lenses out of sight, even if it means suffering occasionally. Impulsive people may not be able to resist trying to "fix" history, even though they know better, and Greedy ones won't be able to keep their hands off historical treasures.

Skills: Any time traveler or crossworld explorer will benefit from an understanding of history — as long as he doesn't come to depend on it. Diplomacy and Fast-Talk are important whenever you deal with strangers; Survival may be necessary when you drop into an uninhabited area.

Physical Appearance: Keep in mind that, by historical standards, modern men and women are unbelievably large and healthy. For a historically accurate pre-19th-century character, subtract 3" from average height as discussed on p. B15, and reduce weight accordingly. An average 20th-centurian will be *big and husky* by the standards of an earlier day, and a *big* person will be considered a giant.

Remember, also, that few historical periods are as cosmopolitan as 20th-century Western cities. Any unusual hair color or cast of features, let alone *skin* color, will be noticed and discussed. A time-traveler may have to be a master of disguise to blend into a historical crowd!

Typical Character Types

Adventurer

He doesn't care where (or when) he goes, as long as there's excitement. He may be a freelance fortune-hunter, or a "troubleshooter" employee of an agency or corporation. Or he may have his own time machine or dimension-jumper, or the ability to do without them.

One interesting type of adventurer is the crosstime vigilante. He wants to be Robin Hood or Batman . . . and perhaps he is, in some other dimension. He could be an epic hero or a secretive crimefighter; either way, he can use high-tech equipment as he Rights Wrongs. This sort of vigilante may have to contend not only with the local authorities, but with Time Patrolmen or Quantum Cops who don't want him to change history!

Advantages: Alertness, Danger Sense, Strong Will and Toughness are all very useful. Almost any advantage could fit some type of Adventurer, though Common Sense is definitely *not* found very often.

Disadvantages: Almost anything can fit this character type (not all adventurers are nice people), except for crippling physical problems. Impulsiveness and Overconfidence are especially appropriate.

Skills: Combat, Thief/Spy, and social skills will all be helpful. Fast-Talk and Survival are probably the most important of all.

Agent

This person has been specifically trained to operate undercover in the past, performing assigned missions for the agency or company that employs him.

Advantages: Immunity to Timesickness (see p. 30) and Language Talent are useful; Intuition and Luck can be very useful, since the agent is usually sent out with only partial information, and will have to analyze the situation in the field before solving it. Some Agents will have Legal Enforcement Powers.

Disadvantages: Agents will rarely have major "bad" mental or physical Disadvantages — unless they have some unique talent that made the employer overlook other problems! But minor disadvantages such as Gluttony are possible, and Miserliness could be amusing in a past setting. And "good" mental disadvantages like Honesty, Truthfulness and Pacifism are not unusual.

They will usually have a Duty to the Agency, which may include chaperoning less-competent historians or scientists, and limits their actions. If the employer is engaged in a war against other time or dimension travelers, its agents have a powerful Enemy.

Skills: Savoir-Faire, Acting, and Fast Talk are important, as are Languages. Some campaigns will have more combat than others, but skill with period weapons is *always* handy. Unarmed combat techniques work no matter what the local weapons technology is. Given the nature of medical care even a hundred years in the past, First Aid may be considered indispensable.

Criminal

There are many different varieties of time criminal, but most of them have the same goal: relieve those past-time suckers of their valuables, to sell in the present day. The same type of crook appears in parallel-world campaigns. Either way, he may have his own means of transport and an independent operation, or he may be a moonlighting technician or even a crooked agent.

NPC criminals might be encountered who want to use time travel to cover up their crimes . . . to revenge themselves on their enemies . . . or even to go back and keep themselves from starting a life of crime! In most campaigns, these last hopeful felons are doomed to disappointment. But remember, not everyone understands time travel, even in a world where it's common!

The criminal who lives like a king among primitives is a special sort — see *Expatriate*, p. 22.

Advantages: Any or none. A criminal Patron can be interesting.

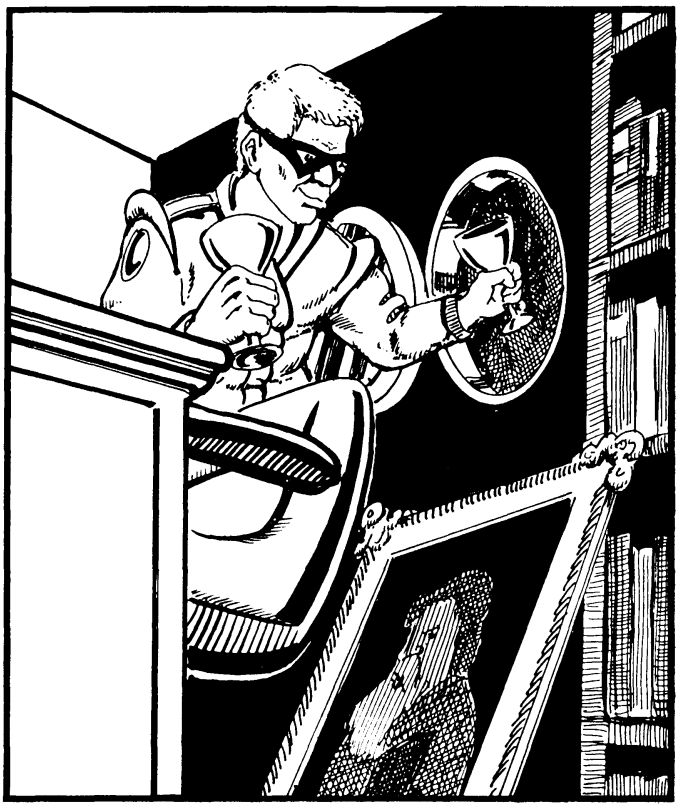
Disadvantages: Greed is very likely, but anything is possible. Some "good-guy" disadvantages, such as a Code of Honor, can make a more interesting character.

Skills: Any sort of thief/spy skill will be handy, as will Merchant (to know what to bring home) and Fast-Talk (to get it home safely).

Some particular types of criminal are:

Time Thief

This criminal uses his knowledge of the past, and/or his advanced technology, to steal gold, gems, and other highly-negotiable goods. They are often clever but unsubtle. A Spanish treasure galleon, for instance, is an easy target for an armed hovercraft, or even a few men with body armor and submachine guns. When the gold is secured, the ship is burned and sent to the bottom, with no survivors and nobody the wiser.



Scavenger

Many items are quite ordinary in their own time or place, but priceless in today's world. Almost any ancient weapon, for instance, becomes a valuable antique a few centuries down the line. Likewise, ordinary coins, stamps, mechanical devices, and publications can all become very valuable with the passing of time.

The scavenger goes back and acquires such items when they are new. He might then bury them for proper "aging," or just bring them directly to the future. (In a cross-time campaign, the existence of scavengers can drive a collector mad. Is this Four-Penny Black stamp a "real" one from our own timeline, or is it from an alternate world? And if it *is* an alternate, does that make it a forgery?)

Of course, in some campaigns scavenging might be legal. In others, it might be illegal — not because it is wicked in itself, but because of the danger that *any* unauthorized time or dimension travel might pose to the continuum.

Looter

This person is also a thief, but instead of "ordinary" valuables, he looks for unique ones. He may loot art galleries, libraries and palaces for the masterpieces of the past. Or he may be a souvenir-hunter, picking up interesting relics. Some looters are connoisseurs, treasuring their acquisitions for their own sake. Most simply sell to collectors.

Depending on the game background and the laws, some sorts of "looting" may be perfectly legal. If the goods are obtained honestly, and there is no chance of upsetting history or changing the structure of a parallel world, it may be all right to "import" valuables. And "stealing" treasures that are about to be destroyed, if done carefully, might be a praiseworthy rescue mission rather than a crime!

Timenapper

A timenapper visits the past (if the laws of physics allow it) or a historical alternate world, and kidnaps victims to return them to his own world. The object might be ransom — just another way of getting rich in the past. But more likely, it's because someone on the timenapper's home world *wants* that victim.

Past times and alternate worlds could be an inexhaustible source of slaves and other, even less savory victims. A cross-world trading organization might easily turn into a slave trade, capturing victims on one obscure alternate world and moving them to another in exchange for valuable goods.

Individuals — famous people from history, or their alternate versions — might also be kidnapped for any number of reasons. People might also be timenapped for research purposes, legitimate or otherwise.

If the "home world" has bio-technology at TL8 or better, *human genetic material* can be stolen. There might be a thriving underground market, driven by men who want to own a clone of Cleopatra or Marilyn Monroe, or women who want to bear a natural child of Elvis Presley or Alexander the Great.

Meddler

This person wants to change history. Perhaps he doesn't know — or doesn't believe in — the natural laws that might prevent his meddling from having any effect. Perhaps he knows but doesn't care.

In a cross-world campaign, a meddler might be a do-gooder, trying to help a parallel world avoid the historical problems that our own world faced.

In a time-travel campaign, a meddler might have similar motivations. Or he might want to change history to make himself rich, or his own nation pre-eminent. He might be out to right some past wrong, either subtly or by force . . . slay the oppressors, cure the plague, feed the hungry. Or he might just want to create a paradox (regardless of whether this is really possible) to destroy the world as he knows it!

Absolutely any combination of advantages, disadvantages and skills is possible, depending on the meddler's background and motivation.

Expatriate

An Expatriate is someone who has voluntarily left his own society to live, usually secretly, in another time or dimension. Many Expatriates are renegades — deserters from the Time Corps, Time Tours Ltd., or similar agencies.

Expatriates choose many ways to fit in. They may sell their specialized high-tech knowledge — or use it to impress primitives with their "magical" powers. In a time-travel or historical parallel world, an Expatriate can use his knowledge of the future to play the stock markets, win bets, and so on, becoming rich . . . unless they accidentally change history and make their foreknowledge useless.

Some Expatriates are legitimate — permanent "agents in place" for an organization that crosses time or hops between worlds. And in some campaigns, it may be perfectly legal for a

traveler to settle down in a past time or parallel world, within certain restrictions. In that case, Time Corpsmen or Cops may be able to call on help from the local expatriate community!

An expatriate may also be a permanent agent for a *criminal* organization - possibly the local henchman of the big-time crook the PCs are chasing.

Yet another type of Expatriate is the castaway. He didn't *intend* to settle down, but his means of transport broke down — or perhaps he was accidentally carried away from his home (see p. 10). Anyway, he's there now, and has to make the best of it. Perhaps he wants to return home; perhaps he has been there so long that he wants to stay.

In most campaigns, Expatriates will be NPCs rather than player characters, because the PCs are traveling, and the Expatriate is someone who has chosen to settle down. An Expatriate may be the target of a mission, or he may be able to give valuable help. Or he may be a "wild card" whose very presence was not known to the PCs when they started their mission.

Advantages: Many Expatriates have Wealth by the standards of their new home; few choose to be *average* members of their new society. Likewise, they are very likely to have local Social Status and Contacts, perhaps paid for by their special expertise. The occasional "legitimate" Expatriate may have his employer as a Patron.

Disadvantages: The likeliest disadvantage for an Expatriate is a powerful Enemy . . . the force from which he deserted or stole his time/dimension machine! He may have psychological disadvantages which kept him from fitting in his original milieu.

Skills: An Expatriate will usually have skills that let him fit comfortably into his chosen home. He will almost always speak the local language excellently and have Area Knowledge of the local time.

Fanatic

This is the individual who has become obsessed, if not actually unhinged, by the possibilities of time travel and alternate worlds. Perhaps he wants to "rescue" Christ from the cross. Perhaps he just wants to get a lot of very candid pictures of Janis Joplin. He may be open or secret about his goal; he may seem rational but single-minded, or he may foam at the mouth. He may be the time traveler's greatest foe, or he may be the one providing the bankroll!

While this is a natural, and unavoidable, sort of NPC, a carefully-designed Fanatic can make a very interesting player character.

Advantages: Charisma is a distinct possibility.

Disadvantages: Fanaticism, of course, or — depending on the exact characterization — an Obsession, Vow, Delusion or just Stubbornness. May have the Odious Personal Habit "Won't shut up about the subject."

Skills: Any or none. Most fanatics are treasure-houses of detailed information about the subject of their fanaticism, but some are grossly ignorant, or can't distinguish their fantasies from their data.

Ghost Chaser

Anyone who travels through time or the dimensions in search of the supernatural. It needn't be actual ghosts: he could be chasing stories of psi powers, magic, UFOs or the Loch Ness Monster. This category includes everything from wild-eyed fanatics to rich dilettantes to dedicated researchers. It can also include Monster Hunters (see *Hunters*, below).

Advantages: It might be that the Ghost Chaser has genuine psi or magic abilities — and is looking for others with such talents. Wealth will help finance ghost-hunting expeditions; Charisma will attract followers, no matter how strange the goal.

Disadvantages: The delusion "Ghosts are real" is a good starting place. Or *is* it a delusion? Some disadvantages suggest good reasons for the ghost hunt: the megalomaniac wants to find Artifacts of Power, the pacifist wants to find a secret that will end war. The gullible person is being used by others (and his whole expedition is a front for something sinister). Stubbornness fits any ghost chaser. Fanaticism fits many of them.

Skills: Any and all. Social skills are especially useful for someone whose goals are seen as "insane" by most of the world.

Historian

The Historian is somewhat like the Research Technician (see p. 26). But the Historian's value lies not in what he can look up, but what he already knows. The two generic types of Historian are the Adventurous, who enjoys dressing up in period clothes and slipping into the cultures he's studied, and the Academic, who has a very hard time connecting his knowledge to the practicalities of life.

Historians may be generalists, familiar with many periods without deep knowledge of any, or specialists, who know only one era — say, 18th-century London — but can name every street, pub, and lamppost. Use the *Specialization and Optional Specialization* rules on pp. B43 and B59.

Advantages: If the Historian is equipping the expedition himself, Wealth is a necessity. Adventurous Historians are often Strong-Willed and Charismatic.

Disadvantages: Academic Historians are traditionally Absent-Minded about everything but their field of expertise. Adventurous ones tend to be Impulsive, Overconfident, or Lecherous. They may also be in competition with rival Historians. (A really ruthless Enemy Historian might be willing to alter history to destroy his rival's work!) Some Academics are Aged, with Poor Hearing and the other drawbacks of advancing years.

Skills: History, naturally. Anthropology, Languages, Linguistics, and Research. And remember that there are other historical specialties than period or geographical area: there are historians of labor, medicine, metallurgy, plumbing . . .

Hunter

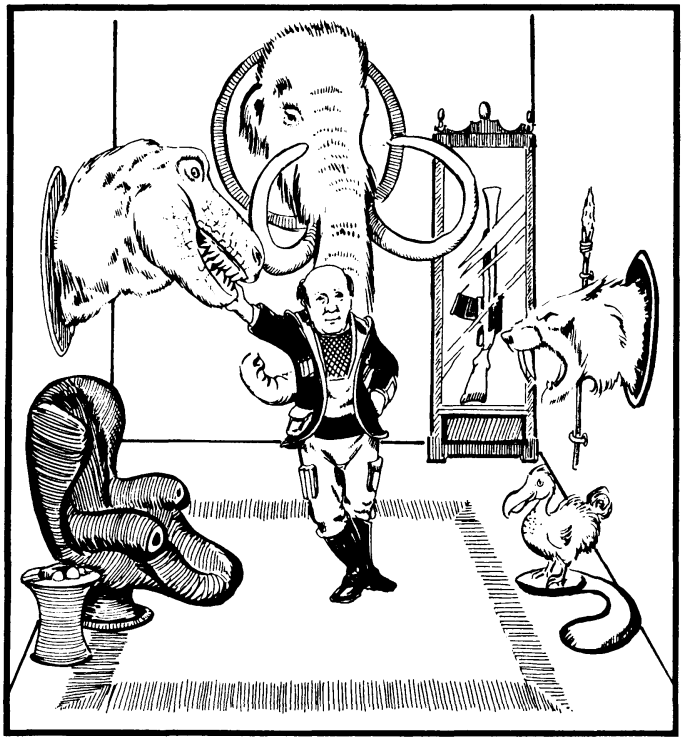
This traveler is interested in collecting unusual species, especially extinct ones, from past times or parallel worlds. He may want trophies for his wall, or specimens for a zoo or life-bank. Or he may just like killing things. He could be a blatant plunderer, or a committed conservationist. And he may bite off more than he can chew . . . see the cover of this book.

A subclass of Hunter is the *Monster* Hunter, chasing vampires, werewolves and other mysteries through alternate worlds — or, if the GM likes, through time!

Advantages: Animal Empathy is useful, as are Combat Reflexes!

Disadvantages: Greed, Sadism or even Bloodlust could all be appropriate for "bad" Hunters. Overconfidence or Combat Paralysis could make life interesting. A Phobia, possibly related to the creatures being hunted, could be interesting. Or what about a Great White Hunter who is terribly squeamish? A rival Hunter could make a good Enemy. (The early history of American paleontology was driven by two rival fossil-hunters, Marsh and Cope; no trick was too low for one of these learned professors to play on his foe.)

Skills: Weapon or Traps skills, depending on the means of collecting being used. Survival for the terrain to be entered.



Academic skills related to the target creatures. And First Aid, for when things go wrong.

Investigator

This is someone who travels in time to find the answer to some specific question. The "investigator" category crosses over with several others, depending on the motive. He may be a researcher or historian, trying to settle some specific point; a spy or corporate agent, ferreting out enemy secrets in the past; a hobbyist, perhaps investigating his own genealogy; a journalist (see below), or even a blackmailer, looking for evidence of shameful secrets.

In a parallel-world background, the Investigator could visit "reflection" worlds, with histories apparently just like our own. The drawback is that he could never be *sure* that he was learning the truth about his own world's past.

Advantages: Common Sense, Intuition and Eidetic Memory are very useful.

Disadvantages: Any and all. Depending on the motive for investigation, Fanaticism can be appropriate.

Skills: First and foremost is Research; other skills depend on the object of the investigation.

Inventors

This is not necessarily the inventor of the time machine itself . . . it is the person who becomes an inventor out of necessity. An important theme in both time-travel and parallel-world stories is the traveler, usually involuntary, who finds himself in a primitive world and starts a one-man campaign to modernize it. *A Connecticut Yankee in King Arthur's Court, Lord Kalvan of Otherwhen, Lest Darkness Fall,* and, most recently, Leo Frankowski's "Conrad Stargard" stories all fit this category.

This can be a great theme for a roleplaying campaign, too . . . and, of course, a *party* of travelers will have a much better chance of surviving and spreading their knowledge.

The Gadgeteering rules (p. 15) are specifically intended for this sort of character. Non-Gadgeteers who wish to re-create an invention use the rules on p. B186-187.

Advantages: Common Sense and Gadgeteering.

Disadvantages: Any and all.

Skills: Mechanic; any scientific skills; History, to know what inventions are really most appropriate and useful. See p. 15 for the application of skills to Gadgeteering.

Journalist

One of the great pulp traditions is the wisecracking investigative reporter, who'll go anywhere his press card will take him (and bluff his way into lots of places it won't) to Get The Story. We've seen this guy (or gal) in Arctic outposts, lost civilizations, and outer space; why not the past? The reporter may be a voluntary part of the team, or blackmail his way aboard through a threat from his editor, or even stow away on the "crackpot inventor's" time machine. He may be irritating, but have a heart of gold, and come through in the pinch. Or he may be just as short-sighted and cynical as he seems!

If the campaign is based in a high-tech world, the journalist may carry video equipment — possibly as a bionic implant!

A journalist may want to interview historical figures, possibly at the most inappropriate or tasteless times. "You're going after Sitting Bull tomorrow, General Custer. What do you really think of those Indians?"

Advantages: Reporters are often Intuitive, and many are dedicated enough to have Strong Will. The sponsoring publication *might* be a Patron, but might also consider reporters to be expendable. Some individual reporters could have a good Reputation.

Disadvantages: The stereotypical pulp reporter is Stubborn, or Overconfident, or both. Some are Cowardly, and quite a few are Lazy. Enough are Alcoholic, Lecherous, etc., that a straight-laced scientist type could be prejudiced against the whole breed. Some have the Delusion "My press card is a magic talisman against all dangers." Photographers are even worse about this. Cynicism is a common Odious Personal Habit.

Depending on the type of publication he works for, a reporter could come with the automatic Reputation "Prying Nuisance," for -1 or -2 reaction.

Skills: Writing, and perhaps other language skills. Photography is common (the rest of the party may constantly have to stop him from popping flashbulbs in public). The pulp reporter was notorious for his complete ignorance of history or geography — so the other characters could explain things to him — but a reporter who had spent much time in an area such as the Middle East or Japan might have more practical knowledge than a professional historian. Fast-Talk is a must, and Streetwise is common! Reporters are also notorious for attempting Diplomacy, Intimidation or Sex Appeal, even if they have to operate at default . . .

Merchant

If time machines or dimension hoppers ever become real, the trading possibilities will be enormous. An infinity of worlds means an infinity of customers! Almost *any* sort of goods will be cheap one place and valuable another, and the merchant makes a good living off the difference. Some merchants will be legitimate, licensed businessmen; others will be only one step ahead of the law.

Whatever dangers there may be in travel, the merchants will always push the envelope, looking for more profits. They may be contemptuous, not just of personal hazard, but of greater dangers . . . it may be a greedy merchant, not a saboteur, who finally changes history or shuts down a parallel timeline.

Not all merchants are money-grubbing civilians. Many field agents of a merchant company will be tough customers, with abilities from the Agent or Mercenary types. These make excel-

lent PCs. And a trading company may employ soldiers, spies and others who are not really "merchants" at all. A whole party could be made up of merchants, ranging from the boss, with *only* merchant skills, through his assistant, with both merchant and agent abilities, to the technicians and mercenaries who don't have, or need, any merchant skills of their own.

Advantages: Common Sense and Language Talent are appropriate and useful; so is Lightning Calculator.

Disadvantages: Traditional disadvantages of this type of character include Bad Temper, Cowardice, Greed, Laziness, Miserliness, Overweight and Pacifism. A merchant with Gullibility, Honesty or Truthfulness can be fun to play.

Skills: Merchant, of course. Detect Lies is a must. Accounting, Fast-Talk, Diplomacy, Economics and Psychology are all useful. A high-tech Merchant is likely to be computer-literate.

Native

This covers anyone who belongs in the time or world being visited, as opposed to a traveler. Most natives will be NPCs. Obviously, no generalizations can be made about their advantages, skills, etc., except that they'll be appropriate for the time and place.

In most campaigns, from the viewpoint of the traveler, the important question about a native is "Does he know my secret?" If time-hopping or world-jumping *isn't* a secret, and all the natives *know* there are out-timers around, the question will be "Is he friendly, or is he just looking for a safe chance to bash me?"

Almost any native who knows about time or cross-world travel will want *something* from the travelers. The question is merely to what lengths they'll go to get it.

A *native agent* of the opposition, whatever that opposition is, can be an especially dangerous foe. The native won't have any cover to be broken, and there's no telling how much secret/forbidden/stolen knowledge he might have!

Treating *any* native like an "ignorant savage" can be a traveler's last mistake.

Scientist

This individual is like the Historian in most ways, but he is interested in studying some aspect of the past *other* than historical humanity. He may feel that the historians are time-wasting fuddy-duddies, preempting valuable machine time to poke after trivia and interfering with Real Science. Historians, and different breeds of Scientist, will hold him in equally limited esteem!

Any sort of scientist *might* want to visit a past or parallel world. Some obvious fields of study include dinosaurs and other extinct species; prehistoric man; geology (*watch* those mountains being built!); astronomy (go back and see the supernova that formed the Crab Nebula); and, of course, on-site measurements of the arcane energies that govern the time machine or world-hopper.

Some scientists are ivory-tower types who don't belong in the field . . . but come anyway. Others are survivors; think of Indy Jones or Professor Challenger. And some just *think* that they're men of action.

Advantages: As for Historian. Mathematical Ability and Eidetic Memory are also appropriate.

Disadvantages: As for Historian, with more possibility of being Fanatic about a pet theory.

Skills: Appropriate scientific expertise, often highly specialized, and Research.

Soldier

This includes anybody who fights for a living, from career officer to mercenary bandit. A soldier might be part of a cross-time army; he might be a mercenary fighter or security guard in the employ of a university or trading company; he might be a freelance looter with a stolen time machine.

For more about cross-time fighting men, see *Eternity's Rangers*, p. 69.

Advantages: Alertness, Combat Reflexes, Danger Sense, High Pain Threshold, Rapid Healing, Strong Will and Toughness are all valuable; Luck is most valuable of all. Officers have Military Rank and — sometimes — Charisma. Police types have Legal Enforcement Powers.

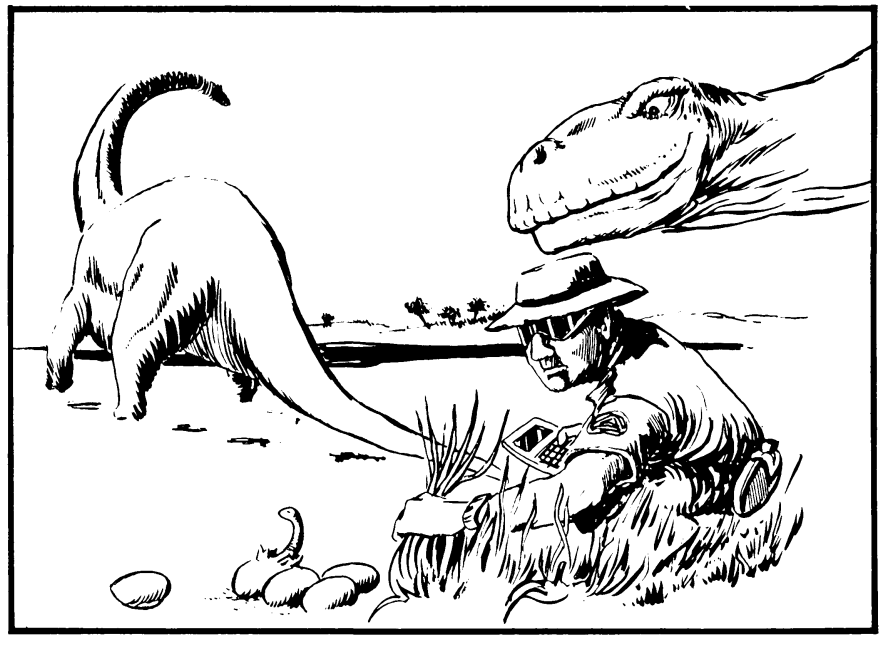
Disadvantages: Significant physical disadvantages are unlikely in most backgrounds — but a pirate crew *might* get hold of a cross-universe conveyor, eye patches and all. Psychological disadvantages are quite possible, depending on the unit. Bad Temper, Bully and even Berserk and Bloodlust could be encountered.

Skills: Combat skills from any and all periods. Survival for a very wide variety of environments. Animal skills, even now-forgotten ones like Packing, become very valuable for a trooper visiting lower tech levels. Officers can use Strategy, Tactics and Leadership, of course. A leader-type who is also a student of history and technology can win wars single-handed, in the tradition of H. Beam Piper's *Gunpowder God.*

Student

Students are usually found in the company of Historians, Scientists or Technicians. If the characters have been thrown into the past as the result of a laboratory accident, one or more of them may be university students. One advantage Students have, which should not be overlooked, is that they are relatively young: they may be able to fit in more easily in earlier times, when people aged and died early.

Advantages: None are necessary, but some Students are "prodigies" with Eidetic Memories, Mathematical Ability, or the like. A Student might also have a useful Unusual Background — for instance, someone who had spent time as a Peace



Corps volunteer might have an easier time in "primitive" cultures.

Disadvantages: While most students are Poor, this rarely matters in time travel (see p. 27). Brilliant students are often Impulsive and very Stubborn. Many students are Lazy, and few want to work *all* the time, much to the professor's dismay. A grad student might have a Duty to a professor.

Skills: A Student will have a certain amount of skill in whatever he is studying, though less than a professional. Students often have athletic skills — Swimming, Boating, Fencing.

Tourist

A Tourist is someone who loves visiting other times and places, just for novelty's sake. A Tourist who becomes too involved with a particular person or period is likely to become a Fanatic, as described on p. 23.

A subclass of Tourist is the Souvenir Hunter. This fellow doesn't enjoy an adventure unless he brings back something to show off . . . preferably something *important.* In a case in his den you'll see Robert E. Lee's sword and Colonel Custer's hat. And hanging above them is the head of a Tyrannosaurus he shot himself — or so he says. When he throws a party, he'll cool the drinks with ice from the berg that sank the *Titanic.* Really serious souvenir-hunting may be treated as an Obsession, or even as Kleptomania!

Note that "Tourist" can be a psychological attitude in other types of travelers. If a Time Corps agent is fascinated by his outtime surroundings and brings back mementos, he's as much a Tourist as the most obnoxious client of Time Tours Ltd.

Advantages: Many Tourists have the Advantage of Wealth, making it possible to afford the expensive hobby of time or dimension travel. In a campaign where some individuals have the advantage of personal time-jumping or world-jumping (see pp. 31-33), some of these people may have a Tourist personality, interested solely in travel for its own sake. This will be very frustrating toward governments and others who want to make use of their powers!

Disadvantages: One common disadvantage is the Delusion "None of this is real — it's all a show put on for me!" In a campaign where many NPCs are *literal* Tourists, they can have a variety of unbearable Odious Personal Habits and psychological disadvantages. And Timesickness is terribly appropriate.

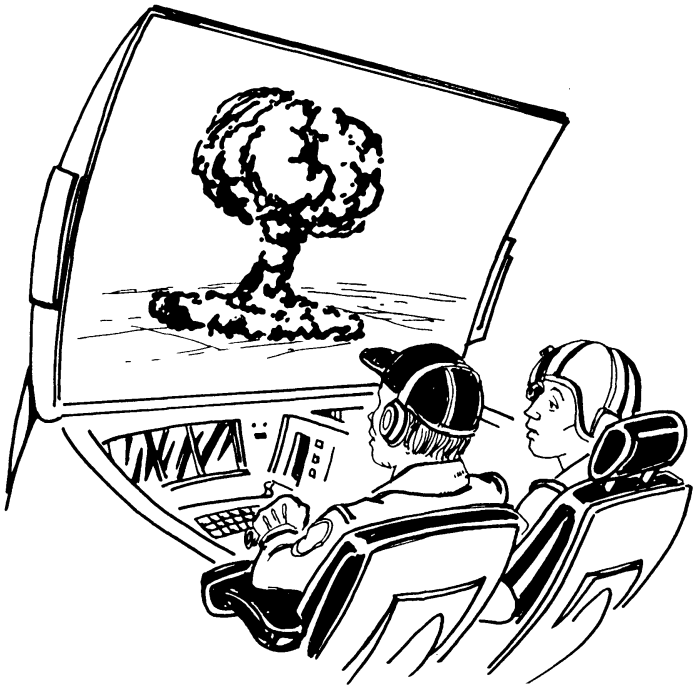
Skills: A Tourist may have any skills, or none at all. The typical "helpless client" of Time Tours is a totally unskilled NPC. But a Tourist may also have excellent skills . . . the kind that can get the party out of a real jam. (If the Tourist is obnoxious, the PCs may have a real problem negotiating with him to save everyone's life.)

Technician

Technicians maintain and operate time machines or cross-universe conveyors. They may go into the field with the agents or other travelers, or stay at Control, trying to keep the temperamental equipment running properly.

Research Technicians are specialists at finding information needed by the travelers in the field, using libraries, maps, computer data bases, et cetera. They may also provide practical applications for the data, coming up with (for instance) a plan for laying siege to a castle, or the best route out of a desert.

Most Technicians, especially those who stay at home, will be non-player characters, but there's plenty of possibility for entertaining role-playing between the "tough agents" and "egghead techs."



A special case of Technician is the eccentric genius who invented the time machine, and now goes jaunting around the past with a group of friends and acquaintances (usually including his beautiful niece/daughter).

Advantages: None are necessary, but Eidetic Memory and Language Talent are useful for Research Technicians, and Time Techs may be able to use Mathematical Ability (to calculate the dwell angle for the chronic frammistat without instruments).

Disadvantages: Technicians who go into the field may be given disabilities that would disqualify Time Agents (and are bound to give the agents a hard time). While a desk-bound Technician might have any physical disability — the crippled-genius stereotype — remember that any handicap that doesn't hinder the character in play is only a detail of characterization, not a Disadvantage worth points. The eccentric inventor's beautiful daughter might be a Dependent — though in these more enlightened times, the daughter is usually the competent adventurer, and the father the incompetent Dependent.

Skills: Obviously, the Tech needs a high skill level in his area of expertise: Temporal Engineering or Operation, Computer Operation, Research. Field Techs should be given a few survival or combat skills, so that they're not completely useless when the going gets tough.

Advantages, Disadvantages and Skills

This section will discuss existing advantages, disadvantages and skills as they apply in a time-travel or parallel-world campaign, and offer some new ones appropriate to the crossworlds genre.

It should go without saying that the GM need not allow any new advantage (or disadvantage) that does not fit the campaign he is running. In a strict parallel-worlds campaign, for instance, the Time Jumper advantage does not exist.

Advantages

Absolute Timing *see p. B19*

Time travel will upset your sense of timing. After a temporal journey, you will not know what time it is until you get a new reference (seeing dawn, seeing a clock, etc.). You *will* know how much time has passed since your time-trip.

For an improved version of Absolute Timing, see *Chronolocation*, p. 29.

Clerical Investment *see p. B19*

Usually, like Status, this advantage will mean little in a crossworld campaign. If it is useful in a given campaign, the GM may allow it.

Legal Enforcement Powers *see p. B21*

In a campaign which is more-or-less permanently based in one time period, characters with a "cover" as local police, or who *are* local police, will get the normal benefits of their connection with authority, and may take this advantage.

If the PCs are full-time travelers, the only "normal" Legal Enforcement Powers worth any points would be those relative to the community of time or world travelers — the Time Patrol, the Quantum Police, or whatever.

If the PCs belong to an organization that permits them to ignore any and all "local" laws when on a mission, and if they can easily escape the consequences of their actions, this is an effective partial immunity to local law. Treat it as Legal Enforcement Powers worth 5 points.

Magical Aptitude and Magic Resistance *see p. B21*

In a time-travel campaign, these advantages are not relevant unless the GM decides that magic still works, or used to work. If the players don't *know* about magic at the beginning of the campaign, the GM may give them the chance to acquire one of these advantages later.

The same holds true for crossworld campaigns. It may be that there are alternate worlds in which magic works, even if magic is wholly ineffective in the "home" timeline.

Patrons *see p. B24*

The only patron worth points for a traveler is one that can, and likely will, cross times or worlds to get him out of trouble. Since "unusual reach in time or space" is therefore obligatory for a crosstime or crossworld Patron, add 5 points to the "power" value for any such patron.

Of the organizations described in this book, Eternity's Rangers (see p. 69) don't count as a patron (they may come get you, but not often, and they were the ones who *put* you there.) On the other hand, Time Tours Ltd. (p. 108) has a good reputation for bailing its employees out of trouble. It is a reasonably powerful organization with unusual reach, appearing on a 12 or better, and is worth 40 points as a Patron.

Unusual Background *see p. B23*

By definition, time travelers or crossworld visitors *already* have an unusual background, and daily meet others with unusual backgrounds. For this sort of campaign, the only sort of background sufficiently unusual to be worth points would be one that gave very special abilities, such as magic, super-abilities or psi.

In a campaign where only a *few* PCs have access to time-travel or alternate worlds, the GM should consider this to be a significant Unusual Background. The cost should be at least 20 points . . . and more, if the time or dimension travel is easy and powerful. (In most such campaigns, all PCs will be travelers from time to time, but not all will be able to control the means of travel.)

Wealth/Status/Reputation *see pp. B16-B18*

In a campaign where much of the action takes place "at home," all these social advantages are important and may be used normally. For instance, in the *Order of the Hourglass* campaign frame (p. 76), wealth and social position can be very important in preparing for a trip, or in defending from enemy Time Circles at home.

However, in most campaigns Status is of no importance: whoever you may be in your home time means nothing in the past or future. (Of course, some hereditary titles are ancient — but imagine telling the 2nd Earl of Pottleby that you're the 17th Earl, and would he mind putting you and your friends up in the family manor for a few days?)

Growing up with high Status is not useless — there is still a bonus to Savoir-Faire skill — but it is no longer "cost-effective," for those who worry about such things. The GM must determine skill modifiers for attempts to pass oneself off as historical nobility (or even one's own ancestors).

Reputations, similarly, count for little in most time campaigns; characters are not likely to meet anyone who knows them 500 years before they're born. Exceptions to this occur in games with many time travelers, and "recurring villains." In the *Dr. Who* universe, for instance, the Gallifreyan Time Lords have a Reputation, not always good, among the cultures that know of their existence. It is also possible that time travelers who do not keep a low profile will become "legends" to later eras. It can be more than a little complicated to deal with people who think you are a mythic hero reborn.

Wealth can be an advantage if the players must finance and equip their own time expeditions. A pocketful of gold can work wonders almost any time (though it might be a good idea to melt down the Krugerrands before trying to spend them in the Renaissance). Poverty is rarely a handicap for time travelers.

In some backgrounds, it is very easy to become rich if you can travel in time and across worlds. In particular, the Time-Jumper, World-Jumper and Snatcher abilities (see *New Advantages*, p. 29) could make it easy to become rich. The GM may require Jumpers and Snatchers to purchase the Filthy Rich advantage if they are using their powers to gain wealth.

Disadvantages

In any campaign where all the PCs have certain disadvantages (e.g., Dependents in the form of tourists, Duty, and so on) these disadvantages do not count against the 40-point limit. If Timesickness (pp. 33), exists in the campaign, the *normal* point value for Timesickness doesn't count against the limit, but any points for additional severity *do* count.

Dependents *see p. B38*

In general, PCs in a crosstime or crossworld campaign should get no points for Dependents unless the Dependents appear essentially all the time, and are part of the party. Otherwise, their usual antagonists will have no idea the Dependent even exists, let alone be able to capture or threaten them.

For example, the inventor of the time machine could bring his eight-year-old son along for lack of a better place to park him. Or the *inventor* could be the dependent. He's brilliant but quite incompetent; the PC is his grown daughter, who leads the party.

Clients, Researchers, etc., as Dependents

In some campaigns, only agents and trained technicians go into the field. Other games may involve the agents chaperoning groups of historical researchers, or even tourists. These people will rarely be as well trained as Agents, but the agents are responsible for their safety (and for keeping the amateurs from dangerous meddling). Such people also count as Dependents, though the actual individuals may be different from game to game. The actual point value depends on several factors, and is based on the *usual* adventure the agents will have:

Competence of the persons to be protected. Are they reasonably competent and intelligent people (-6 points) or bumblers who actively cause trouble (-12 points)?

How closely they must be protected. The Agency may insist that the agents put the auxiliaries' lives above their own (value twice normal); require the agents to protect them wherever possible, but not to die for them (value normal) or consider them to be traveling at their own risk, requiring only that the agents repair any damage they do to the timestream (value half normal).

How often the auxiliaries appear. Use the usual rules (p. B29) for frequency of appearance. Note that if non-agents are sent along only under unusual circumstances — fewer than one in three missions — taking care of them is part of the Agency Duty, not worth points separately. Thus, the "Quite Rarely" frequency should not apply.

Numbers. If a team of several agents only has to escort and protect one person per mission, halve the value. For two dependents, up to half the team, use the normal value. And if the Dependents outnumber the trained members (as with a tourist group) double the value. *Examples:* A Time Tours crew (dealing with bumblers who cause trouble, who must be protected wherever possible, outnumbering the agents) would be 12 × 1 × 2, or 24 points. A team escorting an important researcher (competent, must be protected at all costs, a single person) would be 6 × 2 × .5, or 6 points.

Duty ***see p. B39***

Agents are responsible to the Agency that employs them. Since most or all of their adventures are Agency missions, the point value of this Duty is determined by how difficult the Agency's requirements make the agent's life.

An Agency that has little or no control over how the field agents perform their missions (usually because the mechanics of time travel prohibit communications between them) is worth -5 points. If the Agency has no control, but a great number of rules of conduct (which it can't enforce, but the agents have to make sure they don't leave evidence of having broken them), the value of the Duty is -10.

If there is limited communication, so that the Agency demands regular reports from the field, the Duty is -10 points, or -15 if there are many strict rules.

And if Control can constantly look over its agents' shoulders and kibitz, the cost is -15 points (even if the rules are strict; this is balanced by the ability of Control to provide assistance online).

If the duty is "extremely hazardous" — the equivalent of military service, where the character regularly goes up against murderous foes, for instance — the Duty is -20 points, regardless of the rules.

Enemy ***see p. B39***

Certain groups have time- or dimension-traveling foes which show up often enough to be taken as Enemies; see p. 78 (opposing Time Circles).

No Enemy trapped in a single time or world is likely to be able to reach a traveler often enough to be worth any points.

Primitive ***see p. B26***

A PC recruited in a low-tech time or world will naturally have this disadvantage. Keep it in mind and roleplay it. The primitive can learn to *operate* all sorts of high-tech gear, with patient teaching, but he won't understand what's going on and won't have any defaults with "modern" skills unless he takes a serious training course designed to remedy just these problems. An organization that made heavy use of "primitive" recruits would probably have just such a school, permitting primitive characters to buy off the disadvantage.

Honesty ***p. B35***

An Honest character, in a different time or place, will act as though the laws and morals of his own home were still in force. This is sure to cause interesting problems!

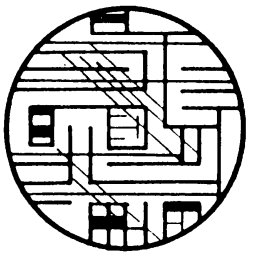
Skills

Absolutely *any* skill can come into play in a dimension-travel or cross-time game. Most skills will work exactly as described in the ***Basic Set*** or other ***GURPS*** book.

But keep in mind that tech level differences can become very important. Any skill listed with a /TL will change and progress significantly from one tech level to the next. See the Tech Level sidebars on pp. B185-187.

An engineer, mechanic, gunner, etc., will always be most effective when dealing with the technology of his "home" TL. Higher tech levels will present baffling advances; lower tech levels will offer slow, obsolete equipment. The farther away from your native TL you are, the greater the penalty when you try to use a skill, as follows:

Tech level 4 (or more) higher than yours: Impossible.
Tech level 3 higher than yours: -15
Tech level 2 higher than yours: -10
Tech level 1 higher than yours: -5
Your own tech level: No penalty
Tech level 1 lower than yours: -1
Tech level 2 lower than yours: -3
Tech level 3 lower than yours: -5
Tech level 4 lower than yours: -7
and so on.



Note that this penalty only applies to repair and engineering. A TL7 walkie-talkie will work perfectly well in 1800 — and you can easily teach your native friends to use it. But if it quits, the local technicians will be at a -10 to fix it, and will probably break it permanently if they fool with it. And *you* will be at a -3 to repair it if you have to depend on 1800s parts and testing equipment. (The GM should be creative. In this particular case,

even after you figure out the problem, it will take weeks or months to come up with a substitute part, since you can't just go down to the radio store and buy it!)

You *can* build up your skill with an alternate tech level; see the sidebar on p. B187.

Area Knowledge ***see p. B62***

When Area Knowledge is defined in a time-traveling campaign, the *time* must be defined as well as the *place*. The more modern a society, the faster Area Knowledge changes. In 20th-century Detroit, knowledge ten years out of date is almost useless. In 8th-century Europe, knowledge can stay fresh for many decades unless a war passes through.

History ***see p. B61***

This is a very valuable skill for any time-traveler or any visitor to a parallel world with a history like ours.

To determine whether a traveler notices something different from history as he learned it, roll vs. History skill, with a bonus or penalty appropriate to the importance of the change. Realizing that Benjamin Franklin was never President is easy; recognizing that the *Lusitania* should not have made it to port is a bit harder . . .

Of course, a difference may just mean that history, as taught in schools or seen in the movies, is often wrong! A roll at a further penalty, and possibly some research time, should be required to check this. (Yes, Genghis Khan really *did* have red hair and green eyes, and didn't look Oriental at all . . .)

New Advantages

Chronolocation ***15 points***

Like Absolute Timing (pp. 27 and B19) but better. Time travel does not upset the ability; you always know what time it is in an absolute sense. Note that you can still be confused by things like Daylight Savings Time and calendar reform. Your chronolocation ability is related to the "entropic charge" of the world around you. Thus, when you travel in time, the GM may tell you "You have gone back exactly 92,876.3 days," and let the player — or the character — deal with questions like "What about Leap Year?"

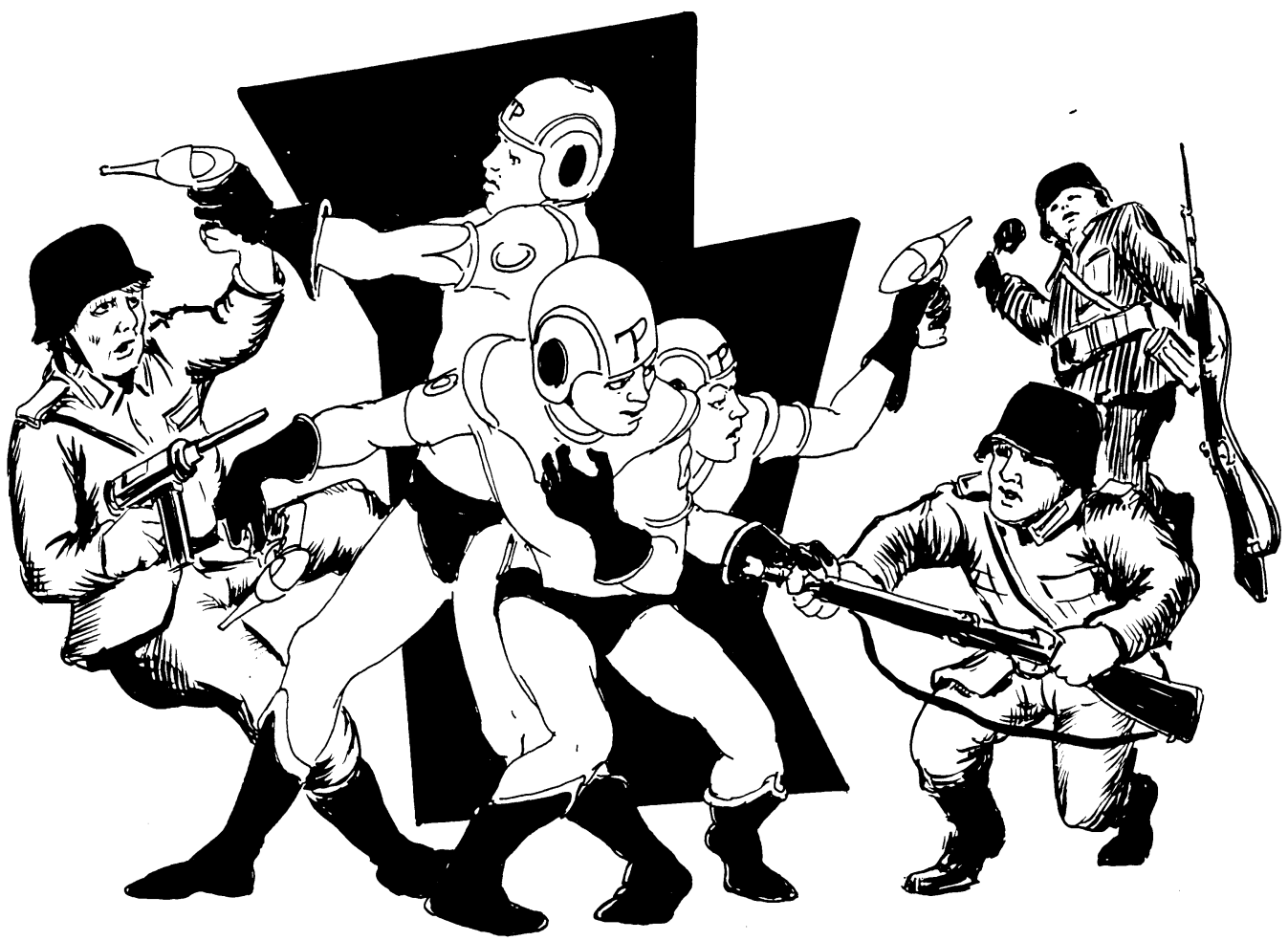
But if your time machine ever malfunctions and drops you into the Jurassic Period, you will know about it *before* you see dinosaurs.

Fugue ***50 points***

This is the ability to send yourself back in time for a few minutes in order to create a double, specifically for purposes of combat. It only works under combat stress; an attempt to use fugue to (for instance) send yourself a message will always come to naught.

When you enter combat, the GM rolls 1d-1 to determine how many future-duplicates the *future* you might have sent back to help. The GM places them on the combat map; they are then under your control. They don't know any more about the outcome of the fight than you do; just by returning to the time of the fight, they are creating an uncertainty about what happens.

If *you* are killed or knocked out during the fight, all your



fugue-doubles will vanish. If one of the doubles is killed or knocked out, all the *later* ones will vanish; the GM assigns each one a number from 1 to (up to) 5, with 1 being the earliest and 5 the latest. However, hits on a fugue double have no effect on you.

When the immediate fight ends, the doubles, dead and alive, will wink out of existence — they were closed causal loops of alternate history. Damage to the doubles, ammunition they expended, etc., does not affect the real "you" at all.

(Yes, this appears to violate a number of different versions of the physics of time travel. The GM is free to prohibit it entirely — or say "It's a wild talent, and it works." Either way, don't worry about it!)

Gadgeteer ***25 or 50 points***

You are a natural inventor. You can modify existing equipment and, given enough time and supplies, create entirely new devices. This advantage allows you to use the Gadgeteering rules on pp. 15-19.

For 25 points, you are a "realistic" inventor. For 50 points, you can create your new devices in the pulp-hero mode, producing wonders in a few hours with the junk you find in an abandoned garage. The 50-point version is not appropriate except in a cinematic campaign.

In a ***Time Travel*** campaign, this ability will usually be used to re-create high technology in a low-tech background. However, it *can* be used to create new bits of super-science, such as modifications to the time machine or dimensional conveyor.

Immunity to Timesickness ***varies***

You are immune to the disorienting effects of time travel. (See *Timesickness*, p. 33.) The value of the advantage depends on the frequency and severity of the usual effects. For instance, if "standard" Timesickness in the campaign is equivalent to a 10-point disadvantage, and all characters normally suffer from it, then complete immunity is a 10-point advantage. It is possible to have partial immunity — in that case, the value of the advantage is the difference between your level of Timesickness and the normal level.

Obviously, if the method of travel used never produces Timesickness, or produces it only under extraordinary circumstances (i.e., the GM imposes it as a "malfunction" or the like for a single adventure) this advantage has no value.

Note also that this is only a protection against Timesickness: it is no defense against landing after the time-trip in an awkward or embarrassing position.

Retrogression ***40 points***

The character can send his mind back in time to temporarily "possess" someone in the past. The ramifications and variations on this ability are discussed in detail in Chapter 5.

Snatcher ***varies***

This is the power to find (almost) any desired item in an alternate world, and "snatch" it across the dimensions to you. This is not the same as World-Jumper ability (below) — it does not let you visit an alternate world in person.

The items "snatched" do not come from the Snatcher's own world, but from some nameless alternate. Thus, a Snatcher can get things for himself, but he can never intentionally take them away from some specific other person.

Although this power is circumscribed in many ways, it remains an extraordinarily valuable ability! The base cost is 80 character points. This cost can be reduced by several possible limitations on the power, described below.

Using the Power

To make a Snatch, the Snatcher must concentrate, undisturbed, for 10 seconds. He must clearly visualize the item he wants. He should have a hand free; the hand will be seen to make "reaching" motions. (A Snatcher with hands tied is at a -3 to his IQ roll.) The Snatcher then rolls vs. IQ. A successful roll means that the desired item is in his hand, or sitting within arm's reach, as he prefers. A failure means that nothing was obtained. Any roll of 14 or over always fails.

A critical failure means the wrong item was snatched. This item will not be immediately dangerous unless the Snatcher was *trying* for something dangerous.

If the Snatcher is trying for *information* in any form, the GM makes the roll — see below.

Items Available

In theory, a Snatcher can get *anything*. In practice, some things are so hard to "find" that it is little use trying for them. In general, a Snatcher has a good chance of getting any item that exists in his own world, or any reasonably similar item. He can also get any item that ever existed in his own world's past history, or any reasonably similar item. If the desired item is unusual, the GM may apply an IQ penalty to each attempt:

Desired item is significantly different from anything that ever appeared in the Snatcher's own world: -1 or more, at the GM's option. A Snatcher could visualize "a perfect diamond, bright green, the size of a hen's egg, carved into the shape of a typewriter," but he might be rolling at -20!

Desired item is unique or almost unique in any one world (e.g., the Hope Diamond): -3 or worse.

Snatcher cannot clearly visualize what he wants: -4 or worse, at the GM's option, and a "success" may not be what the Snatcher was really hoping for.

Note that none of these penalties will keep a determined Snatcher from getting what he wants *eventually.*

However, a Snatcher *cannot* get an item that works by natural

laws wholly different from those in his own world. For instance, a Snatcher in a non-magical world (or even a world with no magic that he *knows* of) cannot Snatch a magical item, because he is absolutely unable to visualize it properly. He'd get a pretty, but powerless, sword or jewel. Similarly, a Snatcher from a low-tech world could not get a laser pistol; he wouldn't be able to visualize it well, and his best effort would be a broken or toy gun. (A generous GM might bend this rule on a critical success, and then let the poor Snatcher try to figure out how to use his amulet/laser pistol/psi-ripper without killing himself.)

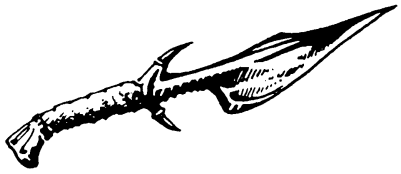
Repeated attempts: If a snatch attempt is not successful, or if the Snatcher wants an identical item, he can try again immediately, at a cumulative -1 to his IQ roll. Each repeated attempt at the same thing costs *double* fatigue. An interval of an hour between attempts at the same thing will eliminate this penalty. (The GM should be strict about attempts to circumvent this. "A .45 pistol" is not very different from "A .357 pistol" for Snatch purposes.) Furthermore, critical successes may be ignored when repeated attempts are made in quick succession — so if the Snatch being attempted is very difficult, the Snatcher will simply *have* to wait an hour between attempts.

Information is not available except in the form of "ordinary" textbooks, reports, and so on. A Snatcher can grab a history book, but can't ask for "The Book of What Happens Next in My Adventure." Note also that the GM makes the roll if information is requested. If the roll is failed by 5 or more, the information comes from an alternate world with different history, physics, etc., and will be wrong — maybe subtly, maybe not subtly at all!

Weight Snatched

The strongest known Snatchers can get any item of up to 5 lbs. weight. A lower weight limit reduces the cost of the power:

3 lbs.: -5 points
2 lbs.: -10 points
1 lb.: -15 points
4 ounces: -20 points
1 ounce: -25 points



Fatigue Cost

The fatigue cost of a snatch is normally 2. The cost of the second, and any successive, attempt at the same snatch is 4. An hour's wait will eliminate this penalty.

Special Limitations

Some Snatchers have particular limitations on their powers, which reduce the character point cost. The GM may permit other limitations (for ideas, see ***GURPS Supers***), setting their cost as appropriate. The final cost of the ability can never be reduced below 50 points. Some known types of limitation are:

Extra time: Each attempt takes more concentration: a minute (-5 points), five minutes (-10 points), or 30 minutes (-15 points).

Specialization: The Snatcher can only grab a certain type of thing, or cannot touch some certain class of thing. Some examples might be *Only weapons* (-10 points); *Only information* (-15 points), *Only money* (-10 points); *Only metal* (-5 points); *No metal* (-15 points); *Only blue things* (-20 points). The GM sets the value of the specialization.

Stunning: The Snatcher is always mentally stunned after a successful snatch. -10 points.

Uncontrollable: On a failed IQ roll, the Snatcher gets *something*, but it isn't what he wanted. The worse the failure, the more different the item is. If a Snatcher wanted a fully loaded pistol, a failure by 1 might bring an unloaded pistol. A failure by 2 could mean a water-gun, a failure by 3 a book on "How to Shoot," and so on . . . with a critical failure bringing a live hand grenade. *Any* critical failure will be dangerous, regardless of what the Snatcher was looking for! -20 points.

Temporal Inertia ***15 points***

You are strongly rooted in probability. This advantage is only worthwhile in a campaign in which paradoxes or changes in history, erasing past events or whole timelines, are possible.

If history changes, you will remember both versions.

If you are involved in a genuine time paradox, you will not be erased, even if the rest of your world is. You will have a place in the new timeline, whatever it is. You will remember all your experiences, even the ones that never happened. (In an extreme case, you will have two complete sets of memories, and you must make an IQ roll any time you have to quickly distinguish between one or the other . . . Acting skill may be needed to keep you out of the asylum.)

There is a drawback, though. There will be a "you" in any parallel or split timeline you encounter, and he will be as similar to you as the timeline allows. In a Timepiece/Stopwatch campaign, for instance, your double will be a Time Agent if you are, and will get similar assignments.

The opposite of this advantage is "Unique" — see p. 34.

Time-Jumper ***Varies***

This is the power to travel in time without machinery or a gate — just by willing the "jump." The basic cost of this power is 100 points, but modifications to the ability (described below) can vary the cost.

This advantage *can* be improved with time and practice. Someone who starts with Time-Jumper ability can spend character points to improve the power at a later date.

The question of what times are available to a jumper, and the possible results of meddling with history, are up to the GM; see Chapter 3.

Making the Jump

To travel in time, the jumper must visualize his destination and concentrate for 10 seconds; then make an IQ roll. If the jump is hurried, roll at -1 for every second of concentration less than 10. On a successful roll, the Jumper appears in the target time (see below). On a failed roll, he does not move; a roll of 14 or more is always a failure. A critical failure sends the jumper to the wrong time!

If two or more jumpers are in physical contact, and one jumps, the other can go along if he wants to — even if the one initiating the jump does *not* want company. The person initiating the jump is the only one who makes a die roll; wherever he arrives, the other(s) will, too. This only works if the tag-alongs also have the power to get there on their own!

The "Landing"

The jumper appears in the new time at exactly the same place he left the old one, or as close as possible. (For instance, if he was in a basement when he "jumped," and there is no corresponding basement in the target time, he would appear at ground level.) If there is no corresponding "safe" location within 100 yards, the jump is impossible; the jumper will know why he failed. Thus, you could not jump between times while you were on a transcontinental flight.

However, nothing in this ability prevents a jumper from ap-

pearing in the midst of other types of danger, such as radiation, gunfire or wild animals. If a jumper has the Danger Sense advantage, though, the GM should roll before he makes a hazardous jump, to see if he gets a warning.

Fatigue Cost

A time-jump normally costs 1 fatigue. The GM may add fatigue costs for especially "tricky" jumps, especially in a campaign where paradoxes are possible!

Load Carried

Different time-jumpers can carry different loads with them. The amount that you can carry will affect the cost of the power. However, "encumbrance" for a jump is based, not on your ST, but on your IQ! Thus, if you have IQ 12, "no encumbrance" is up to 24 lbs., regardless of your ST.

Nothing can be carried (you arrive naked): -10 points.
No encumbrance (2 × IQ lbs. or less): 0 points.
Light encumbrance (4 × IQ lbs. or less): +10 points.
Medium encumbrance (6 × IQ lbs. or less): +20 points.
Heavy encumbrance (10 × IQ lbs. or less): +30 points. At this level, you can transport one person with you, along with the clothes you are both wearing, *regardless* of that person's actual weight. However, if the actual weight exceeds your normal "heavy encumbrance" level, nothing *else* can be carried.
Extra-heavy encumbrance (20 × IQ lbs. or less): +50 points.

Jumping with extra effort: A jumper can make an extra effort and exceed his normal encumbrance limit by 1 level. Multiply fatigue cost by 5 (!!), and make the normal skill roll at -3. If the jump succeeds, the jumper will be mentally stunned on arrival.

Special Limitations

Some jumpers have particular limitations on their powers, which reduce the character point cost. The GM may permit other limitations (for ideas, see ***GURPS Supers***), setting their cost as appropriate. *Minimum* cost for this ability is 60 points. Some known types of limitation are:

Drift: The jumper does not arrive in exactly the place he left from. He won't arrive in thin air or underground, but may show up anywhere within 10 miles of his planned destination. The better his skill roll when he jumps, the closer he will be to the place he wanted to arrive, but it's the GM's call as to exactly where he appears. -15 points.

Limited range: The jumper is limited to hops of (for instance) 100 years at a time. The GM must set the point value of this limitation based on his own campaign; it will be more of a handicap in some campaigns than in others. A suggested value is -10 points.

Limited maximum range: The jumper can never get farther than (for instance) 100 years from his "home time." Again, if the GM allows this limitation, he must set its point value, because it will be *vastly* more of a handicap in some campaigns than in others.

Psychic travel: The jumper leaves his body behind, and enters the mind of a native of the period (see Chapter 5). This is really the *Retrogression* advantage, *not* Time-Jumper. See p. 30.

Stunning: The jumper is always mentally stunned after a jump. -10 points.

Uncontrollable: The jumper will use his power involuntarily whenever he is in extreme stress. Any failed Will roll in the face of danger or phobia indicates extreme stress. The GM does not have to allow this limitation to any jumper who doesn't also have at least 15 points worth of Phobias! -10 points.

Special Enhancements

A few jumpers have extra abilities, which increase the character point cost. Some known "enhancements" are:

No Concentration Required. When you want to jump, just make your IQ roll. +15 points.

Teleport Jump. The jumper can appear anywhere in the new time, within the restrictions given for the Teleport power (p. B175). The jumper must also buy that power at normal cost, plus an added 10-point cost to let the two powers be used together. Two die rolls are necessary for each jump — one for each power — and it is quite possible for one to succeed while the other fails, or for both to fail.

World-Jumper ***Varies***

This is the power to travel to a parallel world without machinery or a gate — just by willing the "jump." The basic cost of this power is 100 character points, but modifications to the ability (described below) can vary the cost.

This advantage *can* be improved with time and practice. Someone who starts with World-Jumper ability can spend character points to improve the power at a later date, removing limitations or increasing the weight that can be carried.

Making the Jump

To visit another world, the jumper must visualize it for 10 seconds and make an IQ roll, rolling against his "memory" of the world. On a successful roll, the Jumper appears in the new world (see below). On a failed roll, he does not move, but may try again. A critical failure sends the jumper to the wrong world! This is terribly dangerous, of course, but if the jumper survives, he may find that he has sole access to a newly-discovered world.

To be visited repeatedly, a world must be "memorized." Memorizing a world is a Mental/Easy task; thus, learning a new world at IQ level costs 1 character point. A Jumper can accomplish this "memorization" in one undisturbed hour absorbing the "feel" of the new world. (If a jumper visits a world and does not memorize it, he can try to return anyway, but he rolls at IQ-3.)

Unless a jumper wants to be *sure* of hitting his target world *immediately*, there is little need to put extra points into memorizing any one world. Should a Jumper choose to do so, each additional point spent takes one additional hour.

Normally, for a jumper to visit a new world for the first time, he must be "escorted" by another jumper. The two (or more) must be in physical contact; each may carry his normal load. The "lead" jumper makes the IQ roll. All the other jumpers go along automatically. *"Escorting" can be involuntary.* If two jumpers are in physical contact when one of them jumps, and the other one wishes to tag along, *he will.* Of course, in a campaign where other methods of cross-world travel also exist, a jumper may use them as well.

Some jumpers have enhanced abilities (see below) which let them visit new worlds. Other new worlds are discovered by accident, when a jumper goes to the wrong place and survives.

The "Landing"

The jumper appears in the new world at exactly the same place he left the old one, or as close as possible. This works exactly as for Time-Jumping — see p. 31. There are a few instances in which world-jumping is more flexible than time-jumping. You *could* world-jump while on a transcontinental flight, if your target world was so nearly identical that there was a plane in the same place!

Fatigue Cost

The fatigue cost of a world-jump depends on the "quantum separation" of the two worlds (see p. 87). If the worlds are at the same quantum level, the jump is easy; the fatigue cost is 1. If the worlds are at adjacent quantum levels, the fatigue cost is 10. A direct jump of more than one quantum level does not seem to be possible. However, a jumper can go from Quantum 5 to Quantum 4 and then, as soon as he retains enough fatigue, to Quantum 3 . . . and so on, indefinitely, as long as he knows enough worlds.

Load Carried

Treat this exactly as for Time-Jumping, p. 32.

Special Limitations

Some jumpers have particular limitations on their powers, which reduce the character point cost. The GM may permit other limitations (for ideas, see ***GURPS Supers***), setting their cost as appropriate. *Minimum* cost for this ability is 60 points. Some known limitations are:

Cannot escort another jumper. If this character ever learns a new world, he won't be able to take others there. -10 points.

Cannot follow another jumper. This is a more severe limitation, because it drastically cuts down on the jumper's opportunities to learn new worlds. -20 points.

Drift: As for Time-Jumping, p. 32. -15 points.

Stunning: The jumper is always mentally stunned after a jump. -10 points.

Uncontrollable: As for Time-Jumping, p. 32. -10 points.

Special Enhancements

A few jumpers have extra abilities, which increase the character point cost. Some known enhancements are:

New worlds: The jumper can deliberately aim for worlds where he has never been. Any such attempt is at IQ-3, with a further penalty assessed by the GM depending on how different the world is from anything in the jumper's previous experience. Of course, it is always possible that *no such world exists,* depending on the number of parallel worlds in the campaign. In that case, any attempt automatically fails, though the jumper won't know why. Fatigue cost for any *attempt* to hit a new world is twice normal. (The GM who finds this enhancement too powerful is free to forbid it!) +50 points.

No Concentration Required. When you want to jump, just make your IQ roll. +15 points.

Reduced fatigue. Visiting another world in the same quantum costs no fatigue; an adjacent quantum costs only 5. +20 points.

Teleport Jump. As for Time-Jumping, p. 32.

Tracking. The jumper can visit a world where he has never been, if he can hold and examine an artifact from that world. The attempt must be made while the jumper is holding the artifact (or touching it, if it's too big to carry). Any such attempt is at IQ-2, and each jumper only gets one try per artifact. +20 points.

New Disadvantages

Incompetence ***-1 point***

A character may be defined as *incompetent* in any one skill, for -1 character point. He cannot learn that skill, and any attempt at default use is at an extra -4.

You cannot be incompetent in a single specialization; if you are incompetent with Guns, for instance, you are incompetent with every type of gun.

No character should ever be allowed more than -5 points in Incompetences.

The GM may disallow any incompetence that seems silly or abusive in his particular campaign. Likewise, the GM can allow an incompetence or two to count as Quirks, if a character is already at the maximum point value allowed for Disadvantages.

Timesickness ***varies***

In some stories, time travel is no more stressful than walking through a door; in others, there are serious mental and physical effects. When inventing new forms of time travel, the GM may set both the frequency and severity of Timesickness (or "jump sickness" in a parallel-world campaign). A roll against either Will or HT may be required to avoid its effects, depending on whether the campaign's time travel is primarily mental or mechanical in nature.

Another option is to link Timesickness to the machine operator's skill: in this case, the Temporal Operation success

roll determines whether the travelers are disoriented. The GM may still allow an individual roll to avoid the effects.

If Timesickness is unusual, then it counts as a disadvantage. If Timesickness is *normal* in the campaign, then it is not a disadvantage; instead, *Immunity to Timesickness* is an advantage, as described on p. 30. A character can have Timesickness at a level worse than normal for the campaign. Calculate the value of "normal" Timesickness for the campaign, and of the increased level, as described below. The difference in point costs is the value of the disadvantage.

Example: Frequent, Mild Timesickness is the default in the campaign. It has a value of -5 points, but that is *not* a bonus to normal characters. However, a character with Acute, Severe Timesickness has a malady which, from the table below, is worth -20 points. The difference, -15 points, is the actual disadvantage value to that character.

In a campaign where there are different forms of travel with different effects, use the disadvantage value for the least harmful *common* method of travel. A character who gains access to a form of travel without side effects should be required to buy off his Timesickness disadvantage.

For game purposes, the malady will be described in terms of a disadvantage. To find the point value of a given level of Timesickness, multiply the *severity* of the effect by the *frequency* with which it affects the victim, as follows:

Severity

Nuisance: The victim is mentally Stunned, as per p. B111, and rolls for recovery at -5 with only one attempt allowed per 10 seconds. This will have little effect unless the travelers arrive in the middle of a hostile situation. -2 points.

Mild: The victim is mentally Stunned and takes 2 dice of Fatigue (see p. B117). -5 points.

Severe: The victim must make a HT roll. On a success, he is mentally Stunned for 1d×10 minutes. On a failure, he is Stunned for 1d *hours.* Double this on a critical failure! -10 points.

Very Severe: As above, but the victim also takes damage: 1 HT if the duration is under an hour, 2 if it is an hour or more. -15 points.

Nightmare: This is a mental effect, most appropriate for psionic time travel. On a missed Will roll, the victim has monstrous visions. Go to the Fright Table and roll as though he had just missed a Fright Check by *twice* that amount. -15 points.

Critical: The victim takes 1 die of damage, and makes a HT roll (even if the save was on Will); if failed, he takes another die. Shock and Knockdown effects are exactly as normal injury (Crippling is ignored, however). This can kill you. -20 points.

Frequency

Rare: Travelers are affected on a critical failure only. Half value.

Frequent: Any failure affects a traveler. Normal value.

Very frequent: A critical success is required to avoid effects. Multiply value by 1.5 and round up.

Acute: No saving roll allowed; all travelers are automatically affected unless they are immune. Double value.

Generally, the more common Timesickness is, the less severe it should be.

Unique ***-5 points***

You are unique within the parallel worlds — the result of a low-probability event in the timelines. If a time paradox occurs, you are likely to vanish, and you will never have any memory of a paradoxical event. Unfortunately, in most time-travel backgrounds, you would never know of this danger until it happened, and then nobody would even remember you! Therefore, this disadvantage should probably not be allowed to PCs in a time-travel campaign.

In an alternate-world campaign, being Unique means that you will not exist in any form in an alternate world, even one very much like your own. This can have advantages. When you visit a cyberpunk world, you are effectively Zeroed (see ***GURPS Cyberpunk,*** p. 21) at no point cost. But it deprives you of any chance of befriending "yourself," which is sometimes a useful technique.

New Skills

Boinger (Physical/Average)

Defaults to DX-4 or any Thrown Weapon skill-1

This is the ability to throw the Boinger, a special stun weapon described in detail on p. 109.

Intimidation (Mental/Average)

Defaults to ST-5 or Acting-3

This is a social skill, used for persuasion. The essence of intimidation is to convince the subject that you are able and willing, and perhaps eager, to do something awful to him.

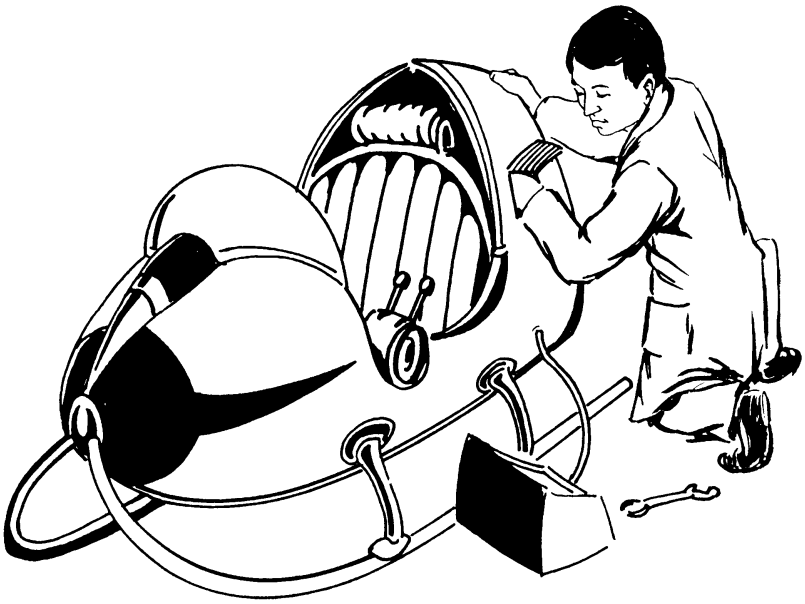
Intimidation may be substituted for a reaction roll in any situation, though it is at a -3 penalty when used in a request for aid. A successful Intimidation roll gives a Good (though usually not friendly) reaction. A failed roll gives a Bad reaction. On a critical success, the subject must make a Fright Check at -10!

The exact result of a successful roll depends on the target. An honest citizen will probably cooperate, sullenly or with false cheer. A low-life may lick your boots (even becoming genuinely loyal). A really tough sort may not be frightened, but may react well anyway: "You're my kind of scum!" The GM decides, and roleplays it.

When Intimidation is used against a PC (or, at the GM's option, against a NPC), this can also be rolled as a contest of Intimidation vs. Will. See *Influence Rolls,* sidebar, p. B93.

Modifiers: Up to +2 for displays of strength or bloodthirstiness, or +3 for superhuman strength or inhuman bloodthirstiness. The GM may give a further +1 bonus for witty or frightening dialogue, but should apply a penalty if the attempt is clumsy or inappropriate. The GM may apply *any* level of penalty if the PCs are attempting to intimidate somebody who, in his opinion, just can't be intimidated. (This includes anyone with the Unfazeable advantage from ***GURPS Supers***!)

Specious intimidation: If the PC can make both a Fast-Talk and an Intimidation roll, and roleplays it well, he can appear to be intimidating even when he can't back it up. This is the only way to intimidate some people (martial arts masters, world leaders, bellicose drunks). Success on both rolls gives a Very Good



If the method of travel in the campaign involves drugs/hypnosis instead of a machine, this is the only Temporal skill, and it defaults to Physician-5 or Biochemistry-7.

The GM may allow other defaults for other types of time travel. For a campaign set in the Victorian era, with a wonderful Wellsian time machine crafted all of brass and crystal with hundreds of moving parts, operation could default to Mechanic-5 . . . if a mechanic studies it long enough, he might actually figure it out!

For a cross-time campaign, this is "Parachronic Operation."

reaction. Success on one and failure on the other gives a Poor reaction. Failure on both gives a Very Bad reaction.

Note that Interrogation skill can default to Intimidation-3. It will not help you tell a good answer from a bad one, but it can get people to talk.

Temporal Electronics/TL (Mental/Hard) ***Defaults to Temporal Operation-6 or other Electronics-5***
Prerequisite: Temporal Physics

This is an Electronics Skill specialty (see p. B43) that deals with building and repairing time machines. Its practitioners are usually called "temporal engineers," just because "electronicist" is such an obnoxious word, but this is *not* an Engineering skill.

There is no default for persons from cultures without time travel — and in some campaigns, the PCs may have invented the machine, making them the only Temporal Engineers available.

For a cross-time campaign, this is "Parachronic Electronics."

Temporal Operation (Mental/Average) ***Defaults to Temporal Electronics-2***

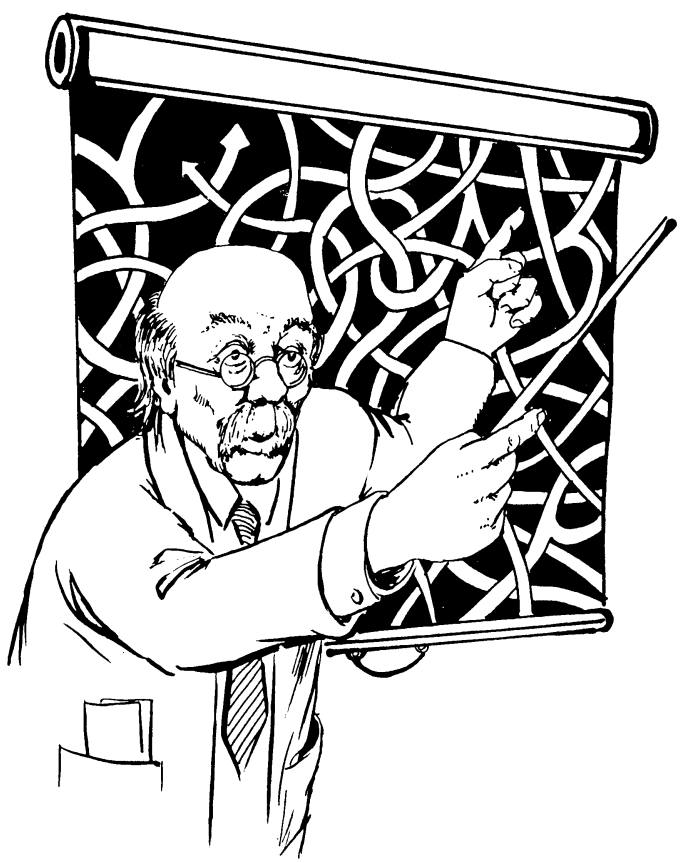
This is the skill of running time machines. Successful Operation rolls get the travelers precisely to the target place and time, without unpleasant side effects. Failed rolls may cause them to arrive a week too early, 15 feet in the air, without some of their equipment, or suffering from Timesickness. The GM may establish a "failure table," or just make it up as he goes along. For some sample failure tables, see pp. 93-96.

In campaigns where the operators remain behind their consoles at Home Time while the agents are in the field, Operation rolls may be required to "lock on" and transfer the agents. ("Beam us up!") This is always necessary if the operators are PCs (see *Mission Control*, p. 9). If the GM plays Control, he may use die rolls or act when it is dramatically convenient. ("Roger, team, we can see the charging Cossacks, and we're doing our best to get you outta there, just be a couple more minutes . . .")

Temporal Physics (Mental/Very Hard) ***Defaults to Temporal Electronics-6, or Physics (TL9+)-4***
Prerequisite: Physics (TL9+)

This is the theoretical science of time travel, as the campaign defines it. Its primary use in the game is to stretch the abilities of the equipment, effectively "bending the rules." While Engineers and Operators are able to do this as well, they will be able to work faster and with a greater chance of success if a Physicist has worked out the principles of the attempt. (Of course, if the Physicist's theory is flawed, the people trying to implement it may notice, or they may make for an even bigger disaster.)

For a cross-time campaign, this is "Parachronic Physics."



The Players as Themselves

One gimmick that works especially well in a time travel campaign is to let the players play *themselves*. To forestall arguments about what George's IQ *really* is, all PCs are built on the same point value. Players keep their own names, their own quirks, professions, and so forth, and add skills and abilities they would like to have, or like to have at a higher level — Fencing good enough to stake one's life on, for instance. The GM can assume that all the players are (for instance) five years older, and have had time to develop their abilities.

Then let them all get recruited by the Time Patrol, or find a loose time machine, and go! If the Time Patrol teaches additional skills, these can be covered by a Duty to the Patrol.

Re-Creating Historical Characters

One of the greatest opportunities in a cross-world campaign is that of creating a historical character as a PC or important NPC. This works best in a parallel-world situation; a PC can be an alternate version of Lawrence of Arabia or Thomas Jefferson or Mata Hari or Socrates, recruited and trained by the world-hoppers. But it can happen in a time-travel background, too. If paradoxes are possible, the PC needs to have been the subject of a "rescue" (p. 8) which saved him from his historical death without leaving evidence.

The result is an "alternate" version of the historical character . . . someone with the same origin, but a different development. (For good fictional treatments of this idea, see the *Riverworld* series by Philip José Farmer, and "Mozart in Mirrorshades," by Bruce Sterling and Lewis Shiner, in the *Mirrorshades* anthology.)

For more about historical characters as PCs, see the ***GURPS Riverworld*** worldbook.

Historical PCs should be carefully chosen. They should be noteworthy enough to be interesting, but not so earthshaking as to unbalance the campaign. Players should choose individuals in which they have a genuine interest and whose time period they want to learn about. It is the player's job to research and understand the person well enough to portray them in the game. The more thorough the work, the richer the character (and the campaign) will be because of it.

The following steps should be followed to create a roleplaying character from a famous individual:

Research

The best place to start research is a biographical encyclopedia. This reference work gives short, general biographies of many historical figures. Reading the entry for a possible subject gives a good feel for the high points of his life, and references to additional sources. (If the GM is introducing the figure as a walk-on NPC, this may be all the information that will ever be needed.)

The next step is to learn a little about the subject's world. This is vital if an adventure is going to be set in that time period. The *character's* knowledge skills won't make up for total ignorance on the part of the *player!*

If the character is to become an agent and travel through history or parallel worlds, the player will still need to know about his "native" world, to understand his worldview and better roleplay his reaction to the things he'll encounter.

Determining Attributes

Using the knowledge gained from research, starting scores for the character's ST, DX, IQ and HT can be determined. The chart on p. B13 can be used as a guideline. High scores will cost points, so the original estimates may need to be adjusted later. Writers, artists, scientists and the like will have a high IQ. A subject's longevity can be a clue to setting HT, but remember that longevity must be considered in relation to the time period.

Determining Advantages, Disadvantages and Quirks

This should be easy, if the player has done his homework. Advantages are any innate talents possessed by the character, or ones gained very early in life. In general, the point total for disadvantages should be kept at the recommended -40; many character flaws have been exaggerated by biographers. Quirks should be the most fun; every great person had them, and they should be roleplayed to help bring the character to life.

Determining Skills and Skill Levels

Two or three skills will usually be prominent — these should be set as high as possible. Secondary skills should then be determined — these should be set equal to the controlling ability (DX or IQ), or perhaps a level or two higher. The remaining points can then be spent to round out the character. Remember that "period" skills which may seem useless at first may be *very* valuable to an agent in a primitive world.

Once speed, active defenses and encumbrance levels are calculated, the character is ready to play.

Footnote Characters

Many of the best temporal agents are those who might be called "historical footnotes." They had interesting and distinguished careers . . . but from the vantage point of the 20th century, they are obscure. As a result, they are easier to "rescue" without distorting a world's history. Playing such a character is a good compromise between a truly famous person, and an imaginary nobody.

Simply thumbing through a biographical dictionary, or even an encyclopedia, will give literally hundreds of possibilities for this type of character — people who were prominent in their own day but who are not well known now. Research into this kind of character is also very educational; history teachers who enjoy roleplaying might consider running a ***Time Travel*** adventure or campaign as "enrichment" material for their students.

"I Didn't Know You Were Real!"

With the GM's permission, the players can research and create "historical" characters who never actually lived, or whose reality is in some doubt. In many cases, the "real" version of such a character will be a far cry from the legendary or fictional one. King Arthur, Robin Hood, and Hercules are all examples of characters who *might* have been based on a historical individual.

Such people are also very good NPCs, because the first reaction of those who meet them will be "I didn't think you were real!" Some "real" characters will give the same effect. The swashbucklers D'Artagnan and Cyrano de Bergerac, and the gunfighters Wild Bill Hickok and Bat Masterson, fall into this category. They all really lived, but many people know only of the stories based on their exploits, and assume that they were

purely fictional. And the truth about some of these people will be surprising . . . Bat Masterson, for instance, was a New York City gentleman for much of his career, and Davy Crockett was a member of Congress!

Purely Fictional Characters

Or *entirely* fictional characters can be brought into the game, from any player's favorite story. Again, this is up to the GM. If some justification is needed, assume that they come from an alternate universe where those people really lived; in a cross-dimension campaign, this is entirely reasonable! Once that is accepted, *any* fictional character is available . . .

Ancestors

There is also a historical character type who may not be at all famous, but can still be very interesting to play . . . namely, one of your own ancestors!

Players who already have an interest in genealogical research will find this easiest, of course, and will have a wide variety of ancestors to choose from. Others may wish to do a little investigation. The easiest way to begin to research your family tree is by talking to relatives; perhaps someone else has already compiled a lot of the information you need.

A campaign possibility: each player takes the part of a Time Agent recruited from his own family tree.

Original Characters

Players may create new characters from any time and place in human history. These would represent "real" individuals who did not rise to prominence and had no great fame or historical impact. This kind of character allows the most flexibility for the player.

In the sections below, human history has been divided into eight periods, each period corresponding to a different tech level. When developing a character from a specific period of history, all skills oriented to a tech level should be taken at the TL indicated. Naturally, some skills will not be available at all in certain periods (e.g. Electronics is not available until TL6). Use good judgment when choosing tech level skills.

For each period, a brief historical description is given, along with examples of characters that might come from the given time. It should be emphasized that these are very general overviews, intended as guidelines. An entire book the size of this one could be written for each period, so additional research is recommended to imbue a sense of reality into the character. For more quick ideas, see the Timeline for the appropriate period.

TL0: The Stone Age (before 3000 B.C.)

Not all early men were created equal. Mankind's prehistory may be divided into three periods: the *Paleolithic,* which lasted until about 10,000 B.C., the *Mesolithic,* lasting until 5000 B.C., and the *Neolithic,* until 3000 B.C. Before the emergence of *Homo sapiens,* the Paleolithic saw various prototypes of modern man; the best known of these is the Neanderthal race. The Mesolithic is distinguished by migrations of tribes into northwest Europe. The Neolithic began in Asia and saw the emergence of agrarian civilizations in China and Mesopotamia.

GURPS Ice Age is an excellent source of information on roleplaying prehistoric man.

Character Types: Primitive hunters and gatherers (including Neanderthals and other cousins of modern man); Asian and Mesopotamian farmers; early Sumerian citizens.

TL1: The Bronze Age (3000-1000 B.C.)

This period is marked by the first use of metals, specifically copper and bronze. The great ancient civilizations emerged at this time: Babylonia, Assyria, Egypt and Greece. The first use of bronze occurred in China, and the Shang and Chou dynasties were born from it. The Celts also exercised their influence over Europe and the British Isles.

Character Types: Babylonian and Assyrian warriors and scribes; Greek scholars, slaves, soldiers, philosophers, and politicians; Chou warlords and warriors; Celtic druids, farmers and warriors.

TL2: The Iron Age (1000 B.C.-500 A.D.)

Around 1000 B.C., iron was first forged into weapons. The technique of casting iron was invented by the Chinese around 300 B.C. This period is dominated by the rise and fall of the Roman Empire. Originally a tiny city-state founded (according to legend) in 752 B.C., Rome grew in power around 500 B.C. when it conquered central and southern Italy and defeated Carthage during the Punic Wars. Internal strife gave way to imperialism under Augustus, and *Pax Romana* (the peace of Rome) kept law and order for over 200 years. The empire reached its greatest extent around 100 A.D., when it began to give way to civil war and invasion by Visigoths and Vandals from the east. Civilization advanced greatly during this period as Roman roads and communication systems allowed new ideas (like Christianity) to spread rapidly.

Character types: Roman legionnaires, gladiators, senators and citizens; European barbarians and nomads; early Christian missionaries.

TL3: The Medieval Period (500-1450)

The fall of the Roman Empire left a void in Western civilization that was filled by the Christian Church and the Byzantine Empire. Politically, Europe was fragmented into small, feudal kingdoms, unified loosely by the Church. The Byzantine Empire was a bastion of Eastern Orthodox Christianity, its influence reaching across Russia, Northern Africa, and Asia Minor. Arabian culture thrived during this period with the rise of Islam; many of our modern scientific concepts were brought back from the Arabs during the Crusades. In China, barbarian invasions gave way to the law and order of the T'ang and Sung dynasties. In 1200 Genghis Khan and his Mongol hordes overran China and ruled for a century. The Medieval period is considered to have ended with the fall of Byzantium to Turkish invaders in 1453.

Character types: Feudal nobles and peasants; Church scholars and officials; Arabian merchants and scholars; Byzantine missionaries; Chinese warriors, sailors, philosophers and bureaucrats; Mongol warriors.

TL4: Renaissance/Colonial (1450-1700)

Two major technological innovations helped shape this period: the development of gunpowder and the invention of the printing press. The Reformation reshaped the Roman Catholic Church and gave birth to Protestantism. Florence and Venice became the centers of culture; this is the era of Leonardo da Vinci and the "Renaissance man." Universities, free-trade economics, and the modern concept of "nation" arose in this period. Columbus discovered the New World and opened it to colonization by Spain, England and France. In the Far East the Ming dynasty dominated China and saw the rise of the Manchus, while Japanese feudalism reached its peak.

GURPS Swashbucklers is a valuable sourcebook for Europe and the New World during this time, while ***GURPS China*** and ***GURPS Japan*** cover the lands of the East during this period.

Character types: Florentine/Venetian artists and architects; European scholars, churchmen, explorers and pirates; French musketeers; New World natives and colonists; Chinese bureaucrats and Japanese samurai.

TL5: Industrial Revolution (1701-1900)

This period sees the birth of steam power and mass production. The Spanish dominance of the previous period gave way to the British Empire, the most extensive regime in world history. A peasant revolution in France was followed by the rise of Napoleon, and the American colonies declared their independence, only to be torn by civil war in the next century. Russia was dominated by the Romanov tsars; its stagnant living conditions still produced some of the world's greatest literature. Mass production created a working class and gave rise to Marxism and the Anarchist movement. The Far East was completely dominated by European powers.

Character types: Victorian explorers and scientists; North and South American frontiersmen, sailors, slaves and industrialists; European nobles and revolutionaries; Russian peasants and novelists.

TL6: The World Wars (1901-1950)

Tensions between rival power blocs in Europe erupted in the Great War when Austrian Crown Prince Ferdinand was assassinated by a Serbian nationalist. The Germany-Austria/Hungary bloc was defeated in 1918, and the Treaty of Versailles was drafted to curtail further German military development. Meanwhile, Russia was busy with the Bolshevik revolution which overthrew the Tsars' regime and established the first Communist state. After the Great War, prosperity fell to global depression, wreaking havoc on the German economy and giving rise to the National Socialist Party under Adolf Hitler. Hitler quickly rose to power and expanded German influence, annexing Austria and the Sudetenland and eventually invading Poland in 1939. The Axis powers (Germany, Italy and Japan) began a campaign of global conquest culminating in the largest war in human history. The United States entered the war in 1942 and helped Russia defeat Germany; it ended the war in 1945 by dropping the atomic bomb on Japan. The United States emerged from the war as the dominant economic power in the world.

Players choosing a character from this period should refer to ***GURPS Cliffhangers*** for more information.

Character types: Russian "reds" and "whites"; soldiers, sailors, spies and airmen from all nations in both world wars; depression-era unionizers; the "Lost Generation" of the 1920s and 30s; Nazi/Fascist party members; world travelers and adventurers.

TL7: Modern (1951-present)

After World War II, the globe was politically divided into three "worlds": the two superpowers of West and East, and the underdeveloped nations. Cold War, a period of mistrust, nuclear arms escalation, and small-scale flare-ups, becomes the *modus operandi* between the American and Soviet superpowers. Tremendous technological innovation occurred: nuclear power, space travel, computers. Culture and society were shaped by mass-scale, instantaneous communication. The 1980s saw a cooling of superpower tensions and the emergence of Japan as an economic power.

Character types: This is the period that should be most familiar to players — look around and use your imagination. A character from the *early* part of this period remains interestingly "foreign" to a modern player, and can be a challenge!

Staying in Period Character

A time traveler (or cross-time agent) must be able to fit in with his background, down to the smallest detail of dress and speech. Depending on the circumstance, this requires a roll on IQ-5, Acting-2 or Savoir-Faire-3.

Frequency of checks is set by the GM, based on the traveler's general level of training, his experience with the period and its difference from home-time society, and the circumstances of the mistake. A trained Time Agent who had visited the period more than once might never have to check for trivial errors, only for major social provocations (see *The Bad Old Good Old Days*, p. 7). An absent-minded civilian might have to check every time he entered a crowded public place, or did anything unfamiliar.

A player who fails a minor check should be allowed to "cover" for the character with a little roleplayed fast talk: "Begad, sir, can't imagine why I said 'siege of Cawnpore,' I meant 'Mafeking,' of course. Funny how the port makes the memory play tricks, eh?" Be sure the cover-up is appropriate; there are social situations in which an apology will fix almost anything, and others in which it only makes matters worse. Take a reaction check for the NPC involved, with modifiers for exceptionally good or poor excuses. Even if the excuse fails, a minor slip will only result in the NPC thinking the character is somewhat odd.

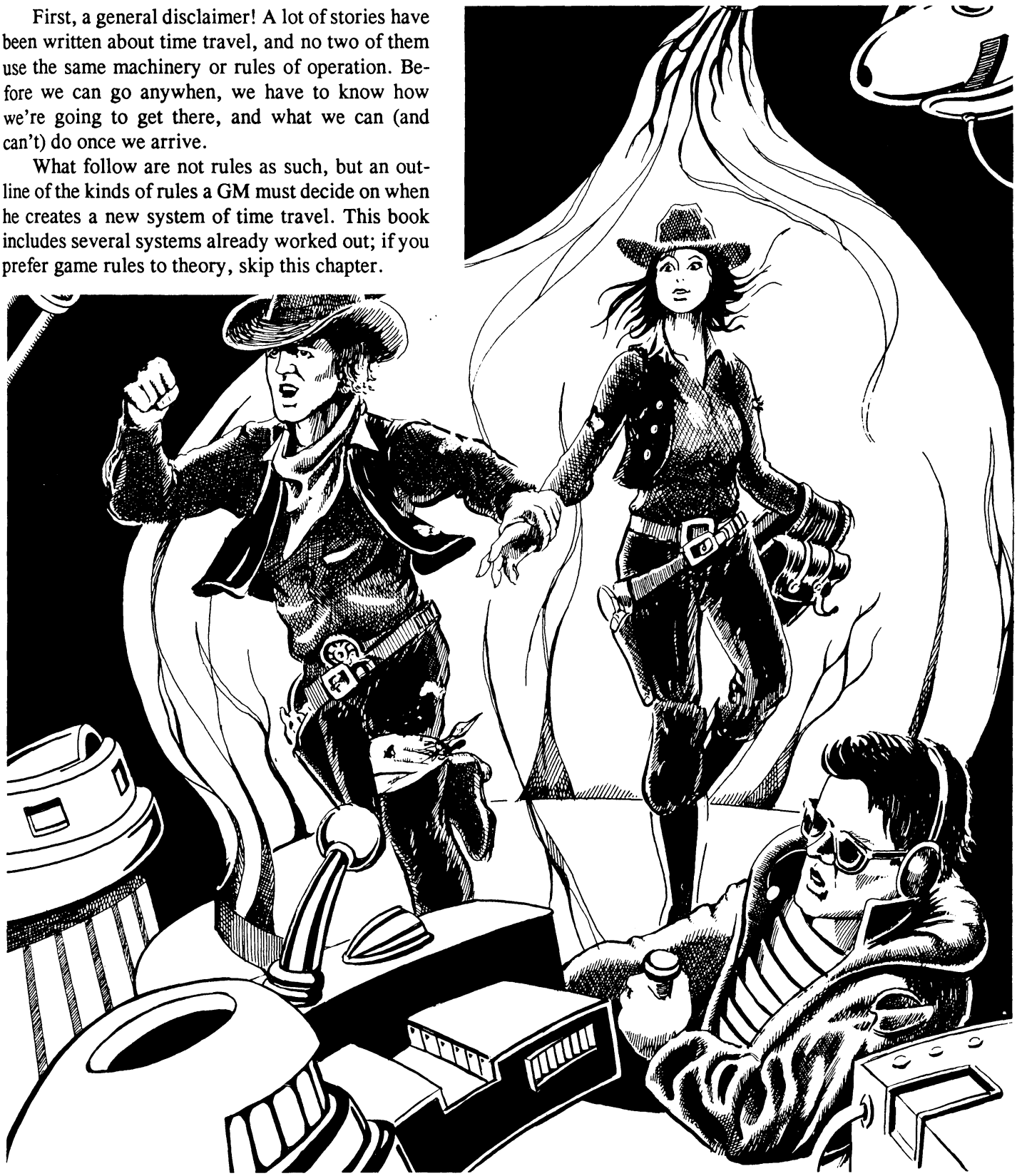
A failed major check irreversibly gives away that the person is not who or what he claims to be. This does not mean that the NPC realizes he's dealing with an "alien"; most people have no notion that time travelers (or crossworld agents) exist. (Exceptions would include other time travelers, friendly or enemy; locals who had been recruited by the Time Corps and let in on the secret; and the occasional genius/crackpot who believes all kinds of crazy things. This last sort, if used carefully, can be a very entertaining NPC nuisance.) Instead, the affected NPC will guess that the liar is concealing his identity for some plausible reason — is a spy, perhaps, or a commoner pretending to be a nobleman.

Someone who fails a major check may still attempt to control the damage with smooth talk. "I fear you have me, monsieur — indeed, I never served with the King's Musketeers. But I assure you I am a loyal Frenchman — and my orders come from the Cardinal Richelieu himself!" It may even be possible to turn a neutral NPC into an ally — people love the idea of conspiracies, especially if they can gain some advantage thereby.

TEMPORAL PHYSICS 3

First, a general disclaimer! A lot of stories have been written about time travel, and no two of them use the same machinery or rules of operation. Before we can go anywhen, we have to know how we're going to get there, and what we can (and can't) do once we arrive.

What follow are not rules as such, but an outline of the kinds of rules a GM must decide on when he creates a new system of time travel. This book includes several systems already worked out; if you prefer game rules to theory, skip this chapter.

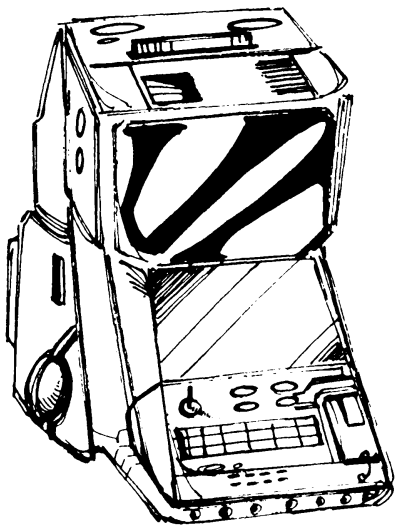


The Linearity Principle

This law applies when time travelers must operate from a "home base," rather than jumping freely around in time. It states that time moves forward at the same speed for the agents in the field and the machine operators at home. If the team spends two weeks in the past, they return two weeks after they left. Conversely, if the agents request information or assistance from Control, and it requires two days to research the data or prepare the backup team, the help arrives two days after it was requested.

The reason for the rule is, again, to prevent the team from solving problems by "magic." Control's inability to scan freely back and forth should be given some mechanical explanation, preferably one that can sometimes be bent a little to save the day. One possibility: Control must maintain a "fix" on the agents, which moves forward as they do; to scan back to some earlier moment risks breaking the fix, losing all communications with the team until they can be located again. (See the "In the Cube" campaign frame, p. 67, for a more detailed example of this.)

Obviously, where linearity applies, agents can't make "pickups" in the field. If you have been out for five years, you can *talk* to someone who left home just a year after you did. But when you go home, it will be five years later; no way around it.



Beacons

If the time travelers are being projected from a base, rather than carrying their time machine with them, perhaps each time-traveling party carries (*must* carry) a beacon which lets Base fix on them to pull them back. If the party is broken up, only those with the beacon will be able to communicate with Base (if that is possible in the campaign) or to call for return, or to be returned at all.

The Physical Setting

The first question: how does the time machine or cross-world railway "work," as a layman might explain it? This is not a question of rubber science (yet) but of physical description. Possibilities include:

Stage: The traveler stands on the platform of a monster machine, and technicians at a console start pushing buttons. There's a blue flash (or a low hum, or a monstrous subsonic belch) and you're there. In this case, the "time machine" does not travel at all, and the travelers have less control over their journeys; in particular, they cannot bounce around freely in time. See *Mission Control,* p. 8. The GM may find this limitation very useful.

Portal: A "door" is opened between two points, bridging the gap between times or worlds. Perhaps it's one-way, perhaps two-way. Perhaps anyone or anything can walk through; perhaps it will accept living flesh only, or dead matter only. The extent of the traveler's control over his return is this: if he can get back to the gate, he can come home . . . maybe. Some gates are only open at certain times; some can be opened only by the volition of an operator at the other end (making them more like a "stage" device).

Conveyor: The time machine is a "vehicle" which may also be able to travel in space. This vehicle may be a huge temporal battleship or a one-man capsule. It may not even be a vehicle as such; it may be a belt, harness or magic amulet that the user wears on his person. This sort of travel usually implies that the traveler has a great deal of freedom to visit different times at whim.

Combination: The above effects can be combined in various ways, as in the *Infinite Worlds* campaign (Chapter 7) in which both conveyors and projectors may be used, and must be combined for a really long jump.

Nothing at all: If the time or crossworld travel is psionic or super-powered in nature, there is no gadgetry at all involved. However, there may be a need for ritual of some sort. See *The Order of the Hourglass,* p. 76, and Chapter 5.

Changing the Past

If the past can be altered, we run into all sorts of problems that are more philosophy than physics. The best known of these is the Grandfather Paradox: suppose you hop into your time machine, go back 50 years, and kill one of your grandparents before your parents are conceived. How did you get born? And if you weren't born, who killed Grandpa?

However, if the past *can't* be altered, it becomes a considerably less interesting place to visit.

Any campaign background must contain a specific solution to this problem. To examine several *general* solutions:

Plastic Time

The past is freely alterable, but at the risk of "editing out" the future that you came from. Your actions change the future. There are several possible results:

Traveler at Risk: The traveler himself may be changed (or even fade out of existence). This isn't too suitable for gaming unless the players enjoy creating new characters.

World at Risk: The traveler may be unchanged, but return to a changed (perhaps extremely changed) world. This is entertaining for the players, but puts a burden on the GM.

Return Blocked: The traveler may be unchanged, but stuck in the past, unable to return unless he can somehow undo the change. This is quite playable,

because the PCs will be grossly inconvenienced, but not killed or transmuted, if they accidentally change history. And they *will* have a chance to fix it.

In any event, there are no paradoxes. If you make a change in the past, it really happened.

Chaotic Time

An extreme version of "plastic time" draws on modern chaos theory. If you travel back in time, *any* change you make will propagate wildly. If you go back as far as WWI, the act of buying a newspaper in London would reverberate down the timeline, and national boundaries would be different when you returned. If you go to the Permian Age, just stepping out of your time machine would make a difference in local weather . . . which would propagate globally . . . and when you return to the year 2000, the ruling species wouldn't be human.

This is hardly suitable for an ongoing campaign, but might make a very spooky one-shot adventure.

Plastic Time with High Resistance

The opposite of chaotic time. The past is still alterable, but it's *hard* to alter it. Small changes will be canceled out by the background noise of history. Big changes, or small changes made with exquisite timing, will change the future.

Recall the theory of time as a river: if you drop a twig in a river, the water is momentarily disrupted, but it continues to flow around the anomaly. And the anomaly begins to flow with the stream until it is, in effect, part of the stream. So you could postulate that though *you* went back and killed Thomas á Becket at the base of the high altar at Canterbury (rather than the four knights just outside the Mary Chapel), the time stream could adjust so that the end result (death of Becket, martyrdom, canonization, and even the presence of four knights who were subsequently despised) would be the same. And historians looking at the incident would record it the way we are told it happened. And perhaps it didn't happen that way in the first place! This relates to the Observer Effect, p. 45.

If the future *is* changed, the results on the time traveler are as described above. High-resistance plastic time makes even "Traveler at Risk" a more playable option, because PCs won't vanish unless they make a *real* blunder.

Fixed Time

What has happened, has happened. Any changes you make will be counteracted by other changes, either accidental or deliberate; you can't really change the course of history. Kill the man you thought was Grandpa and someone else will take his place. If you try a big change (nuke New York in 1920), events will conspire to frustrate you. Nothing you do will set off that nuke.

However, people in the past still have free will, as much as they do any other time, because we don't *know* everything that happened in the past. See *The Observer Effect,* p. 45. This is very playable; it can be a lot of fun to try to work around the Observer Effect.

Paradox-Proof Time

Time is fixed, but with an interesting special effect. If you start to do something that would change history, *boom* — there you are, back in your own time. The universe is not at all subtle about preventing paradoxes. And if you return to a time where you have already been, you cannot communicate with your earlier self in any way, because that would create a paradox. You can't even send a *friend* back to warn yourself. What's done is done.

This is a playable option. Some groups will be frustrated by getting slammed back to their own time. Others will welcome it as a safety net, even though it means some missions can't be completed.

Messages from the Past

How can someone in the past communicate with the present-day? Without a handy Time Radio, or a time-fax to transmit a note a few hundred years uptime, a resourceful traveler can still pass information or even call for help. The longer it will be before the message is read, of course, the harder it is to be sure it will get there.

Message Drops

A message can be left in a predetermined place if someone uptime is looking for it. For a period of a few years, a safe-deposit box could be used . . . but it is important that nobody ever look in it during the intervening years!

For longer durations, a time capsule can be buried in a safe place. With access to high technology, time capsules can be put in very remote places . . . in orbit, for instance, or at the top of the Great Pyramid. Even with "ordinary" technology, creative solutions are possible. (The recovery of a message can be an adventure for the uptime team, too!)

Active Delivery

If nobody expects your message, you will just have to create a message that seeks out the person you want it to go to. This is harder, but not impossible.

Lawyers: With an appropriate advance payment, a law firm will hold a message and deliver it in the future — even a very long time in the future. Pick a law firm in a city that you know will remain prosperous and unconquered until the day the message needs to be delivered. (Other organizations than lawyers can do this kind of task, but a good lawyer won't even blink at the request.)

Message in a Bottle: Bury the message where you hope it will be found at the appropriate time, nested inside three envelopes. The outer envelope says "Deliver to Such-and-so for an appropriate reward." The middle one says "If you get this message before (whatever the date is), *do not tell anybody, and don't open it before that date.*" Thus, you have at least a chance that the message will arrive safely, and will not be read before it should be. (Reading it early could create a possible paradox.)

Magical Time Travel

Perhaps there are no "physics" at all involved in time travel . . . perhaps the knowledge belongs to another field entirely. Here is a spell which might be found in the most secret grimoires of a magic-using folk. Note that the effects of time travel are described only in the most general way, and assume that paradoxes are avoided by the creation of new timelines (see maintext). The GM can decree that other principles apply, as described elsewhere in this chapter.

Time Travel (VH) ***Special***

This spell is similar to Teleport, except it "blinks" the caster to another time instead of another place. Movement is instantaneous — whatever that means with time travel.

The farther away the target time is, the more energy is required, *and* the greater the skill penalty, as follows:

Target	*Cost*	*Skill Penalty*
Within 1 minute	4	0
Up to 10 minutes	6	-1
Up to 1 hour	8	-2
Up to 10 hours	10	-3
Up to 4 days	12	-4
Up to 40 days	14	-5
Up to 1 year	16	-6
Up to 10 years	18	-7
Up to 100 years	20	-8

And so on, increasing the same way for each 10× increase in time.

If this spell takes the caster to the future, it is to one of many possible futures — the one most likely to occur. However, if the caster returns and acts on the information gained, that future may not occur.

Similarly, if the caster returns to the past and changes something (kill someone's parent before they were conceived, for instance) and then returns to their starting time, they will return to a newly created timeline. The newly created timeline will be affected by those actions, but the original timeline — to which the caster can never return — is not affected.

This spell is dangerous — the penalties for a failed roll are the same as for Teleport, described on p. 62 of ***GURPS Magic.***

The caster can carry objects or even another person, up to his heavy encumbrance limit, as for teleporting.

Prerequisites: IQ 15, Magery 3, Teleport.

New Timelines

This lets travelers change history . . . but not their own history. Whenever a time traveler (or group of travelers) arrives in the past, they cause a new worldline to split off from the original, identical in every respect up until the moment of arrival. After that point, however, nothing that happened in the original line is bound to happen in the same way, or at all. The new timeline may be very similar to the old one, or chaotically different, as described above. (Perhaps there is no way to know in advance what the "rule" will be for that new timeline!)

A key point, however, is that everything is duplicated *except the travelers.* They have left their original line (not necessarily permanently — more on this in a moment). In other words, you can't really go "back in time" at all, or have any effect on your own history. You can only create a new world, whose future you are free to alter because it hasn't happened yet.

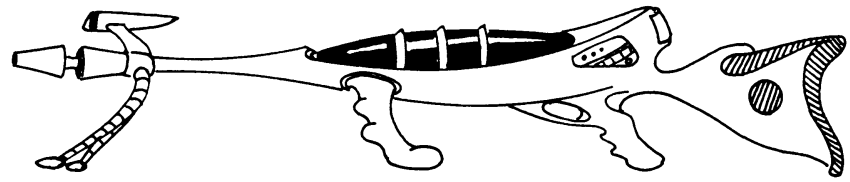
It may or may not be possible to return to the "original" worldline. If it is possible, you can only return to the moment you left, or possibly some later time. You can't return to any earlier point, because that would give you the possibility of making changes to your own past.

This gives a traveler absolute freedom from time paradox. You can kill your grandpa, or even your younger self; it only means that in the duplicate line you won't get born, or won't grow up to be a meddling time mechanic. You cannot, however, make infinite copies of yourself, because you leave the original line each time you time-jump. You can exist in two places at once, by going back to a point within your natural lifetime, but no more than that — because any subsequent trips take you into a new, "blank" copy of the worldline. You can leave the original line any number of times, but you can only arrive in a particular line once.

Yes, this is difficult to follow. Because our logic is causality-based, and therefore time-dependent, this sort of thing always happens when you consider the implications of time travel.

This approach owes something to the time-theory in David Gerrold's *The Man Who Folded Himself,* and a little to the "superstring theory" of modern physics. In Gerrold's book, the tripper was duplicated along with everything else. Paradoxes were ignored, because almost anything that might happen could and did happen in one of the braided world-lines; multiple versions of the hero could and did meet, and the issue of whether one could return to one's original line, or only to one indistinguishable from it, was considered but never solved.

The dramatic drawback to this system is the old problem of "If anything can happen, who cares?" The travelers can shoot Genghis Khan, shoot Shakespeare, shoot their own double; it isn't their universe, after all. This could become tiresome very quickly. However, it could be fun while it lasts, especially for those who know some history and want to play around with it.



The Recency Effect

This assumes that, for some reason, the travelers cannot visit their immediate past. This may be justified by rubber physics like the Time Corps' "Arbatov Barrier," or by an oscillation effect (see sidebar, p. 46) which limits the availability of all past time.

While this will not make *all* paradoxes impossible, it will limit the travelers to historical periods instead of bothering their last-week selves. If this is the kind of campaign the GM plans to have anyway, a recency effect is a good thing to introduce.

Parallel Worlds

Another possibility is that what we choose to call "time travel" is actually parallel-world travel; you're not going to "our" World War II, but to an existing alternate universe in which World War II happens to be going on "now." The world may otherwise be exactly identical to Home Time, or have differences so tiny as to make no difference (President Roosevelt's middle name is Douglas), or major and important divergences (Russia is still a monarchy). It may or may not be possible to return to one's line of origin — or there might be so many almost-identical worlds that one could never tell.

In this case, nothing you do in the parallel world will affect your own timeline. This is discussed in much more detail in Chapter 7.

Talking To Yourself

Nothing can create a really messy (and unplayable) paradox quite as quickly as a time-traveler who visits himself. He can tell himself what to do . . . or what not to do . . . or show up and argue with himself.

For gaming purposes, the question becomes "What sort of logical explanation, or rubber science, will prevent this from happening?" This will prevent characters' visiting the same era again and again, either to "work on the problem till we get it right" or to multiply themselves into armies. It also means that Time Agents cannot return home "before they left" and give themselves advice on how to deal with the mission.

Note that the Temporal Fugue (p. 30) is a specific, limited way around any of the situations described below. If you have the Fugue advantage, you are immune to these limitations.

Paradox-Proof Time

As described above, this type of reality simply bounces a traveler back to his origin as soon as he starts to create a paradox. If he avoids paradox, he can do anything he likes.

Temporal Exclusion

In this sort of cosmos, it is simply impossible for a traveler to clock into a period he already occupies. If you try to travel to a time where you have "already" (in your own absolute past) been, several things can happen, none of them good:

You can bounce. The attempted trip fails, leaving you mentally stunned.

You can wind up in a parallel world at the same time. If it's a close parallel, it may be a very long while before you find out you've gone astray.

You can wind up at the wrong time. Usually you go farther back than you planned — sometimes a *lot* farther back. But you might wind up just before, or just after, the stretch of time you already occupy.

You can travel randomly through time and/or space.

You can wind up in Limbo. Limbo is just a theory . . . a term to describe the place travelers go when they vanish and are never seen again.

If an imprecise method of time travel is being used, this can happen by accident when somebody tries to cut things too close.

What if you clock into a period just *before* one you already occupy, and wait until the "younger you" appears? If something happens to the younger you, a paradox is created. Therefore, the older self — who is the one responsible for the problem anyway — should feel the effects. (This is the most playable answer, but if the GM can find a way to make the younger self feel the effects of a decision the player hasn't taken yet, go ahead!)

Time Travel and Space Travel

The possibility of time travel and parallel worlds, when combined with the existence of space travel, can open a can of worms. Or, perhaps, an infinite number of cans, each with an infinite number of worms. The most "dangerous" of these, in game terms, can be disposed of mathematically.

Infinite Alternate Worlds

In a parallel-world campaign, it can be argued that there should be an infinite number of Earths *exactly* like ours. These are worlds in which the only difference is that some molecule is out of place on Jupiter, or Rigel, or the Andromeda Galaxy.

The answer here is "Not necessarily." There are different infinities. The infinity of parallel worlds is uncountable, but does not contain *every* possible world. The GM need never submit to player demands that the infinity of parallel worlds include the one that will hinder his plans for the campaign!

Travel through Time and Space

A starship which is also a full-scale time machine would be incredibly powerful. Not only could it make a star-jump of any length in zero time . . . it could arrive before it left. Now, the GM is free to permit either of these effects if they help the campaign along — but they are more likely to be a nuisance, inviting PCs to escape the planned limits of the stardrive. Therefore, the following assumptions may be made:

Time travel only works in the close neighborhood of a star or planet. The presence of a very large spinning body is required to create the conditions which make time travel possible. (This is fact, as we currently understand it.)

A body in its "past" cannot leave the region of the spinning body which made its pastward travel possible. The effect of the spinning body, expressed in very simple terms, is to create a number of discrete "levels" of time to which one might travel. As one leaves the area of influence of this "Tipler effect," space-time becomes homogeneous. The space traveler, if he is lucky, will find himself back in his own time. If he is unlucky, he will simply cease to exist.

Yesterday Express . . .
When it absolutely,
positively
has to be there
before you sent it!

Geometrodynamics

Players desiring a brief scientific explanation for time travel may be referred to this section. It may or may not be complete doubletalk, but it is nevertheless *real* doubletalk. Any student of general relativity will recognize the sources and follow the argument; some will even agree with the conclusions. Those who have not studied general relativity should not expect to get past the introductory paragraph.

The authors are indebted to Dale F. Reding for providing this material.

From the senior undergraduate physics text *Principles of Geometric Dynamics*, by D.F.R. Skinner, 2080:

"Like flight, the idea of travel in time has fascinated man since early days. On sound principles of physics it was "proven" that manned flight was impossible, and indeed, man cannot fly like the birds. Yet flight was achieved by methods far different from those used by the birds. Similarly, our common sense experience with special relativity categorically disallows the possibility of travel in time. But here, though special relativity may still apply, common sense may not."

(S. Dadlikski, *Popular Mechanics*, 2059).

Time travel in and of itself is impossible within the physics of everyday phenomena. However, as the theories of relativity deny us the existence of a global inertial reference system, quantum mechanics deprives us of the fiction of a deterministic development of space in time. Underlying the Hamilitonian structure of local physics is the remarkably good approximation of the Poincar group to the underlying local symmetry group, exploited in canonical quantization schemes, for distances on the order of Fermi's length (10^{-15} m).

However, in the absence of associated matter, significant extraordinary local effects appear due to the fluctuations in the local 3-geometry on the order of Planck's length ($L^* = [h^{(3)}\mathcal{G}/(2\pi c^3)]^{1/2} = 1.6 \times 10^{-35}$ m). The fictions of space-time and time are exposed as neo-classical approximations.

Continued on next page . . .

Temporal Snarls

This rule is essentially Temporal Exclusion that can be "bent" once in a while, but within strict limits. It assumes that history is resistant to change and paradox, but allows someone to be in the same time more than once . . . as long as no interaction takes place!

If you try to interact with an "earlier" version of yourself, you'll probably be frustrated; you are trying to create a "temporal snarl" in your own past. This sets up probability oscillations, and you will start suffering Fatigue and other effects as you exert effort in opposition to your current existence.

If someone tries to alter his own past drastically (say, by shooting himself), he should either fall unconscious or pop into another time. This takes care of the Grandfather Paradox. Note that it is the *size* of the alteration, not its subtlety, that matters. Going back 500 years and convincing your many-times-great-grandmother to become a nun would have exactly the same effect; you can't do it.

Any attempt to set up a "loop" in time is also doomed to failure — or, at least, to having no effect on the outcome of the adventure. (This is offered purely for playability. In terms of physics, there's no reason why it couldn't be done.)

If you try to meet and talk to yourself about something relatively minor, it should still be painful — say, 6 Fatigue and -2 IQ for the duration of the meeting and the rest of the day.

But a *minor* attempt to alter your own worldline is possible. If you want to send yourself a cryptic note, the cost might be a mere 3 Fatigue.

If the GM allows this at all, he should assess fatigue (and other) costs based on the size of the paradox or change the traveler is trying to create. A general guideline: the more headaches it causes the GM, the harder it is for the character to do!

Of course, an accidental *meeting* with yourself should be good for a Fright Check at -2 or worse. If you see yourself with injuries or changes, the penalty should be much bigger!

In campaigns involving *parallel* universes, the rule is not needed and should not be used. This will allow parallel versions of a character (who may well not be friendly) to meet and interact.

Communication and Observation

In "Time Agent" campaigns, the GM must decide what communications are available between Control and the Agents in the field. In campaigns where the travelers are free to bounce around as they wish, the question of communications must still be settled, but it will be less central to the adventures.

No Communication

This is the simplest assumption, and in many ways the easiest to manage. The agents are entirely on their own, and cannot ask for help or information. They also cannot move again in time, unless the machine travels with them. They must be brought home either after a fixed amount of mission time — a useful way to keep the action moving — or through some automatic mechanism (see Chapter 4 for an example). No "recall signal" is permitted — if a device can send a beep, it can send Morse code.

Limited Forward Communication

The agents can send messages to Control, but not freely: the messages are limited in length, or format (e.g., they must be sent in Morse), or can only be sent at specific times or from specific places (say, the team's arrival point). Control cannot send messages to the agents at all.

But note that even if there is no handy Time Radio, there are ways to get word to the future. See *Messages from the Past,* sidebar, p. 41.

Limited Reverse Communication

The simplest reverse communication is to let Control continue to send things and people back in time. There are not, however, very many messages worth sending if Control cannot receive requests for information.

Full Forward Communication

Control can look over the team's shoulders constantly, either through a time-transmitting camera carried by the agents, or an "area viewer" (like the screen on *The Time Tunnel.*) They cannot, however, send into the past. If you use this option, we suggest the "time camera" — which may be unreliable, or easily damaged; if you use the viewer, we strongly recommend that Control be able to "fix on" and see only the immediate vicinity of the agents. The reason for this is that unrestricted time-viewing simply makes Control too powerful; if they could see anything at any point, it would be possible to examine every possible obstacle to a mission — worse, it would be possible to watch the mission before the agents had been sent! Time paradoxes again . . .

Full Two-Way Communication

There is the equivalent of a radio or TV link between Control and the field. The agents can ask for information or assistance, and (subject to the equipment remaining undamaged, a "fix" being maintained, etc.) they will receive it fairly promptly.

One interesting way to limit this is to allow full two-way communication only from one specific point. The agents have a "time phone," but it cannot be moved. If they're away from the phone, they're on their own!

The Observer Effect

The Observer Effect, stated most briefly, says "An observed event cannot be changed." There are no paradoxes. Known history cannot be changed.

Now, if this were *entirely* true, time travel would be much simpler and safer. But the Observer Effect says that a successful intervention *can* occur. History *can* be changed. But it is very difficult. And *usually* any attempt to change an established fact will result in failure.

"I Don't Want To Know!"

But to a good Time Agent, the Observer Effect means that any event which was *not* observed *can* be changed. And the observations of the locals on the scene don't count. The observer from the future is the one that matters, because only he can create a paradox. (Thick volumes on physics and epistemology have been written to explain this, and they haven't done a very good job yet.)

Basically, though, all of the details of past history can be considered "in flux" until they are observed by someone from the Absolute Now. There are two possible explanations for this:

(1) *Time is fixed, but we still have free will.* We don't know for sure what really happened in the past, and until we know what happened, we can try to change it. We're part of history.

(2) *Time is not fixed until it's observed.* The act of observation is necessary for the event to be final. It's like Schrödinger's Cat, which is neither alive nor dead until someone opens the box to check . . . In this sense, the observer from the future *creates* the event, and makes it real, by observing it. It's not real until then.

Geometrodynamics (Continued)

Centuries of research, from Newton to Weinkoff, converge upon the simple observation that the dynamic object of study, in physics, is 3-space. ${}^{(3)}\mathcal{G}$, superspace, the totality of all 3-spaces, becomes the primary structure of physical theory. Simplistically, the 3-geometry is itself seen as a "carrier of information about time" (Wheeler, 1962).

In a deterministic world, we replace space-time with a *foliation.* That is, a 3-space development is tracked as a series of sharply defined, infinitely thin "leaves," or foliations, defining time development. At a quantum level, the resulting picture is replaced by a "fuzzy" view of history with leaves of finite thickness. On the order of Planck's length, the system undergoes quantum fluctuations in its 3-geometry. In a classical view, we have the development of the local physics proceeding as a series of "yes" and "no" geometries. Ordering the "yes" geometries provides a local view of the 4-geometry. However, quantum theory defines an associated probability amplitude $\psi = {}^{(3)}\mathcal{G}$ with each 3-geometry. The amplitude is greatest along the classical path, with a sharp degradation on either side of the foliation. One may say that for a small period of time the state of the 3-geometry is indeterminate. Simplistically, one may view this as fluctuations in the background 3-space, in analogy with the well-known phenomenon of vacuum fluctuations in the electromagnetic field (the so-called zero-point fluctuations).

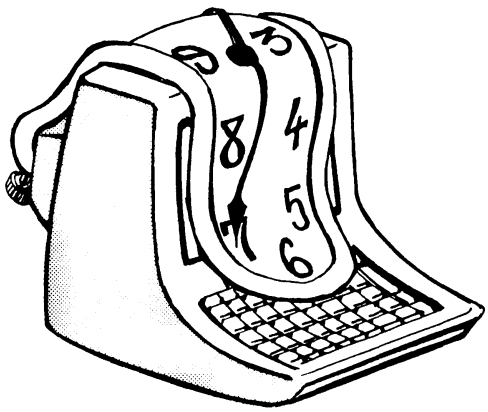
This is the theory as applicable in a vacuum. However, in the presence of a large spinning mass, or the provision of considerable energy, the background fluctuations in 3-space may be set into resonance and a temporarily stable local deviation from the classically predicted 3-space then occurs. At each foliation, all physical 3-geometries are possible. Therefore, it is possible to generate the appearance of "time travel" by temporarily moving to an alternate 3-space. Such an arrangement is, however, unstable, and will ultimately require a "snapping back" into the proper 3-space.

The beauty of this solution is that Special Relativity is inviolate as no information is determined about the "true" 3-space, only about that in which you are currently residing. As such, the popular fears of marrying your grandmother or shooting yourself are impossible, as it is not really yourself that you are meeting, only a "fading" copy. However, some arguments have recently been presented in the *Journal of Geodynamics and Astrophysics* suggesting feedback from alternate 3-geometries is possible. Most practical physicists consider this to be unlikely.

Oscillating Time

This is an interesting limitation to apply to time travel of any sort. Suppose that the energies of time — whatever they are — vary in a predictable way. You can only travel between points that have the same "chronic charge." Result: the time machine can only make jumps of a certain length. This might be a month, a year, or a century. Perhaps there are only a few points in all of history that the machine can reach — in that case, it's more like a "time gate."

Time travelers are thus presented with some interesting problems; they can never depend on going right to the time they want to see. In particular, they can't even *think* of bopping to last week to tell themselves "Don't do that!" This can make a campaign more manageable. Note that linearity (p. 40) is automatically conserved in such a system.



No Machines!

An interesting campaign can be built around the idea that, for whatever reason, time travel works only for living beings. (Say, inanimate objects have too strong an entropic field . . . or whatever.)

The most obvious result is that time travelers will always arrive naked, with no equipment at all. Under these circumstances, the Time Corps will recruit very healthy, self-reliant sorts with little body modesty. In most periods, the first problem the visitor faces will be to steal some clothes . . .

This works especially well with psionic time travel (see Chapter 5), and also makes an interesting malfunction for a "normal" time travel system.

Either way, an observed event is very hard to change. An unobserved event is subject to change.

This means that if an intervention — or a counter-intervention — is bungled, it will be *very* hard to fix. Sure, another team could be sent to the same time. But they will not be able to do anything that contradicts the first team's observations.

The exception, ironically, comes if the first team failed completely and was wiped out. If they didn't report their observations back to their successors, they didn't "determine" history. This has some interesting effects:

Agents are reluctant to report failure . . . which sometimes means they don't flee or call for help when they should.

Agents on both sides are merciful to defeated enemy agents. If they make it home to report defeat, that defeat become more nearly irrevocable.

Agents *hate* to observe the death of a friend. Sometimes an agent will walk away from a wounded "native" ally, rather than risk checking and finding out he is dead. If the death isn't reported, there is a *chance* that help might arrive in time. (A wounded fellow agent, of course, will vanish if he really dies.)

Fanatic agents have been known to suicide rather than report failure. A favorite topic of Time Corps bull sessions is "Would you die to give another team a chance to run the mission?"

Degrees of Observation, and Loopholes

An agent can never undo anything he witnessed. The only hope — and sometimes it is a significant hope — is that he didn't witness it correctly.

Witnessing a film or photograph is almost as final. But films and photographs can be faked. Still, unless Control *believes* that something was faked, it's not likely to risk an agent.

An observation reported by another Time Corps agent is as trustworthy as that agent is. A "real-time" report by a historical native is as trustworthy as that native is.

Published reports, memoirs, etc., are often not reliable at all. If the newspaper says the parade started at noon . . . well, maybe the paper was wrong!

Paradoxes and the Observer Effect

The Observer Effect says that there *are* no paradoxes. So what happens when something occurs which seems to *be* a paradox?

For instance, an agent is in Ford's Theater. He observes Booth's attempt to shoot Lincoln. He watches in sorrow as the assassin steps forward . . . and in horror as a beam of green light slices through Booth's gun arm. In the ensuing turmoil, Lincoln is hustled out of the theater under heavy guard. Clearly, history has just been changed in a big way. Or has it?

There is no one right answer. In fact, the "real" right answer may depend on what the PCs do.

The obvious thing would be for them to start working to kill Lincoln and to leave a historical record that showed he had been assassinated on schedule. This would be very difficult, especially since there is obviously some sort of futuristic intervention already going on.

They might decide that, whatever is really going on, it's too much for them to handle — and concentrate on riding it out without becoming a part of it. This would require an iron will and a blind faith that History Will Sort It Out.

They might also decide that this is the sort of event that shouldn't be observed, since observation makes events real. The obvious answer is that it's time to go AWOL, rather than ever reporting in. (This is really a different approach to History Will Sort It Out.)

Or they could go running home to report. If Home is still there, it tends to prove that the Observer Effect is still valid. If they can't *get* home, it's a sign that

perhaps the rules have changed (an evil GM at work, no doubt). If they've somehow been thrown into a parallel timeline, then there is still no paradox, but they have a whole new problem.

If they *do* get home, they often report in doubletalk or opaque sentences, in an effort to beat the Observer Effect: "I would suggest sending a heavily-armed team to Ford's Theatre starting at least a week before the play." The usual effect is to make it harder on the follow-up team, without beating the Effect in the least. The only time that seems to work is when the original observer isn't around to be debriefed when the shooting is finally over.

The Timescanner

A timescanner is a device which can be used to see into the past; it is useful for archaeologists, detectives and genealogists. When activated, it provides a holographic image of whatever is occurring within a two-yard radius centered around the scanner, at some point in the past. Nothing outside that area can be seen — it can't be used as a "window" to scan the surrounding landscape. The place being scanned is relative to the nearest mass of continental size. Thus, a timescanner can only be used to scan planetary surfaces.

Of course, the Observer Effect applies to anything seen by timescanner. But in a background where history *can* be changed, you might see something different the next time you scan the same period!

A timescanner must be set for an arbitrary point in time in the past, e.g. 31 years, 84 days, 11 hours and 50 minutes ago. Make a skill roll against Electronics Operation (Sensors). A successful roll means the scanner has locked onto the correct period. Failure means that the mark was missed by 10% times the amount failed by (plus or minus, roll randomly). A critical failure means that it could be seeing anywhere . . . Other than actual evidence (why are they wearing togas — are you sure this is 1945?) there is no way to tell *when* the scanner is actually focused, only *where* — the same place it is in the present.

The more distant the period to be scanned, the longer it takes the scanner to reach it. It takes 90 minutes to focus on anything within the last 24 hours, 3 hours to focus on anything within the last six days, six hours to focus on a point 3 months distant, 12 hours to focus on a point within the last 2½ years, 24 hours to focus on something within 25 years, 2 days to focus on something within 250 years, and so on. Each tenfold increase in temporal distance doubles the amount of time that it takes the scanner to reach that period.

After the scanner is ready, it will project the visual image of the area occupied by the scanner, and continue in "real time" until deactivated. This can be unhelpful if, in the time being scanned, the area presently occupied by the scanner is filled with solid material.

For example, archaeologists take a timescanner to the ruin of an ancient palace. They set it up, and choose to go back to a day exactly 3,200 years ago, the approximate date it was built. It takes four days for the scanner to reach back that far (whether it shows brief glimpses of intervening periods is up to the GM); then it starts relaying images. The scientists used astronomical data to make sure they focused in during the early morning. What they see is two halves of different rooms — a wall once bisected the area now occupied by the scanner. One is furnished, a bit of rug extends out, and the corner of a chair. In the other, they can see half a bed with the bottom half of someone sleeping under a fur cloak. If they want to see more, they would have to wait for someone to come into the timescan field (perhaps hoping the sleeper would get up and move into view), or they could try again, either resetting the time (by as little as a few hours, perhaps) or physically moving the scanner itself.

A timescanner uses two E cells, which can power it for 16 days of scanning. It costs $800,000, weighs 5 tons, and occupies 8 cubic yards.

Working Around the Observer Effect

Suppose that a Time Agent has the misfortune to be accused of witchcraft in 1700. He is captured and tortured, but escapes. He reports back to base, which determines that the head witch-hunter is probably a Stopwatch agent.

Now, the one thing that Control *cannot* do is send a team back to terminate the witch-hunter before 1700. He was observed in 1700. The Observer Effect says that we can't take him out before then. We know he was there. Except . . . if it matters enough, we could try to eliminate him and substitute an exact double, to do those things that the original was observed doing . . . including torturing the original agent!

What if the double tries to cheat history? He'd better not. The double will have to make sure that he does everything he was observed doing. If he tries not to, something *will* happen — he will go mad and think he *is* the witch-hunter, or he will be killed secretly and replaced by another enemy agent . . . or something equally bad. (The GM can have a lot of fun thinking up disasters when PCs try to cheat observed fate.)

However, it is perfectly safe for Control to send someone to 1695 to keep an eye on the witch-hunter and report what he does. Sometimes it's a good idea, sometimes it's not. Knowledge is power, but every little bit of knowledge limits what you can do in your own future. The Observer Effect is a two-edged sword.

Parallel Worlds

So what does happen when the past is changed? Science fiction has done a great deal with the concept of "parallel time tracks" — universes physically like ours, in which history took a different turn. Perhaps the conquistadors failed, and the Americas are ruled by a modern Mayan Empire; or Rome never fell; or (more extremely) a race of dinosaurs evolved intelligence and survived to share the world with the upstart humans.

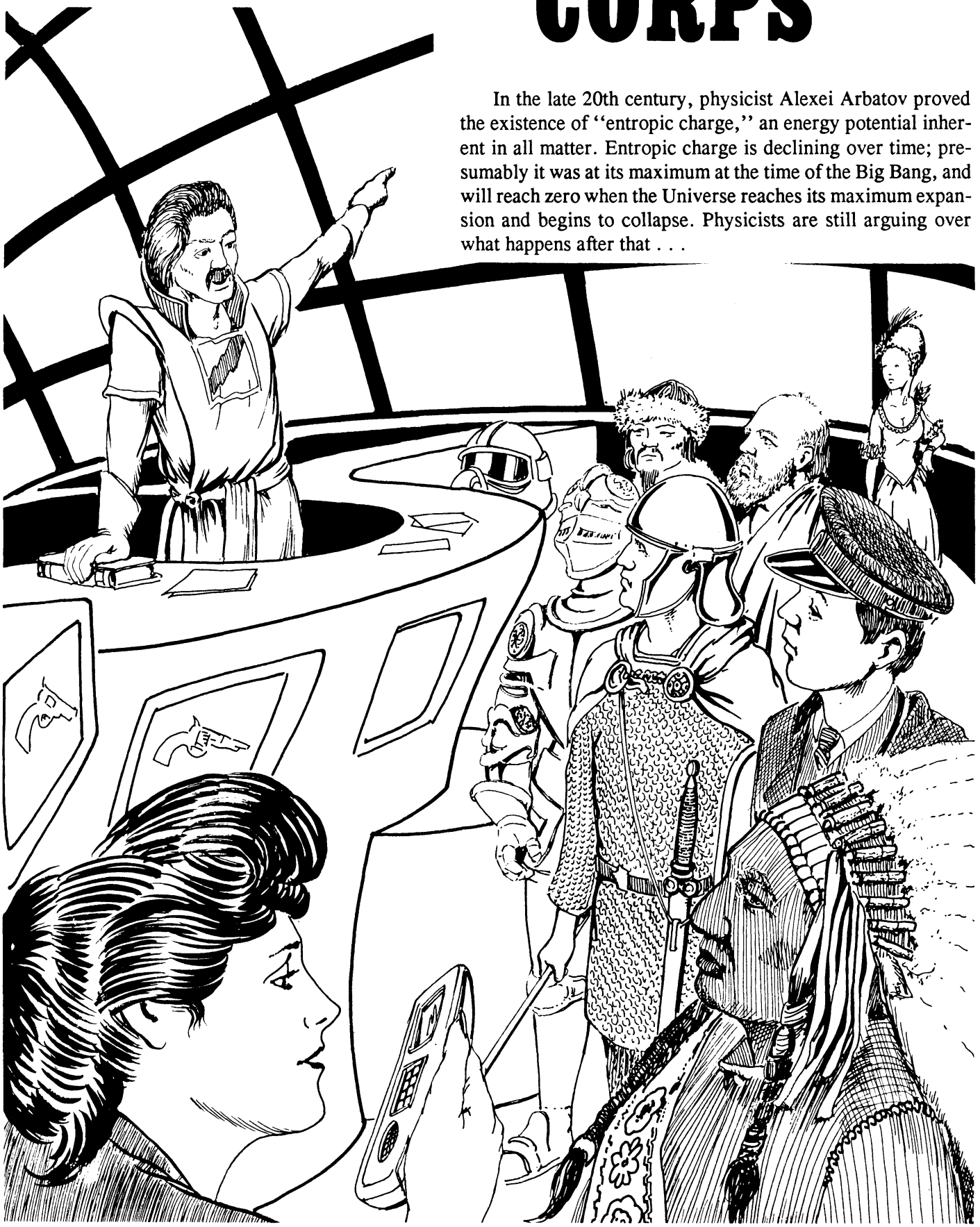
The time machine may be able to reach parallels as well as the "ordinary" past. Landing in a parallel might also be a result of time machine malfunction; the team has to cope with a strange, probably hostile world while they try to repair their equipment, or Time Control attempts to locate them and bring them home.

Or, if the "new timelines" approach to paradox-avoidance is used, the time travelers *create* a parallel world whenever they change the past. See p. 42.

Chapter 7 covers parallel worlds in more detail.

4 THE TIME CORPS

In the late 20th century, physicist Alexei Arbatov proved the existence of "entropic charge," an energy potential inherent in all matter. Entropic charge is declining over time; presumably it was at its maximum at the time of the Big Bang, and will reach zero when the Universe reaches its maximum expansion and begins to collapse. Physicists are still arguing over what happens after that . . .



Arbatov postulated that entropic charge serves to "hold" matter stationary in time, and could be manipulated to move matter through time. But nothing was actually achieved for over 50 years, when Mariana Brill first demonstrated time displacement in the laboratory on the atomic particle level. The Arbatov-Brill Effect used huge amounts of energy, and was uncontrollable and unstable. Another 30 years went by before Nehemiah Eden used a new type of organic-plastic semiconductor to create Focal Referent devices, which made the stable displacement of objects practical (though the energy cost remains staggering).

The United Nations, by then a true world government, immediately moved to establish control over time travel. Under the general title of Project Timepiece, they constructed the first large-scale Arbatov-Brill-Eden Transmitter, and set up the Temporal Control Authority to operate it.

Unfortunately, Timepiece is not alone in the past. Early in its existence, it encountered the operatives of an organization calling itself Stopwatch, who were attempting to alter history at key points. Stopwatch is the equivalent of the TCA from an alternate present, in which humanity is ruled by a gray bureaucracy. (It calls itself United Mankind, but our world knows it as the Hive.)

Stopwatch agents are working throughout time to make certain that their future comes into existence. Project Timepiece has created its own elite Time Corps to ensure that it does not.

Mechanics

The Arbatov-Brill-Eden Transmitter (ABET) is at the center of a town-sized complex in the Canadian wilderness. While the Transmitter Stage itself is just a plain metal disc 5 yards in diameter, it is supported by ranks of cryogenic supercomputers and one of the largest power-generating stations on Earth; each pound of mass sent into the past requires some $10,000 worth of electricity. The rest of the TCA complex provides housing, research, and training facilities for approximately 600 Time Agents and several thousand support personnel.

Once displaced into the past, an object has "negative temporal potential"; Arbatov's entropic energy is constantly trying to return it to the present. Displaced objects must always be inside the field of a Focal Referent device, or they will return to the Transmitter Stage. (There is one very important exception to this: the Divergence Effect, described on p. 56.)

The ABET can send a load of 1,200 lbs. to any period for which a window (see below) can be found — distance into the past does not matter.

The ABET can reach any physical location on Earth; agents are not only transmitted in time, but teleported in space. (It does not seem able to hit off-Earth points accurately, due to the lack of a gravitational frame of reference.) The first time agents are sent to a given site, there is a 1 in 6 chance that there will be a small coordinate error — not fatal, but often interesting.

Target Periods and Blackouts

Because of the Arbatov Barrier, an effect analogous to the "potential barrier" around the atomic nucleus, nothing above the atomic level can be sent back less than 130 years. For an Absolute Now of 2100 — a good starting place for the campaign — this means that no time after 1970 can be reached.

Even before 1970, the ABET cannot send agents to any chosen period in time. It is limited to "windows" — periods 245 days, 496.5 seconds apart. These window periods move as the Absolute Now does. If June 7, 1832 is a "window" right now, then June 14 will be a "window" next week. These "windows" have no width at all. You can send to one specific instant in June 7, 1832 . . . or you can send to another instant, some 8 months earlier or 8 months later . . . and so on. If you want to get to June 14, you will have to wait a week . . . either in the present, or in the past.

Time Travel Glossary

Absolute Now: the "real" present, from the point of view of someone at ABET headquarters.

Blackout: an area of time which cannot be reached by the ABET transmitter. Some are temporary; some seem permanent.

Clock Out: travel in time.

Crunch Time: the Absolute Now time passing at a faster rate than experienced time while on a mission.

Divergence: the warning that a historical change is about to occur. See p. 56.

Downtime: toward the past.

Dropout: when all agents in a time period are thrown back to Base by a historical change.

Ear: a device for detecting items entering or leaving the *local* time.

Eddy Effect: the reason agents in the past may not get supplies or reinforcements exactly as expected.

Jumper: someone who can travel in time (or, depending on the campaign, across worlds) without benefit of hardware. See the Time-Jumper and World-Jumper advantages, pp. 31-32.

Nak: short for "anachronism." Any person, place or thing who belongs in a different time or timeline.

Native: anyone who belongs in the current world or time.

Observer Effect: a phenomenon which limits the type of historical event that can be changed. See p. 45.

Slack Time: time passing at a faster rate than normal relative to Absolute Now.

Traveler: anyone who goes between times, dimensions, planes or alternate worlds. See also "Nak."

Uptime: toward the future.

Agent Slang

Time Agents are a close-knit group of highly trained specialists, and like any other such (firemen, fighter pilots) they develop their own terminology, often irreverent, for the trade. Using this slang can add color to a campaign. (GMs are certainly free to develop their own terms — or better yet, encourage their players to do so.)

The implanted Focal Referent is called the Latch, or sometimes the Jockstrap. The Mark II that non-agents wear has nicknames like Safety Belt.

Agents tend to be derisive of non-agents, and (when the victims aren't listening) call fitting the Mark II "tucking them in" or "putting on the training wheels." The Transmitter Stage may be called Home Plate, Ground Zero, or similar names; only a rookie would call it "the Transmitter" or "the Stage."

Timesickness has many very colorful nicknames; among the more printable are "Wells' (as in H. G.) Revenge" and "The Crosstime Cookie Toss."

We can't print any of the nicknames for Stopwatch agents.

Thus, agents sent into the past must usually wait several months to get to a desired historical event — but sometimes they have no choice but to land almost on top of it, and act with little preparation.

Certain periods, though, are blacked out and unavailable. Some of these are due to successful Stopwatch interventions (see below). Others are mysteries. The blackout from 25 B.C. to 82 A.D. is especially irritating to historians. Blackout periods have been known to move and change, too. (The GM can set blackout periods for any time he finds convenient.)

When a window moves into a blackout, nothing can be sent through it, or emerge from it . . . but the window will re-emerge from the blackout on schedule. Agents who are "back in time" at the moment a blackout begins cannot return home until it is over, and sometimes have odd memory lapses.

A temporary blackout is created just by sending something back in time. When something is sent to a window, that window closes for the next 3d×100 hours of *past* time (which is an average of a month and a half). The actual time it will be closed cannot be predicted, but the ABET can detect as soon as the window opens again.

Since linearity is *not* conserved in this scenario — the Absolute Now does *not* necessarily move at the same "speed" as the past, with respect to an observer in the past — someone who was sent through a window will not always be "on" that window with respect to Control. Sometimes, but not always! In general, the more a visitor meddles with the past, the likelier he is to set up an "eddy" which will reduce the precision with which Control can send him reinforcements or supplies. See sidebar, p. 51.

Returning

Agents may return at any time (unless Divergence is occurring — see p. 56). When they return, they will return to whatever moment the Absolute Now has reached. The Linearity Principle (see sidebar, p. 40) does *not* always hold true. The more changes are made, the more likely it is that time will be linear.

Anything which returns to the future will reappear on the ABET stage. The stage is kept clear at all times except when something is actually being sent, and returnees are taken off the stage immediately. (Theoretically, anything returning to a fully-occupied stage would simply be displaced in a random direction, to appear in an open area, but nobody wants to take chances.)

The Absolute Now

The Absolute Now — the date to which agents will return when they clock back from the past — starts at the date on which they leave ABET, determined by the GM. Changes are partially determined by the PCs' actions. For instance, if they send a note to Control, requesting a machine which will take 3 months to build, then the Absolute Now advances by 3 months, even if the agents get their machine tomorrow relative to *their* time.

The GM can also advance the Absolute Now arbitrarily while the agents are in past time. This means that when they clock forward, they will come back later than the time they left. As a general rule, future time passes at only 10% of observed time if the agents do *nothing* (this allows for some great vacations). Minor variations let it flow at 30% of past time speed; major ones at 60%; huge ones at 100%. This can vary by 4d% in either direction, though never to less than 0%. And the GM can always declare "A month has passed at Control with no report from you. They get nervous and send you a message."

The existence of an Absolute Now prevents one sticky sort of paradox. Agents can meet an agent from "their future" — but they cannot carry information back to the time they left from. They will return to the same Absolute Now that the later agent came from.

Game Mechanics

Timesickness

Timesickness (p. 33) is a normal side effect of ABET travel in either direction. It is Common and Mild.

Temporal Exclusion

The Exclusion Rule (p. 43) applies. Travelers can't travel to a time where they already exist. If they visit a time just *before* they already exist, they must leave again before their "earlier" version appears (or is born). If they don't, the "later" version will pop back to the ABET stage.

Communication

The agents in the field can almost always communicate with Control via notecards (see sidebar, p. 57), or by returning in person if necessary. This only becomes impossible if a mission is imperiled by divergence (p. 56).

Control can communicate with agents by sending physical messages through the ABET, but each time a package is sent, that window is closed for a long time. In a pinch, Control can send a package to an earlier window and mark it "Do not open until whenever!" Attempts to use this trick to get around the Observer Effect (p. 45) will fail; usually, such a message is simply blank when read.

Each communication from Control advances the Absolute Now from the point of view of the agents.

Paradoxes

History in this campaign is plastic but very resistant. The Observer Effect (p. 45) applies; paradoxes seem to be impossible. On the rare occasions when history is changed by a Timepiece or Stopwatch agent, the change affects the Absolute Now only on a probability level (see p. 58).

It is possible for an agent in the past to meet someone else from "his future." That is, someone from 2100 could meet someone who had been sent from 2101. When that happens, the agent from the earlier time knows that the Absolute Now has advanced (see main text); if he clocks back, he'll arrive in that later time. Agents in this situation are careful to exchange only information required for the mission.

Example: Ng Chan clocked out on January 1, 2100. He traveled 200 years downtime to January 1900. He remains there, observing, for 100 days. Normally he'd assume that only 10 days Absolute had passed (he's not taking any actions — just observing). One evening, though, he's contacted by Al Morris, a fellow agent. Al tells Ng that he clocked out in July 1, 2100. Ng now knows that the Absolute Now has advanced 7 months — and he'll probably try to figure out why! No matter what the explanation, Ng will now snap back to July 1 or later — he has "lost" the intervening 7 months (this is known as "crunch time"; see sidebar. Biologically, Ng would have only aged 3 months (the length of time he spent in 1900).

It is possible that the "real" absolute now is 500 years from now, and that Timepiece agents are being watched by the agents of some future time corps — but that would be a different campaign, and would require some explanation of why Timepiece agents return to their own time. In this frame, our heroes are at the real Now, the farthest point that eternity has advanced. They will not see agents from the far future. If they see agents from a *near* future, that future becomes their present when they return.

The Focal Referent

A Focal Referent (FR) is the device that keeps a transmitted object in the past. Time Agents have a Mark III Focal Referent implanted in the chest and abdomen. It is powered by myoelectricity from the user's body, and is not detectable by surface examination. The organic plastic does not appear on X-ray, though a careful search with ultrasonic equipment (available only after the late 1960s, and therefore not much of a risk), or surgical invasion, might reveal it.

The Mark III monitors the wearer's heart and brainwaves. If he is badly wounded, the device switches off, and the agent is returned to the transmitter stage, where an emergency medical team is constantly standing by. See sidebar, p. 60.

To return voluntarily, at the conclusion of a mission or before, the agent uses his tongue to activate two switches built into his teeth (two, rather than one, to avoid accidents). Even so, there is a small chance (a roll of 5 or less on 3d) that any blow which gets past the head's DR will pop the agent back to his home time. (The GM may ignore this result if it interferes with the game, but players will usually be amused; it's better than dying.)

Non-agents sent into the past usually wear a Mark II FR as a belt or chest strap (with heart sensor, functioning like the life sensors on the Mark III). It weighs 1 lb. and has DR 3 and HT 5.

Both the Mark II and III Focal Referents will "hold" the wearer's clothing and personal equipment to a range of about 5 yards. Beyond this range, the gear will snap back. Equipment can be fitted with a Mark I FR, about the size of a credit card (DR 2, HT 3). Agents usually carry a spare Mark I in case they have to temporarily store their gear. (Placed in a closet or chest of drawers, for instance, the Mark I would stabilize everything within 2 yards.) Weapons are usually *not* equipped with their own circuits — a very effective insurance against their falling into the wrong hands.

Any "home-time" item which leaves a FR field will snap back to the ABET stage. This includes shed blood, sweat, fingernail clippings, and so forth — which is why agents take a strong laxative a few hours before leaving. The return of random trash is messy and inconvenient when the Stage is occupied, but rarely dangerous. When necessary, pressure sprayers sweep the Stage clear. (The backup system is a couple of people with mops . . .)

Exception: An item in a blacked-out period will not snap back to the future, even if it loses its Focal Referent, until the blackout ends.

Any FR field will hold a "future" object; if one agent hands a stunner to

The Windows

For game purposes, it is easiest to think of the present as "dragging" a string of windows through time. These are the only points to which a time traveler can go. They are about 8 months apart. So if you can hit January 1700 right now, you can also hit September 1700, and May 1701, and so on — assuming no blackouts intervene.

In practice, the GM can put a window whenever he wants one by deciding what date the Absolute Now is at — see p. 50.

Eddies and Uncertainty

Agents who meddle with the past, or who are in the presence of Stopwatch agents who meddle with the past, will find that Control can't hit their time *exactly* with reinforcements, supply drops and so on. The "window" has become uncertain. This uncertainty is from 1d to 10d hours; the GM judges the current level of historical change on a scale from 1 to 10, and rolls that many dice.

The message or reinforcement usually arrives after it was expected. On any die-roll result containing more than two 6s, the shipment arrives *before* it was expected. If the shipment was in response to a request from the past, it will never arrive before it was requested!

another, it is held by the second agent's field when the first agent walks away. But Stopwatch FR fields will *not* hold an item from the Timepiece future, and vice versa.

Crunch Time and Slack Time

When the Absolute Now advances at a faster rate than the personal time of a traveler, this is known as crunch time. In the example in the main text, Ng might complain that he was "crunched 7 months, and missed the basketball playoffs."

On the other hand, if everything goes well, an Agent can spend *longer* downtime than the Absolute Now passes. This is known as "slack time."

Crunch time and slack time can introduce some interesting effects, especially regarding calander age vs. biological age. For instance, someone with a *lot* of slack time might have a calender age of 20 years, but a biological age of 50+. Someone who uses slack to their own benefit (meeting deadlines, rising in rank, etc.) is known as a slackmaster.

Conversely, an Agent with a great deal of crunched time might appear to be 25 years old — but was actually born several *hundred* years ago (if the Absolute Now had advanced that far since the campaign started)!

The Hive

The Hive is a world in which everyone works for the government . . . or for some part of a web of overlapping governments that starts at the level of the huge, gray apartment blocks, and goes all the way to the bloated descendant of the U.N. All corporations have been nationalized (or all governments have been bought out by the corporations — it's hard to tell).

It is a polluted, overpopulated, desperately resource-poor world. But its civilized portions are very regimented and orderly. When a Hive agent visits the past, he is likely to see not freedom and wealth, but a disgustingly undisciplined display of waste. But there are exceptions; some Hive agents revel in the past and don't want to leave.

Hive agents may be from any of the industrialized parts of the world — North America, Europe (including European Russia), eastern China and Japan, Australia and Argentina. The poorer areas have simply collapsed in famine and disease, and have been abandoned. Where they held valuable resources, as in South Africa, enclaves from the Hive exist to strip them dry.

The Transference Effect

The food that a traveler consumes in the past, once digested and assimilated, becomes part of the traveler and returns when the traveler does; so does the air in his lungs. It appears that when atoms from the future chemically bond with atoms from the past, the Arbatov charge "leaks" via the electrons. If a future object interacts chemically with past materials inside a Focal Referent field, it will gradually leak its "future" charge. Similarly, "past" atoms can be assimilated into objects from the future, though they tend to acquire a "future" charge.

Since most of the human body is water, an agent can avoid any significant effects by drinking a great deal of future water for at least a week before returning. This not only replaces the system's "past" water, but seems to replenish the charge on the body's other molecules.

But when an agent returns by surprise or without taking precautions after a *very* long visit to the past, he may take actual injury because some of his molecules stay in the past! Roll 1d-2 injury for each full year the agent stayed in the past, or 1d-3 if he lived as much as possible on rations brought from the future. (But note that since the agent returns to the ABET stage, where some of the world's best medical care is available, he's usually in little danger unless he's dead when he arrived.)

Still, there are spooky side effects. When an agent leaves some of himself behind, those who remain will see a greasy, bloody mist in the shape of a man — the left-behind molecules. And there *have* been cases, not thoroughly explained, where long-term agents vanished from the past and did not return to the future. Were their molecules dispersed throughout history, or did they arrive, intact, *partway* to the future?

A much commoner painful side effect occurs when *any* agent returns; a major fraction of the material in the digestive tract remains in the past. This sudden vacuum in the gut is painful, and costs 1d of fatigue.

A *good* side effect: After someone has been in the past for about a month (8d days, different for each traveler), their cut hair, fingernails, skin flakes, etc., will no longer snap back once removed, eliminating a telltale sign of Agent-ness. Living matter like blood *will* snap back; hair and fingernails on a living body will snap back when the person does (though they may get shorter).

Bringing Past Items Forward

In general, it can't be done. Past-time items carried by returning agents, placed within items set to return, etc., etc., simply stay in their own time. Agents wishing to send inanimate items "forward" must bury them in time capsules.

With patience, the transference effect can be used to bring a living being forward. A pair of Eohippus, captured in the prehistoric era and carefully fed on modern food and water for five years, was returned to the ABET stage with no ill effects, and has already produced a colt.

The Enemy

The Hive occupies an "alternate present." It is impossible to travel between that present and our own. However, both alternate presents can send agents into their common past. (See the sidebar for a description of the Hive's world.)

Why are there only two competing timelines? We can only guess. Temporal physics seems to be governed by a Strange Attractor — a mathematical function that boils down almost all probabilities into two. Consider: When you spin a

coin, it is random, a ball of light moving about the table. But when it stops, no matter where it falls, it will *almost* always end in one of two states: heads or tails. (But it *might* land on its edge, or fall off the table . . . just as agents have occasionally reported observers from potential futures other than that of the Hive.)

Our timeline seems to be spinning like a coin. Whatever happens in the past seems to lead *almost* inevitably to either our world or the world of the Hive.

And here the coin analogy breaks down, because now — whatever "now" means — *both* our world and that of the Hive seem to exist. They are *not* separate timelines . . . at least, we don't seem to be able to travel there, or vice versa. They are different aspects of the same timeline, with almost equal probability.

Could enemy action change history enough to extinguish us entirely? Mathematics suggests it can't . . . but if our timeline becomes unlikely enough, we will no longer be able to travel in time. And that, by itself, is worth fighting for! Now our agents not only oppose Stopwatch's changes, but try to create their own, to make history favor *our* world.

We have only a general idea what events favor Stopwatch, and what events favor us. The final decision which determines which way the coin falls must lie in the 130 years which the ABET can't see or visit. *Something* during that period was important enough to reduce all preceding history into one simple choice.

All the maneuvering of both sides is simply directed at influencing that one decision, without knowing just what it is. But we've learned, from our probability readings after each known change, *about* what to expect. In general, it seems that historical events favoring freedom and personal liberty favor our world, and those favoring control (whether dictatorship or just bureaucracy) favor the Hive. The *form* of government doesn't seem important: corporate control is just as bad (for us) as rule by king, president or Mafia don. Wars in themselves may be good or bad, but they're more often bad because war, or the fear of war, encourages stricter controls.

Other Realities and Doubled Agents

The only documented "alternate present" is that of the Hive and Stopwatch; however, Agents have reported contacts with individuals who seem to be Time Agents from other realities, some of them quite bizarre.

The other troublesome effect involves the people of the Hive's universe. Are they us? That is, do we have duplicates in that world, or are they entirely different people? If we do coexist, one would expect that the people who are recruited as Time Agents in our world would also be employed by Stopwatch. Again, agents have reported meeting their apparent doubles — but nothing has been documented.

Time Agents

Timepiece Agent characters are created on a base of 100 points (or more, if the campaign is to be cinematic), but certain advantages and skills must be purchased, representing agent training, and certain disadvantages are not permitted.

No one would be selected as a Time Agent who was not in first-rate physical and mental health. (Sending a hemophiliac into the Middle Ages would amount to murder!) Therefore, no physical disadvantages may be taken, and mental disadvantages are allowed only if, in the GM's opinion, they would not directly impede the agent's work. Impulsiveness or Overconfidence would be allowable; Pyromania or Sadism would not. Pacifism might be considered a plus, although Total Nonviolence would probably be too much of a handicap in getting the job done. Agents do not have Dependents, and the agency does not normally send non-agents into the past.

Stopwatch Agents

The agents of the alternate-world Stopwatch organization are every bit as well trained and equipped as the PCs. Most of them are motivated by a personal lust for advancement; the world of the Hive is comfortable only for those on top. Furthermore, they have been convinced that our timeline must be extinguished if theirs is to survive, so their dedication is fanatic.

Attempts to bring Stopwatch agents back don't work. Timepiece agents have been captured by Stopwatch and taken away, but we know from interrogation of prisoners that none have ever made it back "home." They've never been seen by our side, either — and we don't know where they went!

The GM should occasionally force the two sides to make a temporary truce and cooperate, either to save all their lives from the angry locals, or to avoid a change so massive that it might make *both* worlds less probable.

Stopwatch agents are generally more ruthless than Timepiece agents. They have more to gain and more to lose — though as just mentioned, truces are possible. And while Stopwatch does not specifically train its agents against killing as Timepiece does, they are just as subject to the effects of changing history, and have the same need for caution. They rarely kill someone unless they *know* he's from Timepiece. And even so, they can often make the Observer Effect work for them by leaving a foe alive. A favorite Stopwatch tactic — and some Timepiece agents use it, too — is to slit a bound foe's wrists. The blood loss will trigger his FR and send him back home, where he'll be patched up to tell his story. (If the victim wasn't really from the future, of course, he simply dies.)

Stopwatch cannot be taken as a specific Enemy, because it's built into the campaign as part of the overall risk that agents take, and does not seem to target specific Timepiece agents — or to have any way of doing so if it wanted to.

Time Agent Equipment

Agents have access to any equipment they need, without regard for budgets, at Tech Level 9 . . . within the limitations of the 1,200-pound maximum transfer. Of course, the agents' superiors (that is, the GM) may veto any request that seems unreasonable. The GM, playing the supervising agents, decides which items may have built-in FRs (so they can stay on the past on their own) and which do not have FRs (so they will snap back if dropped).

There are two standard weapons, which *never* have built-in FRs. Occasionally a past-timer will manage to get hold of one which is "stuck" in the past due to divergence, but it always vanishes as soon as the divergence effect ends.

The Stunner is a sonic stunner in the shape of a short metal wand. It can be tuned for either tight-beam or area effect. Rifle versions also exist.

The Stinger is a gas-operated pistol firing tranquilizer darts. It may be camouflaged to look like an antique weapon (flintlock, Colt .45, etc.), and fitted with powder charges to make the appropriate flash and bang, or disguised as a cane, prayer book, or other item and operate nearly silently. The darts contain a plastic FR circuit, which is charged as they spin through the barrel rifling: a few seconds after firing (more than enough time to reach the target) the charge dissipates and the dart vanishes, leaving only a small puncture wound like an insect bite.

The Super Stinger is a rifle version of the Stinger with telescopic sight; if not disguised as an antique weapon, it folds to fit in a small shoulder bag.

The costs given below are for use of these weapons with other ***GURPS*** campaigns; in this frame, of course, they are issued by Timepiece.

Other weapons may be issued, usually as part of costuming — a sword for the Middle Ages or Renaissance, for instance. Such weapons will always be of Very Fine quality! Any projectile weapon will need ammunition equipped with FR circuits, or it would vanish after 5 yards' flight. Some enemy agents carry hideaway pistols, with unmodified bullets, specifically for killing at close ranges. Beam weapons don't suffer from this range limitation. (And of course locally-made guns — or locally-made bullets in any guns — will work normally.)

Even agents sent to more modern times — World War II, for instance — will not be equipped with heavy artillery; if the situation requires a rocket launcher, the agent is expected to acquire one on his own.

Continued on next page . . .

The GM should play the role of recruiting officer when the players ask for disadvantage points. A reformed alcoholic might be accepted, if the applicant was very talented — a linguistic genius, say. Miserliness would be no disqualification, but it's hard to see how that would affect a character in play, and remember that a Disadvantage that doesn't bother the character isn't worth any points.

Agents have a Duty to Timepiece (involves risk of life, constantly in effect, -20 points). This includes an obligation not to kill if any other option is available. It is not a prohibition on killing, but the GM should reward characters who consider the options and find alternatives, and withhold points from those who kill needlessly.

Naturally, Timepiece can provide training in virtually any skill agents might need, from fencing to disarming nuclear weapons. And the top Field Agents are generalists rather than specialists. But Timepiece also has many agents, including combat specialists, who are relatively one-dimensional. They are usually used either as part of teams, or for very brief missions — e.g., they're usually NPCs. These include the combat specialists, or "grunts," who are used when direct confrontations are inevitable.

Timepiece is worth no points as a Patron, because usually the time when an agent is in most need of help is the moment when Timepiece can't do anything.

Field Agents

About 600 active Field Agents work out of the Canadian base. Retired agents often stay with the service as instructors and advisors, and can return to the field in a pinch. Therefore, while there is a good chance that any agent will know any other active-duty agent, nobody can recognize all his fellow agents by sight. There are recognition codes . . . but nothing is foolproof.

Local Agents

Timepiece maintains a classified number of Local Agents in dozens of past times. These agents often spend years in place, and develop firm identities in the past. Of course, Stopwatch does the same thing.

Local Agents can escape to Base at any time, just by triggering their FR devices. But they can return to a specific time only when a "window" crosses it.

Local Agents may receive instructions from Timepiece at any time, but with rather weird constraints. At any given Absolute Now, communication is possible only with a string of points in history, 8 months apart, with various gaps. So once an agent has been in place for 8 months, you can almost always communicate with him — but not necessarily at the most convenient time. You can't depend on telling him "Do this now!" You may have to tell him "Do this in 6 months . . ."

Retired Agents

Retired agents often stay with the service as instructors and advisors, and can return to the field in a pinch. Many of them also volunteer as Local agents in the past, becoming permanent observers for the rest of their lives. Currently, Base has about 100 retired agents on its staff.

Detecting Interventions

Penetration Detection

When a penetration is made from Absolute Now in one timeline, the ABET on the other timeline can pick it up. Thus, it is meaningful to say "Stopwatch penetrated 1850 A.D. about 20 minutes ago."

However, there are lots of false alarms. This may mean that there is time travel going on that we don't know about, or that we don't understand the

system, or both. Over 70% of the time, a team sent back to check a penetration detection will find nothing.

Problem Reports

Whenever possible, Local Agents will monitor important historical events. Sometimes they observe a problem directly (an agent in Moscow sees the French marching in). Sometimes they see its effects afterward (an agent in Paris receives word that Moscow has fallen and the Czar is a prisoner). In either case, the agent's duty is to *immediately* return to Control with a full report. If several agents are present, one returns. The others wait to be contacted. Usually the contact will come within minutes after the messenger leaves . . . even if it is from agents who have been on the scene for months.

When a Local Agent becomes aware of a problem, the one thing he must *not* do is observe too much! This seems like a paradox — in most wars, information is vital. But in crosstime conflict, often the more you know the less you can do.

Enemy action can be detected in the past through the Eden-Arbatov Energy Reflector — the EAER, or *Ear.* This detects the ripple of energy created when a mass enters or leaves "current" time nearby. The larger the mass, the farther away it can be spotted by the Ear. Agents *wear* small Ears; they are built into the skull, and translate the energy into sound to let the agent "hear" something entering or leaving. Thus, agents can often detect each other by listening! Sending a note at the wrong time, or carelessly dropping something, can be a fatal giveaway.

An agent can tell by the sound whether something is coming or going, the direction, the general size, and the approximate distance. The distance something can be "heard" depends on its mass, and increases according to a reverse power curve; the maximum theoretical distance at which *any* ripple can be picked up is less than 150 yards. The table below shows the range at which typical masses can be detected coming or going.

Object size	*Ear Detection Range*
Fingernail, button, etc.	5 yards
Notecard, dart	10 yards
Bullet	20 yards
½ pound	30 yards
1 pound	40 yards
10 pounds	50 yards
100 pounds	60 yards
1,000 pounds	70 yards
1,200 pounds (maximum ABET send load)	71 yards

Larger Ears are available (20 lbs., .4 cubic yard). These have no more detection range, but read out the *exact* mass and distance of each penetration, and can log all penetrations for later examination . . . which is useful, because everybody sleeps sometime.

Divergence and Dropout

If scheduled reports fail to come back from a given period in time, it may mean that the agents there have been cut off by the divergence effect (see below). Of course, if it *is* divergence, no reinforcements can be sent directly to the time in question.

Sometimes the first warning Base has of a change is when it finds out that it's lost the round . . . by the unexpected appearance of all its agents and equipment for a particular time period.

The blackout of that period remains in effect, and often spreads. History has been changed.

Time Agent Equipment (Continued)

Stinger Weapon Stats

Stinger operation requires Guns skill. All agents know it at level 12 or better (some are much better).

The Stinger does 1d-1 impaling damage (special effect — see below). It has SS 12, Acc 3, ½D (for targeting purposes only) 100, Max 200, 3 lbs., RoF 2, shots 20/B, no minimum ST, no recoil. Cost $800; TL9.

The Super Stinger does 1d+2 impaling damage (special effect — see below). It has SS 13, Acc 8, ½D (for targeting purposes only) 300, Max 800, 8 lbs., RoF 2, shots 100/C, minimum ST 7, no recoil. Cost $1,500; TL9. Various telescopic sights can be added, of course.

Stinger rounds do no actual damage. They automatically break on any solid protection with more than DR 3. Otherwise, the "damage" roll is used to determine if the needle gets through the target's Damage Resistance; if the total after DR is subtracted is 0 or more, the needle broke the skin. The target rolls vs. HT-3. If the roll is failed, he passes out for 3d×10 minutes. Even if the roll is successful, the victim is groggy, at -5 to effective DX and IQ, for 2d minutes. Results are not cumulative. Cost $100/100.

Agents may also be issued other kinds of Stinger ammunition, with different chemical loads. Some possibilities:

Hypnotic: Effects similar to the "Daze" spell (p. B164); the victim looks normal, but "blanks out" for 1d minutes, noticing nothing that goes on. Good for walking past sentries. Cost $200/100.

Nerve agent: Lethal; does 3d damage, 1d if an HT roll is made. Intended for use against large hostile animals (dinosaurs?). Effects *are* cumulative. Cost $300/100.

Stunner Weapon Stats

Stun pistols (see p. B119) use the Beam Weapons skill (p. B49). All agents have it at level 12 or better. "Grunts" will have it at 15 or better.

Stunner stats are on p. B208 (pistol) and B209 (rifle). A *disguised* stun weapon may be built into anything of appropriate size; cost is $1,200 and up for a pistol, or $1,500 and up for a rifle.

Continued on next page . . .

Time Agent Equipment (Continued)

On fan-beam, which uses two charges, everyone in a 120-degree arc is affected out to a range of 6 hexes; there is no roll to hit (though the user must still roll vs. DX in case of fumble) and the resistance roll is against HT. Failing the roll knocks the victim out for 20-HT minutes. Note that targets with HT of 20 or more are immune; berserk characters have +4 to resist. Though this is a "sonic" weapon, it works directly on the nervous system; deafness is not a defense. Effective ranges are tripled underwater, and the weapon is ineffective in vacuum unless touched directly to the victim (presumably in a spacesuit!).

Costumes and Money

The Costuming division can provide copies of any period dress, with improvements such as Kevlar lining for leather armor. Some items, such as suits of plate armor, may be equipped with Focal Referents to keep them from snapping home when separated from the wearer.

Traveling money is a problem neither of the time agencies has ever fully solved. Precious metals, or even gemstones, are cheap compared to the cost of transmission, but they are difficult to stabilize. Where commerce is well developed, Research Division can provide instructions for profitable, inconspicuous investments. They have also manufactured large coins and articles of jewelry containing small FR circuits, although these lose their charge and snap back in a few days, giving rise to stories of magicians' gold that dissolves after the sorcerer departs. . . .

The standard field medical kit (5 lbs.) allows a trained user to perform First Aid at TL9 (10 minutes per patient, 1d+1 HT restored). In long-term care, a physician can restore 2 extra points (instead of the usual 1) per day, 4 on a critical success. A critical failure still causes only 1 point of additional injury. However, the field kit contains only enough supplies for 20 patient-days of treatment (five patients for 4 days, 10 for 2 days, and so forth). It also contains five doses of a super-antibiotic, Panmycin, that will cure any known microorganism-caused illness (+8 to HT rolls when recovering from disease). Agents are immunized (+3 to all HT rolls) against most of the diseases they might encounter. The team is as responsible for their use of the medkit as for their weapons; keeping someone alive can be as damaging to the timestream as killing a person.

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Changing History

History can be changed. In fact, it can be changed over and over.

Entropic energy allows an absolute sequence of events to be imposed on changes made in *past* time. Suppose that in 2001, enemy agents launch a time-attack against Wellington at Waterloo. It is partially successful, and history changes. So in 2002, it is true that Napoleon won and the French Empire survived another 13 years. But in late 2003, a counter-effort is launched, which restores history to its original track. Thus, the history books of 2003 are very much like those of 2001.

When one side or the other changes history — accidentally or on purpose — the effect is to change the *frequency* of the entropic energy associated with each possible future. In other words, the *probability* of each future is changed.

These probability fluctuations can be detected by instruments at Control. A probability change takes the form of a curve along a chart of history. Some changes seem to "damp out" immediately. Others have an avalanche effect . . . but even these seem to damp out in the 130-year period that the ABET can't reach.

The instruments at Control can measure the probability of their own existence at Absolute Now. This is used to keep overall score in the campaign; see *The Final Outcome*, below.

They cannot measure the *local* probability of success in some contested past time, but the agents in that time have two rough-and-ready indicators of success.

The Divergence Effect

When the *local* probability of Timepiece's coming into existence drops below a certain point, travel between that time and the Absolute Now is no longer possible . . . for Timepiece agents! Stopwatch agents are unaffected. The reverse is true for Stopwatch.

An agent can check this at any time by tossing a bit of future material outside his FR field. If it vanishes, things are not going too badly. If it fails to vanish, the mission is in jeopardy. (Often, the first that an agent knows of the failure-to-

vanish problem is when someone tries to return home, and fails . . . or when a hurt buddy's body doesn't vanish, but stays right there and bleeds.)

When one side gains a strong advantage, however, the other will be "stuck" in the past, with possibly deadly results for severely injured agents who can't get home to high-tech medicine. Agents call this "divergence loss." It is not final: probability can flip back and forth more than once during a mission, until one side is completely defeated — or, as occasionally happens, the probability balance is restored, and both sides agree to back off.

When this "divergence effect" occurs, the time period is blacked out from Control's point of view. Control cannot send anything to the closest "window" beforehand, and sometimes for several "windows" afterward.

Dropout

When the *local* probability of Timepiece's coming into existence drops below a final threshold, all Timepiece FRs in that period cease to function, and all surviving agents and equipment snap back to the Stage in failure. The reverse is true, of course, for Stopwatch. There is often no doubt when you "win" an encounter; your foes vanish! The losing side can then send no agents into that period, or the immediately following time, giving the winners a chance to consolidate their gains.

In game terms, if the GM decides that Stopwatch is *about* to win, he cuts off communication between the agents and their base. And if he decides that the agents have failed and Stopwatch *has* won that encounter, he snaps everyone and everything back home.

Long-Term Effects

Over a term of months or years, as the Absolute Now measures time, the local probabilities tend to even out. The more massive the change, the longer they take . . . but eventually most of that period, with its *changed* history, will be accessible once again. Usually, though, one critical area remains "blacked out" and unavailable for direct ABET transfer forever.

Visiting Changed History

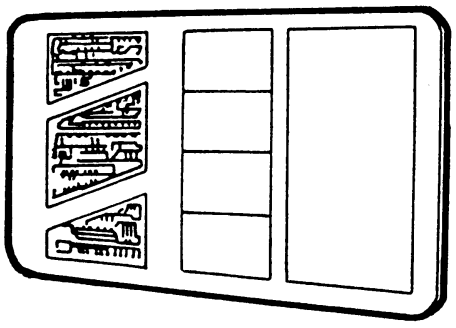
When history is changed, the GM must decide how far-reaching the change was. The sooner the change damped out, the less history the GM must rewrite or avoid!

Agents visiting changed history will be familiar with the new history. After all, this *is* history now; they read about it in their history books. Thus, the GM should start any such visit with a briefing to the players. Often the new history will be because of a Stopwatch intervention, and the players' mission will be to make a change that — they hope — will push history back toward a favorable track. The inertia of time will help them in this. (The GM may also decree that some part of "real" history is a Stopwatch plot, and send the party back to *change* historical reality.)

Remembering "Original" History

Only those individuals with the advantage of Temporal Inertia (see p. 31) can remember events of an "original" history, including missions (their own or others) to that period. Usually, the Time Corps' first warning of a change comes from its agents or employees with Temporal Inertia. (Individuals with Eidetic Memory and Temporal Inertia, even if they have no other qualifications, are hired by Timepiece specifically as "rememberers.")

After a change, the Time Corps immediately debriefs its rememberers and produces a file of alternate history. This can be used in an attempt to plan actions which might undo a change.



Time Agent Equipment (Continued)

Other Gadgets

The effects of Focal Referents are described on p. 51.

The *Notebook* is a portable audiovisual recorder/player, about the size of an average hardcover book. It is used to record the course of a mission, though if fitted with a Focal Referent it can be used as a snooping device. It records on laser discs which can be ejected and used to send messages to the present (see also next entry). Time Agents are notorious for using the recorder for all sorts of purposes except keeping an accurate record of their activities. . . .

Notecards are small sheets of plastic with a faint radioactive tracer. Agents in the field can write messages on a card and leave it behind; once out of range of the agent's FR, it will snap back to the ABET stage, where its tracer sets off a warning to pick up the note. The special cards are rarely necessary, of course. *Anything* that appears on the stage will be examined immediately. But if a note appears on the stage at the same time that several wounded agents snap back, the special plastic cards are likelier to survive and be noticed! Notecards that do not disappear provide a warning of Divergence Effect.

The T-Meter is a device for measuring Arbatov energy; it can precisely identify the moment in time at which the travelers have arrived. (If the GM would rather the players not know this, the T-Meter may be made unreliable, or not used at all.)

Home-Made Equipment

If the agents are going to be in place for a *long* time, they can bring tools and equipment from home and *build* some fairly high-tech equipment. If they really need an Uzi, they can have one made from local materials.

Visitors From the Future

Control has never been blessed (or cursed) with visitors from its own future. The explanation for this is purely theoretical.

It starts with the idea that Control exists in the true "Absolute Now." There *is* no future yet; it is just unformed possibilities. (There is no mathematical proof of this, though.)

Even though our current Control exists in the Absolute Now, it might be able to send agents to the Control of eight months ago. But this is prevented by the Arbatov Barrier, which imposes a minimum time-jump distance of 130 years.

Still, it is possible that 130 years from now, the Control of that time will be able to send agents to the Control of our time. But there are theoretical reasons to think that the existence of an ABET transmitter is one of the things that can create a "blackout" period. If this is true, then a time which is the *source* of time-travelers can never be the *destination* of time-travelers.

And it's also possible that some of the unexplained visitors to the past, occasionally reported by our agents, are really from our own future. But if they are, they haven't admitted it . . . or anything else!

Record-Keeping and the Observer Effect

Timepiece has two very different kinds of record-keeping. It keeps extensive records about the detailed course of history, as recorded by historians and as observed by agents in "unthreatened" periods. Timepiece has the greatest historical library in the world . . . fully computerized, of course, but many of the original materials can be examined. (+2 to any Research roll on a historical subject!)

But Timepiece does *not* keep detailed records of the observations and actions of its own agents, once a specific crisis is past. Even the greatest success will leave only a numerical rating in the agent's record, along with a note that he has successful experience in that period. Minor failures, likewise, will leave only ratings. Major failures are rarely survived.

The reason, of course, is to attempt to outsmart the Observer Effect. The less detail is known about some things, the easier it is to get around them. On the other hand, if you know *nothing* about what either your agents or the enemy are doing, how can you proceed? It's a problem that makes the lives of time agents entirely *too* interesting.

The Final Outcome

If one side loses enough successive contests, then its probability will become low enough that it will not be able to travel in time reliably, if at all. It seems unlikely that any probability can be *completely* erased . . . but who would want to take the chance?

In game terms, the GM should start with the relative probabilities of Timepiece and Stopwatch at 49% each. (The remaining 2% is made up of a huge number of low-probability futures.) Any successful intervention by one side will add 2d% to its own probability, and subtract 2d% (*not* necessarily the same number, but reroll any result that is more than 2 different) from the opposing probability. The "main" probabilities may never total more than 99%, with the last 1% going to the "wild" futures. Should the Timepiece-Stopwatch total ever be more than 99%, reduce the higher probability to make the total 99%.

The GM may also decide that a badly-botched intervention has made *both* futures less probable, reducing each one by 1d% or even 2d%.

If Timepiece's probability is reduced below 8%, the campaign has ended in failure for the agents. If Stopwatch is reduced below 8%, the PCs have won — and can continue to travel in time as researchers or even tourists. (But if they do something to change history again, Stopwatch may reappear!)

It is also possible that repeated disasters will reduce the *combined* probability of Timepiece and Stopwatch to less than 70%. If that happens, the GM may create a *third* time-twisting agent force, with any characteristics he likes . . . another probability has reached critical level, and may be treated like the first two. Things can really get complicated then . . .

Typical Mission

Actually, because of the high percentage of "false alarms" and missions to protect "weak spots" against *possible* incursions, the truly typical mission is one in which the agents clock back . . . spend several paranoid weeks downtime, possibly getting in trouble with the natives . . . and clock home, never having seen any evidence of a Stopwatch agent. Certainly the GM can throw in such a mission now and then. But players will expect to encounter enemy agents . . . and the player *characters* are *paid* to expect enemy agents.

Our typical mission, then, is one where Stopwatch is really up to something. Here's an account of the mission as it happened . . .

The Warning

The ABET operators report a possible Stopwatch transmission: to a window at May 30, 1914, in Austria. The time and place suggest that this is real. On June 28, Archduke Francis Ferdinand, heir to the Austrian throne, and his wife were assassinated, leading immediately to World War I. Obviously, this is a key historical event. But how does Stopwatch stand to gain by changing it?

Three days later Brunner, the Local Agent in Vienna, sends a further report. Just as a precaution, he had bugged the homes and meeting places of the Serbian conspirators who were to assassinate Ferdinand. Through his listening devices, he heard sounds of a disturbance. A little detective work on his part confirmed that the main conspirators had been removed and replaced by Stopwatch agents!

The Briefing

The agent team is called together and briefed on the period. In this particular case, the Austria of 1914 corresponds almost exactly to that of our "real" history. The GM mentions one non-historical detail: the American escape artist and writer, Harry Houdini, is currently living in Austria, writing, researching and doing occasional short performance tours. (The depth of this briefing would

depend on the GM and the group. If everyone enjoys research, the GM probably started by checking several books out of the library, and he might end his briefing by handing them to the players.)

The problem is that the nature of the intervention is not immediately obvious. Clearly it has something to do with the assassination. But the Archduke was, in his time, a force for stable unity. One would think that Stopwatch would *want* him dead! So the agents will have to watch carefully and think on their feet.

The Initial Penetration

The closest window to use would be the same one that Stopwatch used, now at June 2. (The fact that they used it recently does not black it out to us — just to them.) But Control is concerned that the team might not have time to prepare properly. Brunner is the only agent in that time period, and he is not well equipped.

So: Six agents (the PCs) are clocked to the *previous* window, 8 months earlier. This will give them time to prepare. Immediately afterward, Control sends six combat specialists ("grunts") to the June 2 window, with orders to wait for contact from the PCs and follow their instructions.

The PCs in 1913 are under strict orders *not* to contact the Local Agent in any way, and *not* to interfere with the Stopwatch actions that Brunner reported. To do so would be to challenge the Observer Effect. However — armed with the information supplied by Brunner — they place the fake assassins under surveillance without being detected, and they identify a total of seven Stopwatch agents.

One of the players tries direct action anyway, just to see what the GM will do. He sets up an ambush to zap one of the female agents with a Super Stinger — no women are known to be crucial to the Stopwatch moves already observed. But the entire team is afflicted with food poisoning from a bad dinner the night before. The rifleman is doubled up with cramps five minutes before his target appears, and his FR yanks him home. Since he didn't tell the rest of the team what he was up to, they spend a lot of time being paranoid. The Stopwatch agent who was being targeted *did* "hear" the missing agent clock out, and her team is paranoid, too.

In January, 1914 the "early" team gets a time-dropped package of extra weaponry, supplies and information; the missing agent returns in this drop. (If the PCs had thought of anything in particular that they really needed, they could have requested it by notecard and gotten it in this drop.)

The Moment of Freedom

At the moment in 1914 at which Brunner sends his note back to Base to give the alarm, the agents are free. They are no longer constrained by LA's observations. They can contact Brunner, and they can act against Stopwatch in any way that does not contradict what is currently known of history.

However, they choose *not* to contact Brunner, because they know from their own surveillance that the Stopwatch agents have spotted him as a possible foe. They're not sure yet, though.

The First Move

The Timepiece team decides that they don't know enough yet to try to frustrate the plot. They could try direct action against the Stopwatch team, but then who will assassinate Ferdinand?

But after six days of waiting, they become impatient and worried. When the "grunt" team (NPCs) appears, the agents decide to act. They divide their forces to track the enemy agents, hoping to clean them up in a simple firefight. A couple of combats ensue. Five Stopwatch agents are hit by darts and clock out to escape. One is captured, but nothing is learned from him before he gets away (you can

The Observer Effect vs. Changing History

New agents often ask "How can history be changed at all, if the Observer Effect really works? After all, everything important about history has been recorded."

The answer — for practical purposes, anyway — has to do with *direct* vs. *indirect* action. A directly-observed event has a great amount of inertia; it is not likely to change because of direct action. But *indirect* action, which does not itself contradict anything observed, can build up a "momentum of events" that can sweep away observed actions. But this momentum can take months or years to build!

Thus, a time traveler *can* take actions that will eventually change observed history. This can sometimes sweep away whole sections of known history, with all their observations . . . and with all the Local Agents of both sides. And if, as often happens, the change is reversed, the "old" history will be back in place, along with its agents. But observations made during that period will no longer be fully reliable; there is once again scope for free action by Time Agents.

Gross Changes: A Bad Idea

"Why don't we just nuke Hitler?" Every new Timepiece agent asks that question, or something like it. Why can't we just send a whole army of Time Agents, armed to the teeth, to forcibly put history on the kind of track we want?

Because it doesn't work, that's why.

Timepiece and Stopwatch don't play a subtle game because they want to. They're subtle because they have no choice. Both agencies have learned the hard way that noisy, flashy maneuvers don't benefit *anyone*.

In the early days of the Time War, Stopwatch tried several blatant attacks on the early days of American history, from machine-gunning Washington's troops to planting a fuel-air explosive device on Wall Street. In every case, the result was to pop all agents of *both* sides out of the affected time, and to reduce the Absolute Now probabilities of both sides' coming into existence.

Apparently if the past-timers realize, as a group, that they're being invaded, that tends to throw history along *very* different lines. We don't know what those lines might be, and we don't want to find out.

So, agents . . . be happy with your plotting and your careful maneuvers in the background of history, and forget about nuking Hitler.

stuff a rag in someone's mouth to keep them from using tongue-switches, but it's hard to interrogate them in the meantime). One escapes.

But three of the PC agents are shot in the melee. Two have to clock out to save themselves. One is merely wounded in the arm. The noisy gunfire draws police; the wounded agent, and one other, are arrested. Ironically, they are suspected of being English spies (someone missed a language roll) and potential assassins! Worse, *all* the agents must discard their weapons as they flee the police, rather than risk having future gadgets captured. (The grunts, their job done, are ordered to clock out.)

Jailbreak!

Since they have little to lose, the agents contact Brunner. With his help, and via some bribery, their two jailed comrades are freed — an adventure in itself. But at this point, the agents find out the hard way, via the Divergence Effect, that they are in danger of failing their mission. (The jailbreak has gotten national attention, and war fears are raging . . . with speculation that England and America is plotting against Austria. The visiting Houdini is suspected of being a spymaster! And maybe it's true . . .)

Neither the agents nor their remaining equipment will clock home. The agents are now absolutely on their own; they can't get help from Control, and they can't escape. (But at least the surviving Stopwatch agent, and any cronies she may have, won't be able to "hear" them.)

Thinking It Through

One key to resolving this situation lies in the war scare; if none of the players are history buffs, the GM should make a few History or IQ rolls for the agents, and drop some hints. The Austrians are now rattling their sabers, but it's out of paranoid fear . . . historically, they didn't expect the British to get involved on the Continent, let alone the Americans. Right now, the leaders of Austria and Germany are rethinking their plans to start a war, and *this* is what is changing history.

A Solution?

The agents should deduce that a postponed WWI works against Timepiece. Perhaps they will realize that the war is inevitable, and a later war will be worse than an early one. They may have to assassinate Ferdinand themselves to get history back on track!

One Stopwatch agent is still loose, and the agents' Ears hint that she is still active; she knows who they are, and has been snooping around. She'll probably be trying to *stop* the assassination.

About Houdini

Houdini, of course, is the wild card in the adventure. He might be a Local Agent for *either* side. Or he could be the real, original Houdini, just "out of place" as a side-effect of some past historical meddling — and if he is, he might or might not be involved in espionage. Either way, he could be useful to the agents!

Historical facts: Houdini's birth name was Erich Weiss. He was the son of a rabbi from Budapest (the other capital of the Hapsburg dual monarchy.) He spoke fluent German and had toured Germany, Austria and Russia (he was in fact suspected of being a spy by the Russian secret police). As a Jew, he was unpopular in some quarters, as a possible Hungarian nationalist in others and as a possible spy in many. He had contacts at many levels of society and a formidable array of skills. By 1913 he was an aviator, a mechanic, an expert driver, a good rifle and pistol shot, an acrobat, an illusionist and escape artist. He might know anything else useful that could be learned at the time; he was insatiably curious.

Revival: Medical Help at ABET

Timepiece has some of the most advanced medical care in the world. If an agent is still alive when he appears on the ABET stage, his chances of survival are good. Skilled medical teams are always standing by — not just on call, but scrubbed and ready to operate.

If the campaign is using advanced or optional rules about blood loss, etc., all such loss ends within seconds of the time the victim arrives on the stage.

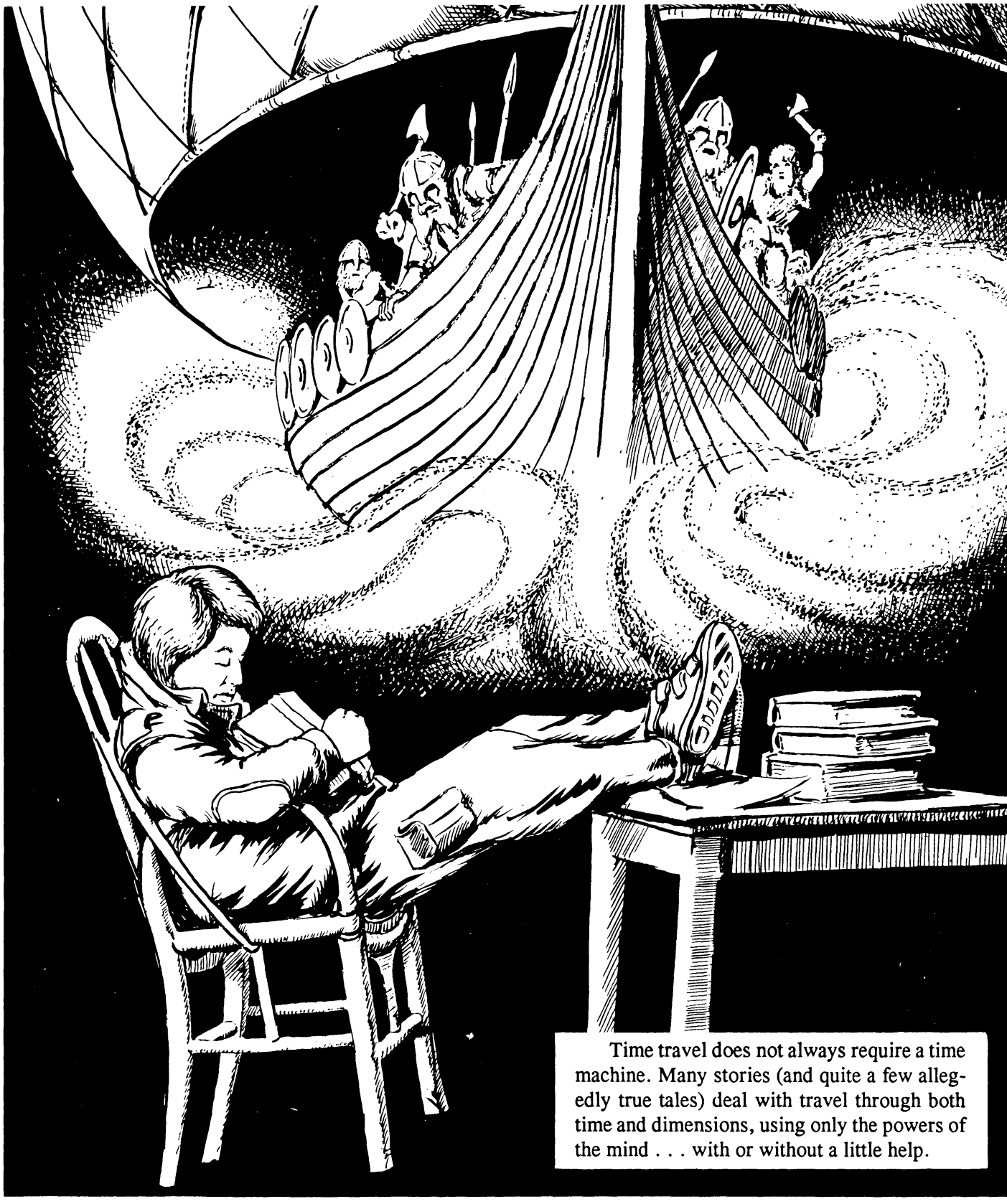
It will sometimes be possible to return the agent to action almost immediately, if the window is clear (see p. 50). To recover from normal injuries, the victim rolls daily at HT+1. His doctor (who will have Skill 20!) also rolls *twice* daily. Each successful roll retains one point of HT.

Agents who have been poisoned roll at +6 over "normal" recovery rolls (because much of the poison will stay in the past). Agents who have diseases *will* be cured; no known past-time malady can defeat Timepiece's doctors. (All agents receive a Panimmunity treatment in advance, giving them +3 to avoid infection in the first place.)

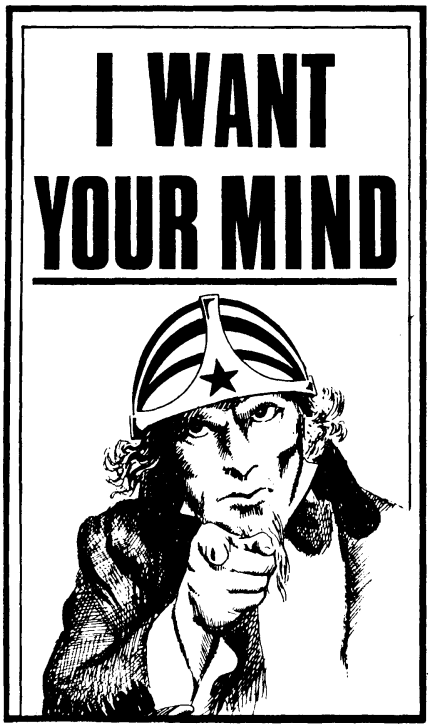
In the case of severe physical injury, an agent can be patched up with bionics, possibly including built-in weapons and the like (see ***GURPS Cyberpunk*** or ***GURPS Ultra-Tech***). Or a braintape can be made and a clone body grown, restoring the patient to complete health. None of these repairs costs the agent anything, of course, but any of them mean that he will have to sit out the next several months at Timepiece HQ.

The only thing that Timepiece's medical staff can't deal with is severe head injury. If an agent pops back with most of his head missing, he's dead. Even so, if the player likes, a clone of the agent can be created from a braintape made before the mission!

5 PSIONIC TIME TRAVEL



Time travel does not always require a time machine. Many stories (and quite a few allegedly true tales) deal with travel through both time and dimensions, using only the powers of the mind . . . with or without a little help.



The Time Draft

The idea of psionic time travel leads to an interesting campaign possibility . . . one in which the time travelers are not at all willing.

Secret government experiments have proven that mental time travel exists, and can affect history (or, alternatively, can bring back valuable information and relics). Unfortunately, only one person in hundreds of thousands has the "time gene." Time travel is considered so important to national security that, as these people are identified, they are rounded up and removed to the maximum-security Time Laboratory, where they are "encouraged" to serve their country on missions into the past. The draftees aren't sure they like the idea — but even if your mind has the freedom of time, it's hard to argue with someone who's got your body locked up. . . .

The idea here is that the time-travelers are entirely unwilling, and constantly looking for a way to escape. (If they're willing to cooperate with their captors, it's an ordinary Time Agent campaign.) This might be part of a broader campaign in which all psi users, not just time-travelers, are hunted by governments that wish to exploit their powers. Some government agents might be sympathetic, and help the "underground," while some psis assist with the roundup.

Mental time-travel abilities may be considered simply "super" in nature, rather than "psionic," if that best fits the campaign. This chapter will assume that they are psi powers, but it really makes no difference in game terms unless special psi-affecting gadgets (as described in ***GURPS Psionics***) exist in the campaign.

If these abilities *are* considered psi-related, treat them as "wild" talents that do not require any of the nine basic powers described in ***GURPS Psionics.*** However, the GM may allow *physical* projection to be affected by gadgets or factors that would limit Teleportation, and *mental* projection to be affected by anything that would limit Telepathy.

Physical Projection

This mode is essentially identical to those using machines, except that the machine is the brain. "Time Police" and "Time War" campaign types can use it, though it is stylistically more appropriate to freelance travel, especially in campaigns with a magical or occult theme.

Not everyone can time-travel, although possibly everyone has the potential. Something not readily available (that is, something under the GM's control) should be required. Its possessors have some version of the Time-Jumper advantage (p. 31). The point cost can be treated as either a super-ability, an Unusual Background, or a Trained by a Master advantage, depending on the rationale chosen for the campaign. Some possibilities:

Inborn Talent

Time travelers are born, not made. Some bizarre genetic twist gives certain people the power to travel in time. The ability may always have existed, being kept secret by its users (see Poul Anderson's *There Will Be Time*). Or it may be a recent mutation, perhaps along with other super-powers (though that's another worldbook). It could be even a mutation of a post-nuclear future — although we'll say this once for the record: Mutations take place only in the generations born after the triggering event; once you're born, you can't mutate. (At least that's true of radioactivity, but a biological weapon might conceivably "mutate" victims immediately, especially under pressure of dramatic necessity.)

An interesting short campaign could be built around the holocaust's survivors trying to gather the temporally gifted mutants, and train them for a mission into the past, either to recover unobtainable supplies or possibly even to prevent the disaster (and creating a whopper of a paradox).

Special Training

Anybody can time-trip if they know how; the problem is getting the training, which is the closely guarded secret of a group of Tibetan monks/Cthulhu worshipers/Knights Templar/mad game designers. Our heroes learned the technique when their plane crashed in Tibet/they were inducted into the cult, which is now hunting the renegades/they met one of the last defenders of the Faith, who passed on the secret while dying/they won the SJ Games prize drawing at Origins. Tripping-through-training usually involves joining a secret elite, who are either sworn to uphold good or (as with the Cthulhoids above) are fleeing the rest of the group, which is sworn to do them in. Just try explaining *that* to the cops.

Gadget Required

Time travel requires some kind of augmenting device, either a machine (which may answer any of the descriptions of time machines, from pocket-sized to Pentagon-sized) or a special drug or chemical (which you can't get at the local Boots or Walgreen's, even with a prescription). This will tend to make it the

provenance of a government, or super-government, project — perhaps secret and highly experimental, perhaps well-established. The treatment may not work on everybody, and it may have drastic effects on those who can't make the grade. See the "Richard Blade in Dimension X" series of books, by several authors using the name Jeffrey Lord, in which only Blade is tough enough to survive being transmitted into the big X — at least, in the early books.

Magic

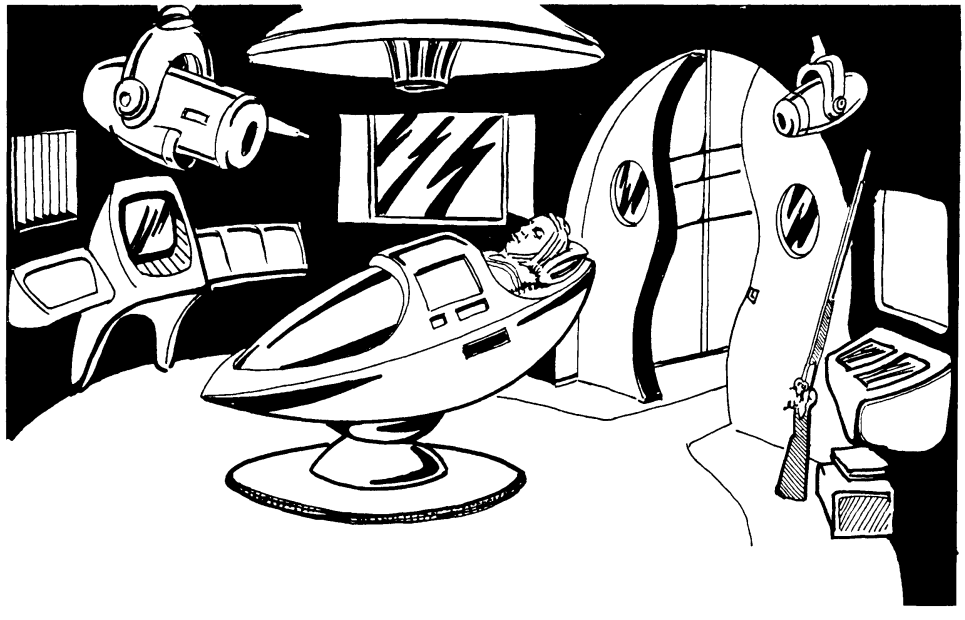
Time travel requires a magic spell, cast at a place of power; a Stonehenge or Siege Perilous or Mystery Hill. But perhaps most of the spell was provided by long-ago wizards, and the PCs unwittingly complete the ritual. The travelers may stumble through the doorway by accident, and then have to find the right place, and the right spell ingredients, to get home again.

Or perhaps only a rare few can use this gate; to everyone else, it's just an old rock. Or perhaps the big secret is just the existence of the gate; anyone could use it, if they only knew . . .

Travelers in this mode won't usually be doing a lot of hopping around — unless they get hold of something like the map in *Time Bandits*. See the discussion of time-gates in Chapter 2.

Equipment

Mental trippers usually have tighter limits on equipment than their hardware-driven counterparts. They should be limited to what they can carry on their persons. The Time-Jumper advantage (p. 31) prescribes an absolute mass limit. This includes clothing, tooth fillings, and everything that isn't the person's own cellular material. The GM may limit this further. Perhaps the tripper arrives in the past exactly as he came into the world, without even the tooth fillings (never mind the eyeglasses, hearing aid, toupee . . .)



There have been various attempts in various games to set equipment limits based on destructive power: a hand grenade would cost more energy (or points, or whatever the cost was measured in) to transfer than an equal mass of potato salad. The GM may try this sort of philosophical balancing, but it's not easy. Try and calculate the value difference between, say, a bow with six arrows and a pistol with six bullets.

It is the authors' considered opinion (with which the reader is welcome to disagree) that most role-playing adventurers carry around too much stuff and spend far too much time worrying about the stuff they're carrying. "Caddy, my number six magic sword, please." Mental time travel offers an ideal way to (literally) strip off the hardware and force the players to figure out solutions to their problems, rather than simply pointing a gadget (technological or magical) at them.

On the other hand, if the GM feels the campaign will be enhanced if large artifacts can move through time, he can always allow stretching of the limits, perhaps rolling at a penalty (with failure bringing either loss of part of the transfer or temporary mental "burnouts") or by allowing cooperative transfers — if several travelers concentrate together, they can move a mass equal to the

Retrogression: Special Difficulties

In addition to the usual problem-solving of the adventure, the spirit-traveling heroes also have to figure out how to explain their weird behavior. In a time when people believe in demonic possession — and a great many people do, even today — this could be rather a touchy subject.

Every now and then the transfer process might glitch, putting two spirits in the same body. They can converse telepathically, but they have to decide who's going to work the muscles — see Steve Martin's amazing performance in *All of Me*. Or a traveler finds his host's mind isn't fully dormant, so that it "awakens" every now and then.

As noted before, this should be handled very carefully. Used once or twice, there's a good laugh in it — but the "sophisticated" time traveler repeatedly telling the terrified peasant's mind to shut up and stay out of the way has a cruel edge that no one should find funny or comfortable for long.

total of their individual allowances *times* the number of people involved. (Keep it a simple multiplication and not a power curve; exponents add up fast, and pretty soon they're moving apartment buildings.)

Other Psi Abilities

In a time-travel-by-translocation campaign, the GM may allow the characters other psi abilities, from the ***Basic Set*** or from ***GURPS Psionics***. However, these powers will be limited by their transfer into new bodies. Normally, a psi inhabiting a host body is at -1 to any psi skill, and his Power is *halved* (round down).

But if the spirit happens to have entered a host body with the appropriate psi Power, use the spirit's skill at no penalty. If the host has psi skills in that Power that the spirit does not, the spirit can use them at -3 to skill while in the host body. The spirit uses his own Power or that of his host, whichever is higher.

Mental Projection

So far, it's been assumed that "time travel" means physically going whenever-it-is, with flesh, blood, bone, and whatever equipment the GM grants in support. Another possibility is to send only the mind, the consciousness, while the body remains behind. This is the Retrogression advantage (see p. 30).

This does not necessarily mean adventuring as a disembodied spirit. The projected consciousness would occupy the physical body of a temporal local, whose own mind lies dormant during the possession. (Having the native's mind remain active could be interesting, but put a heavy strain on the GM and players both; there would be a set of NPCs, as large as the players' group, on stage and talking constantly. Both the dramatic and comic possibilities of this would get old quickly.)

The mechanics of the projection can take any form that Physical Projection, above, does: rituals, magic places, chemicals, training, and so on. The only difference is that the physical body stays in the present. The bodies are in suspended animation while their spirits are away. They need no food, but are vulnerable to physical destruction. (If this doesn't fit with the GM's chosen method of projection, of course, the bodies can lie in bed somewhere, requiring constant attention . . . even more vulnerable.)

The Linearity Effect holds true: the time that passes in the present is the same amount of time that seems to pass while the spirit is in the past. (Although an interesting variation would be to allow weeks or months of adventure in the space of a single night; the travelers may end up wondering if it was all a dream!)

Once the spirits arrive in their host bodies, they cannot hop from one host to another — that's entirely too much power. A spirit whose body is killed could return in another body; see below.

Past-Time Characters

The GM should create characters for the host bodies. This requires as much care as designing any other important NPCs, since the players will be carrying around their hosts' reputations as well as their bodies — though they may have to find out the hard way just what those reputations were. ("Giacomo the Jester is also the world's deadliest and most cunning assassin." "*Now* he tells me.") The hosts may be somewhat spread out, both socially and physically, so that the players' first task is to locate and identify one another — and their second is to explain why the King's Astrologer is suddenly buddies with an illiterate Gascon cowherd. But don't overdo it; nobody needs to start an adventure with two-and-a-half strikes against them. If the GM wants to make things a little easier on the team, which is a good idea the first time or two this somewhat odd variant is played, assume that "like minds seek like bodies," and the hosts are not vastly different from the spirit's home bodies — at least, not in ways that will make the spirit's abilities completely useless.

Basic Attributes

Determine the effective abilities of the new body as follows:

ST: use the host body's. If the host is more than 4 points stronger than, or 2 points weaker than, the spirit's own body, check for accidental injury whenever the player performs a feat of strength. The roll to avoid injury is 15 or less, modified by -1 per point of strength differential.

IQ: use the spirit's. Since we're assuming that the consciousness is separate from the physical brain, the host's brain structure, or even brain damage, has no effect.

DX: if the spirit's is lower, use it. If the spirit's is higher, the effective DX is the average of the two (add the DXs and divide by 2, dropping the fraction). A dexterous individual can get a little more out of the host's muscles, but not his own level of ability.

HT: use the host body's. But when a Will roll is required in a HT-related circumstance, use the spirit's.

Advantages and Disadvantages and Skills

The spirit retains all of its mental advantages and disadvantages. The spirit may ignore all physical disadvantages except those with a mental or habitual component: Epilepsy, Low Pain Threshold, Stuttering. For game purposes, assume that the host's mind and habits will allow a Mute spirit to talk, or a blind or color-blind one to see properly. The carry-over of disadvantages can be interesting when, for instance, a "possessed" bard develops a stutter.

The traveler acquires all of the host's physical disadvantages, but only those physical advantages that either his own body possesses or (in the GM's opinion) require no experience or training to use. *Example:* If your new body has Acute Hearing or Rapid Healing, you get the full benefit. If it is Ambidextrous, however, and you are not, you get no benefit, as you have never learned to use your off hand.

Skills

The traveler has full possession of all his mental skills. The host's mental skills are not available under normal circumstances; in an emergency, if the host knows a skill, add 2 to the spirit's default roll.

Physical skills are another matter. The spirit's physical skills are used, and the host's are ignored. But the spirit's physical skills don't necessarily transfer in their entirety. No matter how well trained you are, another body is not going to respond as your own does, and the effects will never be in your favor. (The one more-or-less exception is simple strength; anyone can throw punches and lift things, and if suddenly granted more strength, the punches would be harder and the load greater; but hard punches alone don't make a boxer, and lifting heavy loads carelessly can cause serious physical damage, as described above.)

Mental skills are those of the spirit.

For physical skills, the process is a bit more complicated:

a) Determine whether the host body is Athletic, Average, or Unathletic. This should be apparent from the character's abilities and background. If it's not obvious, figure Move, and assume that a result of 4 or less is Unathletic and 6 or more is Athletic.

Athletic	+1
Average	0
Unathletic	-1

b) Determine how common the skill is in the culture being visited:

Universal	+1 (riding where horses are the main transport)
Very Common	+1
Common	0
Rare	-1 (the skill exists, but only a few have it)
Unknown	-2 (anything that hasn't been invented yet, or is completely outside the culture)

Total the scores. If the total is negative, subtract that many skill levels from the spirit's skill. If the total is positive, there is no bonus effect.

Death and Return

If the host body is killed, the spirit instantly "snaps back" to his own time, and must make an immediate Fright Check (p. B93). The Fright Check is modified, at the GM's discretion, by the nature of the death, and someone killed in their sleep or by total surprise would not need to roll at all. An accidental death would roll at no penalty, providing there was nothing especially horrible about it. An ordinary combat death would roll at only a -2 penalty, or no penalty at all for a soldier. A messy or lingering death might roll at -5. A death by torture, or involving a Phobia (a long fall for an acrophobe, say) might roll at -10 or even worse!

One's first "death" always adds an extra -10 modifier, one's second an extra -5, and one's third a -2.

Should the traveler acquire a mental disadvantage as a result of the Fright Check, it should be related to the circumstances of his proxy "death."

Once the traveler recovers from the results of his Fright Check, he may immediately attempt to rejoin his companions, if he chooses. Of course, they won't know who he is until he identifies himself! Thus, it's a good idea to work out passwords in advance.

Psi in Other Campaigns

Psi powers can be interesting in a campaign which uses other means of time travel. Mental abilities can be invaluable to a time traveler, and dangerous if used carelessly.

A Time Agency would certainly want to recruit psis if such people existed: mental powers amount to special equipment that is invisible, weightless, and cannot fall into the hands of enemies or curious strangers. The drawback, of course, is that careless use of psi may result in the agent attracting unwelcome attention — seized as a scientific curiosity in more modern times, or in earlier eras hunted as a witch! Remember, too, that if psis exist now, they almost certainly existed in the past (unless they were created by some sort of mutation or chemical treatment that made time travel possible). Thus, a time-traveling psi may be detected by the "native" telepaths.

6 OTHER CAMPAIGNS

This section will present four detailed "alternate" campaign backgrounds for those who prefer a different style of cross-universe gaming. "In The Cube" is an alternate time-travel frame, set in the early days of temporal research. "Eternity's Rangers" is a military campaign. "The Order of the Hourglass" presents physical time travel through mental discipline in the world of the 1920s. "The Horatio Club" is a cross-universe campaign in which the party can travel to alternate worlds as free agents, rather than as minions of some organization.

In the Cube

The Time Research Unit was established at a major university to systematically study theories of time travel. After several years of arguing theories, a group of unit members decided to take some practical action. Working in their spare time, late at night, with any equipment they could buy, build, or borrow, they assembled the "Prototype Temporal Tesseract Generator" — the Hypercube.

The Hypercube is a room full of personal computers, homebrew circuits, tunable dye lasers, spark coils, and other unbearably scientific stuff. Against one wall is a 15-foot square of metal rods: this is the actual time portal. It is a "cube" only in the fourth dimension — only when it is actually powered up and running. This requires enormous amounts of energy. In the basement below are massive electric cables and helium-cooled power accumulators.

It looks like a pile of junk, but it works. Unfortunately, it doesn't work very well.

During a full-power test, something went wrong. The portal opened — and a vacuum was created, a whirlwind that sucked papers, books, coffee cups, and the experimenters closest to the Hypercube into and through it.

It was days before the rest of the TRU researchers were able to establish contact with the missing people, using the Hypercube as a time viewer. The lost group was alive and well in the year 1868, hiding in a cellar in London, afraid that if they went out they would be arrested and unable to explain themselves to the police.

The TRU brought the Hypercube up to full power, attempting to bring the group home. They succeeded in pulling them out of the cellar — and then lost contact. When the fix was reestablished, the group was aboard the cruise ship *Berengaria* during an Atlantic crossing in 1928, again hiding from arrest, this time as stowaways.

Researchers in the university library found deck plans of the *Berengaria,* and enough data about the ship's operations to enable the lost group to masquerade as passengers until the ship docked in New York, by which time the Hypercube was ready for another transfer.

But that one didn't work either. . . .

Overview

The party is "lost" in the past, the result of a time travel experiment gone wrong. A team of scientists and technicians tries to return them to home base, but succeeds only in moving them randomly from one historical point to another, where they sometimes have to take an active hand in history, but mostly just try to stay alive.

This is a possible place for the idea of players having "themselves" as characters (see p. 36). Players may also choose to be members of the TRU team that operates the Hypercube. Research and Temporal Mechanics skills are called for here; other skills could be useful in giving advice to the Wanderers. ("First release the air brake, then let out the throttle slowly — and keep water over the crown sheet . . .")

The GM may even allow each player to run two characters: one Wanderer, and one on the TRU group at home ("the Team"). This will eliminate those periods when several players sit around with nothing to do except listen to events that they really aren't supposed to know about yet!

Mechanics

The Hypercube can view the Wanderers and their immediate surroundings, and allow voice communications with them; it can also shift them from one place and time to another, but the technicians have no control over where/when they go.

In the Cube: Physics and Paradox

This is intended as a simple "adventures in history" frame. The Wanderers are trying to survive and get home. They shouldn't be concerned with deliberately changing history.

If they accidentally do something that would rewrite history . . . well, they do it. But they merely create a new timeline. And the next time they move, they're back in their own home timeline.

Linearity is conserved, of course. One hour for the Wanderers is one hour for the Team.

Adventures in the Present

As a change of place, the GM can give the Team who stayed at home some interesting problems. This works best if each player also has a Team character.

To start with, how many people know that the Wanderers are in the past? The Hypercube was a "bootlegged" project at a university, done without official permission. Someone has probably filed missing persons reports on the Wanderers, and embarrassing questions are being asked. Of course, the Wanderers in the past can cooperate by dictating reassuring messages to their friends and loved ones. For a while . . .

Of course, the Team could tell the truth. But then they'd lose control of their wonderful invention. Perhaps spies, competitors and government agents are already snooping around. The campaign could even turn into Espionage on alternate weeks!

All these functions require a "fix" on the Wanderers. Every time a transfer takes place, the fix is lost and must be reestablished. This requires a Temporal Operation roll by the TRU Team. If the roll succeeds, subtract the number of points it was made by from 12; the result is the number of hours that will be required to make contact (minimum one hour). If the roll fails, another may be made in 12 hours. A critical failure requires an immediate Temporal Engineering roll to avoid a burnout (see below).

Once the fix is established, the Team can see the Wanderers as through a window. They may rotate the view, but not leave the characters; essentially, they may not see anything the Wanderers cannot see. Of course, if they think of it, they can use sniperscopes or light amplifiers.

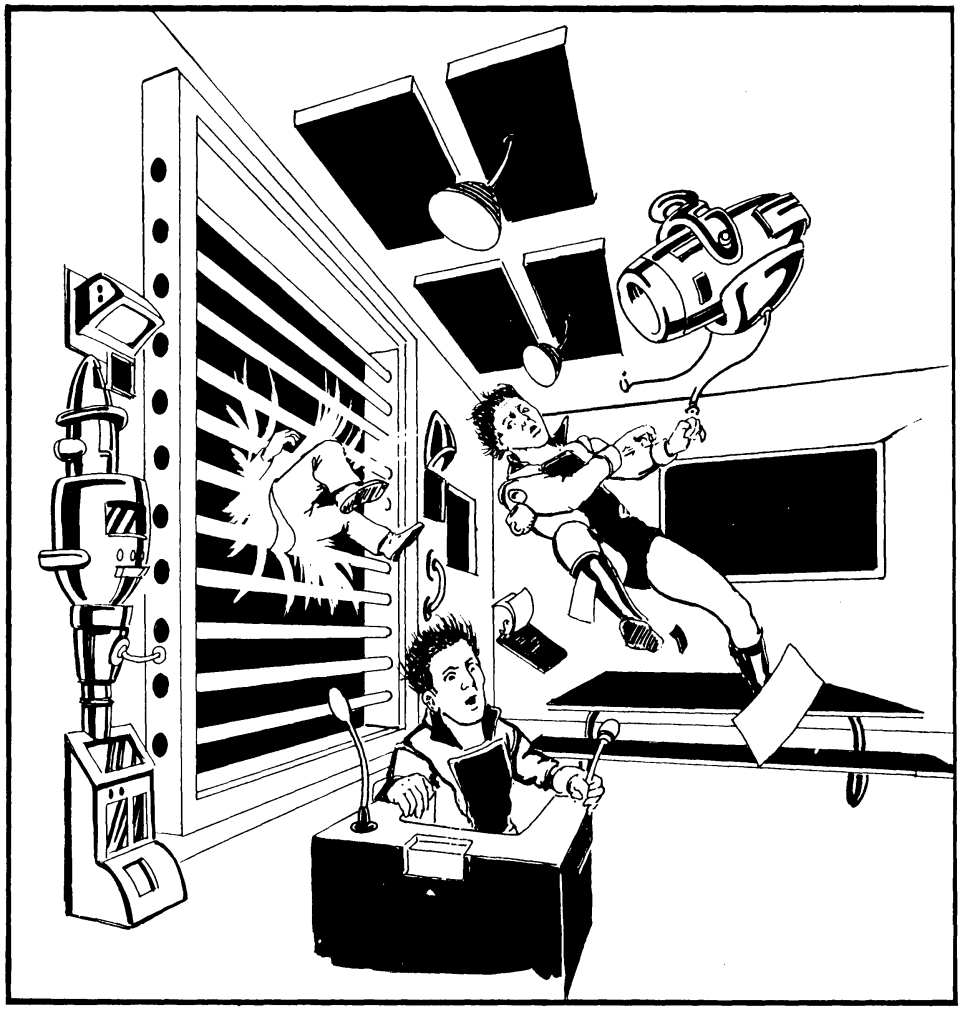
They also have two-way voice communications. Anything the Wanderers say (or could hear) can be heard by the Team; they may talk to the Wanderers. Assume that the Team's messages come through very softly, so that under normal circumstances only the Wanderers can hear them (though others might if it were very quiet). This of course requires that the Wanderers talk to the air when they need information, which could be embarrassing if overheard; they could also write notes, which the Team could read.

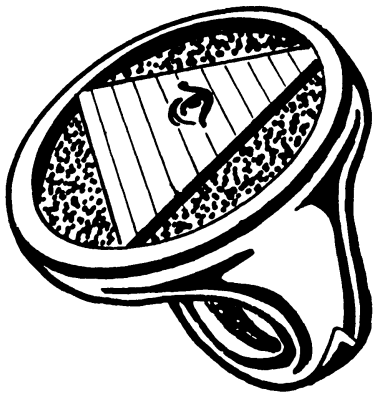
If the Wanderers split up, the portal view follows any of them the Team wishes; to switch from one sub-group to another requires a Temporal Operation roll. A failure requires 1d×10 minutes before another attempt; critical failure requires an Engineering roll to avoid burnout.

The Hypercube has three power levels, which are set by the Team:

At Level I, a fix and communications are possible. The Cube is normally at Level I, which can be maintained indefinitely.

Level II is an intermediate level, used when preparing for a transfer. It





The Illuminati

The World's Oldest Conspiracy will certainly have access to time travel if it exists; they probably invented it. Perhaps they control absolutely who does and doesn't learn the secret: all the Time Groups are pawns of the Illuminated Ones' unfathomable plan for control of all space and time.

The Illuminati make a bad enemy, both from a character's and a GM's point of view: they're just too powerful. If a handful of 100-point meddlers could destroy them, it would have happened long ago. But the Conspiracy does not have to be the enemy: on the contrary, it thinks of itself as beyond "taking sides," beyond good and evil. The only rule for action is whether it furthers the Conspiracy's ends . . . and who can say what those might be, even those who think they know the truth?

A campaign with the Illuminati will actually look very much like one without the Conspiracy. It's never possible to confront Them directly, either to oppose or join them (there are no Illuminati Recruiting Offices). There will only be vague hints, people who seem to know things they shouldn't or can't know, and the occasional inexplicable event or bizarre coincidence.

requires 6 hours to build up from Level I to II, and the level can be maintained only for 2d×5 minutes; after this it drops back to Level I and must be built up again. Faster power buildup, or extending the maintenance time, require Temporal Engineering rolls.

Level III is transfer power. To go from Level II to III, transferring the Wanderers to another time, takes only 1d minutes (which could be a long time in the middle of a battle) and a successful Operations roll. It will take a critical success, or a kindly GM, to bring the Wanderers home.

After each successful transfer, contact is lost for 1d+1 hours.

The power system is not stable. Critical failures in Engineering or Operation may cause a burnout, dropping power to zero. This breaks communication and loses the temporal fix. There is also a chance, known only to the GM, that a burnout will duplicate the original accident, yanking more members of the Team into time to join the Wanderers!

Restoring power to Level I after a burnout takes 12 hours, plus or minus the result of an Electrical Engineering roll. Then a fix must be reestablished in the usual fashion.

The other thing the Team does is look up useful information for the Wanderers. For a general description, see the section on *Mission Control,* p. 9.

After a transfer, Timesickness is Rare and Serious.

Physical Support

At Level III, the Team can send up to 200 pounds of matter to the Wanderers instead of trying to move them. A successful Operations roll is required; failure means the package is lost, critical failure causes burnout and possibly drags more people into the past (though at least the package will go too).

The approved method (unless some volunteer wants to join the Wanderers, carrying the package with him) is to place the material to be delivered on the floor, in front of the frame, and push it through with a *very long* stick. Travel through the frame is one-way; a new stick must be obtained each time. Anyone who starts to go through the frame must go all the way, or lose whatever part of their body is involved.

Whether the transmission succeeds or not, contact is lost for 1d-2 hours, minimum 1 — less than after a transfer, because the Team knows where and when to focus the Cube.

Variations

If done without the Team at home, this is like the Free-Timers frame without deliberate control over the time trips. The Time Wanderers are entirely on their own in the past, and have to improvise solutions with whatever they have at hand. In these circumstances, the GM could give them some high-tech gadgets, such as a solid-state library computer, advanced medical kit, solar-charged stun pistols, and so forth.

Eternity's Rangers

Doc says it's an experiment. Beauregard thinks we're in Hell. Gunnar thing's it's Heaven, and Quintus says we're somebody's toys. Me, I quit caring after Cold Harbor.

The only thing we have in common is that we're all dead.

I died in the Ardennes, during what you call the Battle of the Bulge. Ran into an enemy patrol in the middle of the night. There was fire; too much fire. Then a voice said, "If you want to come out of this alive, friend, take three steps left." I figured I was surrendering. But I was volunteering. When I took the three steps,

Ranks and Promotion

The Table of Organization of the Rangers shows a rated strength of 479 men, divided as follows:

The *squad* nominally has 6 men — four privates, a corporal and a sergeant. This is flexible; some squads, at least temporarily, have up to 9 men. (In game terms, a party usually forms one squad.) The squad sergeant is *always* tough and experienced. New recruits are usually attached to existing squads, but sometimes — especially when there has been a lot of attrition — squads are formed entirely of new recruits.

There are no lieutenants in the Rangers ("It's the best thing about the whole damn outfit.") Two squads make a *platoon,* led by a master-sergeant. Four platoons make a company, led by a captain. There are eight regular companies, each with 50 to 60 men at any given time. The Ninth Company parades as a unit, but it is made up of specialist squads which are attached to other units at need: First and Second Sniper, First through Fourth Scout (specializing in stealth, mapping and primitive weapons), Sapper (engineers) and Technical (who can generally drive, operate or repair any piece of military equipment from TL2 on up to a laser rifle).

The Rangers are led by the Colonel and the Lieutenant Colonel (who everyone addresses as "Exec." Promotions up to the rank of Captain are made by the Colonel. If the post of Exec falls open, the Colonel makes a choice, which the Recruiters retain the right to veto. If the Colonel is lost, the Recruiters name a new Colonel. The Exec is usually offered the post, but may decline — in fact, any Ranger may decline a promotion, and many, especially sergeants, do.

Discipline

Foulballs don't get recruited for the Rangers. Most on-base discipline problems are caused by personal disagreements, sheer adventurousness, or the kind of unavoidable accident that somebody has to take the blame for.

The Recruiters have a clear, simple book of regulations about 30 pages long. It is based on no recognizable military code, but its essence is familiar to any soldier, and can be boiled down to:

(1) Follow orders.

(2) Make pickup.

Punishment for minor infractions is simple: slow promotion and an extra share of maintenance duty. If a trooper insists of fighting when he's not supposed to, one of the sergeants will give him a little informal unarmed-combat practice until he shapes up.

Severe discipline problems, when they occur, are usually due to the stress of combat; it happens to the best. Field court-martial penalties include demotion, execution on the spot (very rare) and expulsion from the Regiment . . . after pickup, the offending trooper is simply never seen again. An informal penalty, strictly against regulations, is to put the offender in a very unpleasant situation and go home without him. The troops call this "galley slaving."

it wasn't '44 anymore, or Europe. It was the place we call Shanghai Port, full of guys in uniform, asking where I was from. When I was from.

That's how the people — or whatever they are — who run this place do their recruiting. Doc was at Dien Bien Phu. Quintus was a charioteer for Alexander. Beauregard ran out of luck at Chancellorsville. We have guys from Ypres and Khalkin-Gol and Thermopylae and Masada.

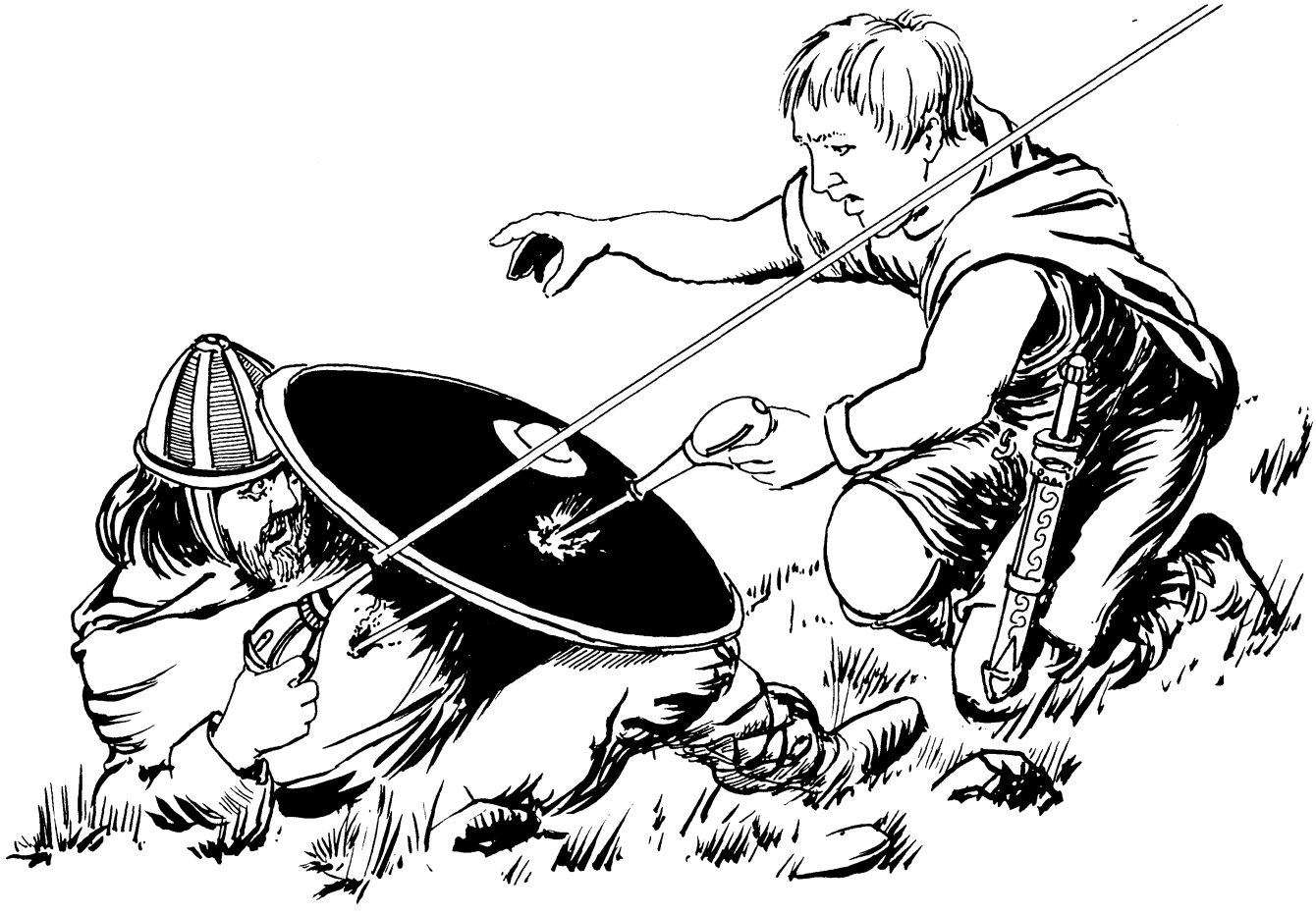
A couple of days later I got issued my gun, and the next week we went off to fight at the siege of Magdeburg, Thirty Years' War. The Recruiters — whoever they are — never waste a lot of time on orientation; like Lafayette is supposed to have said, there's more dogs where those came from.

We know lots of military history around here. That's about all we do know. I've fought at Naseby and Vera Cruz and Mafeking and, as I said, Cold Harbor, where I personally shot Ulysses S. Grant dead. He was trying his damndest to shoot me.

See, that's where I stopped caring. If I shot Grant at Cold Harbor, then who'd I read about in school? Who's the President on the fifty-dollar bill? Either the others are right, and this is all some kind of experiment on conflict, or a kid playing toy soldiers, or else — I don't know what else. I only know I've carried a submachine gun against fourteenth-century Italian mercenaries, and seen a kid who was born after I died, who got yanked out of someplace called Tranh Hoa, die for good on the end of a French lance at Salamanca. Hey, toys get broken.

So what's the point? Why carry a gun for the Recruiters? Well, it isn't all war. We get Leave, too. Leave is like a battle — they turn us loose on the past. I've known the best that Imperial Rome and the Sun King's France have to offer. I've raided Spanish galleons for gold that went to buy bathtub gin in Harlem.

The other reason is that we can't go home. Every now and then a Ranger deserts, but you can't really light out into some other time. There's too much to explain, too many things about life you'll never get comfortable with. One



packful of gold could buy you a start, a farm somewhere, and any story you made up about where the money came from would be no crazier than the truth. But it's like fighter pilots talking about buying a farm somewhere. They mean dying.

I guess that's the real reason. The Recruiters picked us, out of all the men about to die in all the wars, because we were what they wanted — the sort of guys who'd do the job.

Overview

The premise here is that some mysterious group with control over time snatches soldiers about to die, and employs them to tip the balance of "historical" battles, for some goal not readily apparent to the soldiers themselves. Sometimes the Rangers seem to be on their own, but occasionally they meet similar mercenaries on the other side.

This is a frame for those who want to run commando adventures with historical backgrounds, but not worry about historical accuracy. The Rangers can be given any equipment the GM wishes, without fear of upsetting the balance of the past — there isn't any such balance. Or perhaps there is — whatever the Rangers do to change history is being undone, by other time travelers or the "blind forces of history." The point is not to worry about it; the Rangers don't.

This might not be a *time* travel campaign at all. It's possible that the Recruiters move between parallel timelines instead. That would explain why history isn't changed. But the Recruiters, whoever they are, are ruthless and sometimes brutal.

The Recruiters

Who *are* the Recruiters? They won't answer that question. There are a *lot* of questions they won't answer. They do seem to be honest — at least, no Ranger has ever caught them in a lie and lived to tell about it. They say they're human.

They're also ruthless. They take good care of their troops, but it's the care you take of a good tool. When the tool breaks, you get another. And there are *no* rules about what you can do on Leave . . . which keeps the troopers happy, but is hard on the civilians who provide the entertainment. Whatever the Recruiters value, human life and dignity don't seem to be high on the list.

But they know military psychology. For a professional soldier, the Rangers are a dream unit. Military discipline and military honors; clear, simple orders; tough missions but not impossible ones; good troops and good officers. Travel to strange places, meet interesting people and kill them. If you make pickup, you'll be healed to fight another day. It's Valhalla with automatic weapons.

As a result, the Rangers have high morale, and don't worry too much about their mysterious employers. They don't really fight for the Recruiters; they fight for their Regiment.

Characters

All characters should be experienced, competent infantry soldiers. (If the Rangers have a navy or air force, or even an armor unit, nobody has ever heard of it.) While a fine Ranger can be built on 100 points, it's easy to justify a 150- or 200-point base, or even more, for those who enjoy a high-level campaign.

Most troops are TL4 or later . . . familiar with modern concepts of war, and with which end of a gun to point. But there are a lot of exceptions — including Cro-Magnons, Indians, Bantu and ninja. Most of these wind up in the scout squads.

Language is no problem. The Recruiters speak English with an indefinable accent, and English is the language of the Rangers. Any trooper who didn't speak English at IQ level will acquire it when he is recruited. (For character

Crosstime Soldiers: Variations on a Theme

The Rangers don't have to be ignorant pawns. They might know exactly who they're working for; they could be volunteers in a cross-universe or cross-time war against a particular enemy force, ranging fast and loose over all of history, in eternal stalemate. For an example of this, see Fritz Leiber's "Change War" stories, including the novel *The Big Time*, of the struggle between the Spiders and the Snakes.

The Rangers could even be part of the I-Cops, the crosstime enforcers described in Chapter 7. In this case, though, they'll know more about their bosses, and their R&R can't be quite as free-wheeling.

Time Raiders

The time mercenaries don't have to work for a third party at all. Perhaps they're temporal plunderers, using their access to time and modern weapons to run riot through the treasure-houses of past times or alternate worlds. The choice example of this — without the shoot-em-up — is the movie *Time Bandits*. The GM can contrive any sort of time-travel mechanism he likes, including an actual time machine . . . but keep it simple. It's best to assume that the raiders got their craft by accident, and don't understand it at all. (Probably it belonged to a peaceful tourist or researcher who trusted the wrong person on one of his outtime jaunts. As soon as his new friend understood the controls, *boom*, the tourist was history and the Time Raiders were in business.)

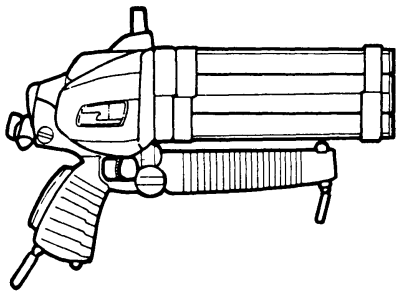
Toy Soldiers

Or maybe it's an experiment: someone has snatched groups of soldiers from various times in history and is inducing them to fight each other for some mysterious (and probably evil) reason. The *Doctor Who* episode "The War Games" was an example of this; it's more suited to a long but finite adventure, with the soldiers gradually discovering the truth of their situation and planning to escape, than an extended campaign.

Uniforms

On missions, the Rangers often wear period clothing, either military or civilian. But they do have their own uniforms. Dress uniform, used on formal occasions, is field-gray with black and silver accents. Fatigues are cammo, usually in woodland colors. Insignia follow the British pattern, with subtle differences.

Uniforms are issued at need and, perhaps uniquely among all armies in history, always fit.



Port Shanghai

Port Shanghai (the Recruiters insist on calling it "Base") is a small complex surrounded by woodlands. From the evidence of the stars, the climate and the wildlife, it is in southern Italy — perhaps Sicily. Aside from the Rangers, the total population of Port Shanghai is about 50 Recruiters, who come and go in their own mysterious fashion.

The barracks buildings are comfortable 20th-century facilities. Almost any book or video is available for the asking, in the troops' very limited free time. A Ranger will average one mission every three weeks; most of the rest of his time is spent in training and work.

Routine training and minor maintenance is the responsibility of the Rangers themselves; the Exec takes care of scheduling. The beautiful, empty land around the complex is used for maneuvers — and many troops take their R&R camping and hunting. Anyone who walks too far from the building complex hears a voice out of thin air, saying "You are about to go off limits." If they go farther, they fall asleep (stunned?) and awaken at Port Shanghai just in time for a punishment detail.

Special off-base training (for instance, in Arctic surroundings) takes place two or three times a year, lasting a couple of weeks at a time. The entire regiment leaves together, transported by the same mysterious means that takes them on missions, and trains together; major maintenance takes place while they're gone.

design purposes, assume all recruits have English at IQ level or better in addition to their native tongue, even if this doesn't fit the character story at all.) The Recruiters *can* provide this instant language teaching to any Ranger for any needed language, but they do so only if a mission absolutely requires it; they prefer to make do with Rangers who speak the required language.

Female Rangers are found in the same ratio that female combat troopers are found in 19th- and 20th-century armies. Very rare . . . But the Recruiters don't pick up cowards or incompetents. Any female Ranger will be able to pull her own weight.

Status and Wealth are irrelevant.

Advantages: Any warrior-type disadvantage is appropriate, and since the Recruiters pick good warriors, they're common. Combat Reflexes, High Pain Threshold and Toughness are *very* common here. Officers must have Military Rank.

Note also that the Rangers, while on duty, don't age or get ill. This is just part of the background, as is their full-time Duty, and doesn't affect their point value for this campaign.

Disadvantages: No physical disadvantages. Some troops had injuries or bad eyesight Before . . . but the Recruiters fixed it. No mental disadvantages which would interfere with combat are allowed. But Bad Temper, Bloodlust and Berserk are all right, as are Code of Honor and Honesty. No Enemies; the Recruiters will provide you with your enemies, you don't need any personal ones.

For an interesting character, try taking the Primitive disadvantage (at -5 points per level below TL7, which is the level of the equipment the Rangers most often use). A primitive trooper can still learn high-tech weapon skills — he just won't have any default abilities with them. There is no lack of willing teachers and no shortage of ammo for practice.

Skills: Combat skills from any and all periods are appropriate, as are most thief/spy abilities. Strategy, Tactics, Diplomacy and Fast-Talk are all invaluable, as is Intimidation (see p. 34). Other skills may be defined for purposes of characterization, but will rarely come into play.

Mechanics of Travel

The machinery of travel is entirely offstage. All the Rangers know — and all the players know — is what they experience. They don't even know whether the limitations they fight under are necessary or artificial.

When the Rangers go on a mission, they are dispatched as a unit. No Recruiters go along, ever. The Rangers stand in a bare room, a golden glare fills everything, and when the glare dies down, they are somewhere else. Usually it's a safe, quiet place. Occasionally it's not; the Rangers have to be ready to be dropped into the middle of a firefight.

Timesickness (p. 33) is Rare but Severe.

Making Pickup

When the mission is finished, the surviving Rangers are pulled out as a unit. The "as a unit" part is important. When the troops believe they've accomplished the mission, they have to gather before they get pulled back to Shanghai Port. Everyone has to be in physical contact. Every Ranger has a "caller" built into a back molar, but only the one belonging to the senior surviving Ranger will actually *work*. When it's triggered, the gold glare comes — and everyone is back at the base.

Presumably the Recruiters have some kind of time-viewer, but the troops don't know. They cannot communicate with Base except to request pickup.

Nobody knows why the Recruiters are so stingy with their pickups. For most missions, there is only a single pickup. The most in the history of the Rangers

was a four-pickup mission, with a fifth one scheduled two weeks later to give stragglers a chance to make it back . . . and that mission was a huge one, with six companies of Rangers.

KIA and MIA

Dead soldiers may be abandoned. The Recruiters don't care. But the troops themselves frown on leaving a buddy behind, no matter what; the simple service for the fallen, held after each mission with no Recruiters present, is part of the glue that holds the Rangers together.

However, the Recruiters insist on recovering lost and wounded. This can mean prisoner rescues, battlefield searches, and long stretcher hauls. It can also mean ethical decisions about shooting badly wounded comrades, but that's a matter for the GM and players to work out among themselves. Anyone who is alive at pickup will be returned to full health in time for the next mission, without remembering much about their treatment.

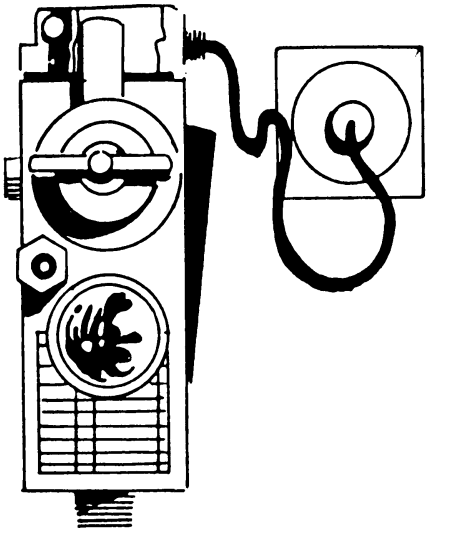
If troops are genuinely MIA (missing in action), it's up to the ranking officer to decide when to give up and call for a pickup. Leaving MIA behind is not good for your chances of promotion, or for your reputation among your fellow troops.

Foulups happen, of course. Occasionally a mission is "Go back and get our guys out of there" — sometimes out of imprisonment, sometimes just to recover troopers who missed pickup. These are rare, and never done for just one or two troops. What makes a rescue mission worthwhile to the Recruiters, nobody knows.

Prisoners

As a general rule, Rangers don't take prisoners, unless that's a specific mission objective. When masquerading as local troops, of course, the Rangers will follow local policy. That can be pretty brutal if they're impersonating Mongols, but it comes with the territory.

Rangers are also expected not to be *taken* prisoner, because that means they miss pickup. (The Recruiters assure everyone "Don't worry, you don't know



Equipment and Medicine

Permissible equipment is controlled by the Rules of Engagement for a particular mission. If the Rangers want period costumes and weapons, they should be issued them. Sometimes the rules of engagement will *require* them to conform to period equipment.

"Science fiction" weapons such as laser rifles or sonic stunners may occasionally be allowed, although the most practical weapon will probably be a reliable assault rifle with plenty of ammunition, and a few grenades. The Recruiters' "native" technology is *at least* TL10.

The major limitation on equipment is portability. The Rangers have to carry every piece of equipment they take; a full pack, up to Encumbrance limits, but no vehicles, pack mules, or little red wagons. If the team needs a jeep, they're going to have to steal one.

The field medical kits issued to the Rangers are TL8 (see p. B112). Any Ranger who is alive for recall (even with negative HT) gets Recruiter-tech medicine, which fixes everything, including crippling injuries, in effectively zero time, leaving only trivial scars and nasty memories. Death is irreversible, however.

Rangers on active duty do not age or get sick. This costs no character points; it's just part of the campaign. (Thus, there are no provisions for retirement. When you join the Rangers, you're in for life.)

Rangers who desert (or miss pickup for more than a year) *will* age, but all HT rolls against illness are made at HT+3.

anything that can hurt us.") A Ranger who *is* taken by the enemy is expected to escape by any means possible — including giving his parole and breaking it — in order to make pickup. Mission plans must include emergency rendezvous points.

All Rangers are given false teeth with suicide capsules, *just in case.*

Missions

The average mission involves from six to 60 Rangers . . . that is, from a single squad to a reinforced company. Mission teams are chosen by the Colonel and his Exec; the Recruiters don't seem to have a say, or are willing to delegate.

Some missions are harder than others, of course, and green troops will get easy assignments — or careful supervision — until the Colonel is sure of them.

Some Rangers retain loyalty, or at least a feeling of fondness, for their old nation or old unit. Any Ranger can turn down a mission assignment that he's not comfortable with. Only rarely will a Ranger even be *asked* to go against his original nation, at least within a century of his own time. Usually when this happens it's a relatively nonviolent mission, such as a theft or a prison break.

Briefings and Rules of Engagement

The troops (and the players) receive fairly complete briefings, which are generally accurate; of course, in war very little is absolutely certain, and obviously the Recruiters cannot foresee the problems the team will encounter or the outcome of the mission. (At least, if they can they don't tell the troops.)

The mission briefing also given the Rules of Engagement for the battle. These vary widely. Some typical sets of rules might be:

(a) Wear uniforms appropriate to the period; use weapons of the period; do nothing to reveal yourself as intruders, and remove anyone who witnesses an anachronistic act.

(b) Wear whatever you want, carry any weapon or other device up to TL9, and don't worry about witnesses.

(c) Use equipment up to TL7, plus sonic stunners disguised as ordinary TL7 items, and *don't kill anybody* — but stun anyone who witnesses your arrival or otherwise detects an anachronism, and inject them with a 24-hour knockout drug and memory eraser.

Objective

The Recruiters will always send the Rangers off with specific commands. Sometimes the instructions are very specific indeed: "Kidnap Nobunaga and bring him back for pickup here by 0800 local time," or "Enter the Wehrmacht headquarters between 1900 and 2300 Wednesday, recover all the contents of the safe, and make pickup ASAP," or even "Proceed immediately to coordinate Theta and join the Brazilian troops rendezvousing there; when you see two green flares, use your laser weapons to kill everyone not a Ranger, and call for pickup when you're done." This last job doesn't make an especially challenging adventure, but there *are* missions like that.

Very often the goal is simply "make sure that side X wins this battle," with the Rangers given considerable freedom of action in making that happen. The best way to tip the scales might be an armed skirmish at a key point, or the assassination of a commander (or a messenger), or a precisely timed raid on a strongpoint. Note that the *players* don't have to be military geniuses to enjoy this. The GM should require them to make the best plan they can, complete with maps and contingency plans. But the leader's Strategy or Tactics roll, made by the GM, determines how good the *leader's* plan really is. The GM then adjusts the roll from -3 to +3 based on the excellence of the *players'* plan.

The troops will always have a reasonable amount of time — a couple of days of game time at least — to make battle plans. (This also gives the GM plenty of

time to invent ways to upset those plans in the field.) In addition to schemes for actually winning the battle, they should make firm, flexible plans for assembly at recovery time.

We assume here that the Ranger unit stays mostly together, facing small-scale encounters, ambushes, castle raids, et cetera, in typical roleplaying fashion. Rules for full-scale battles are outside our scope here.

Whatever the mission, the operation isn't over, the troops won't be evacuated, until they succeed. (You *can* call for pickup without completing the mission, if you're willing to spend the next 20 years as a private.)

Limitations

The Rangers often use advanced equipment — far more advanced than that of their foes — and they usually know exactly who and what they are facing. This doesn't mean that Ranger adventures are simple turkey shoots, where PCs with automatic weapons mow down Roman legionaries just for the heck of it. There are several other points to keep the squad thinking in the field:

Numbers

No matter how many shots you can fire compared to your enemy, he still only has to hit once to bring you down. Even in a "small" historical battle, the Rangers will be vastly outnumbered by the local forces. While the burst from an SMG would indeed startle Renaissance troops, and perhaps even put the fear of magic into them, a determined or panicky charge could still bring the gunner down. A brief jam, or a fumble while changing magazines, could be fatal.

Thus, intelligent Rangers uses their advantages carefully. They are trained to be as ruthless, cautious and sneaky as any ninja or Green Beret. Should a Ranger character forget that the local "primitives" outnumber him by millions to one, the GM should deliver a painful reminder.

The Free-Timers

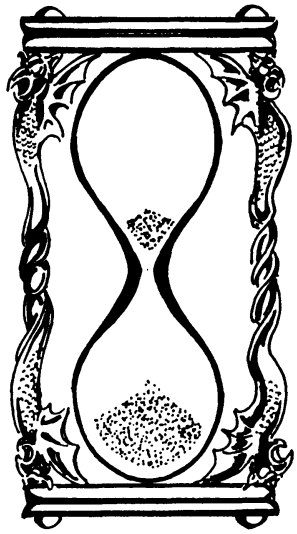
This is a campaign in which the characters have their own time machine, and are answerable to nobody; they go jumping around the past as tourists — and naturally end up having adventures. Or perhaps they all have the Time-Jumper ability.

Since the players at least theoretically have complete freedom over their time movements, the GM should pick time-travel mechanics that will let him keep things under reasonable control. If paradoxes are possible, the party *will* create them, probably before lunchtime.

Unless the GM *enjoys* untangling paradoxes, it's best to assume that they can't happen. Either "plastic time with high resistance" or "fixed time" (p. 41) works well.

The "Free-Timers" might have the one and only time machine. But it provides an interesting built-in tension if they stole it from the Time Police (who want it back), or the Evil Invaders (who want it back), or the Mad Scientist (who wants it back) . . . or whatever.

An equivalent campaign can be run in the "Infinite Worlds" background (see Chapter 7). Instead of a time machine, the PCs have acquired an unlicensed sub-quantum conveyor. They have dozens or hundreds of worlds to explore (especially if they're willing to play with the settings and try to find new ones). But they'll be pursued by the I-Cops, and possibly agents of a government or corporation, depending on exactly how they got that conveyor and what they do with it afterward.



Carrying Items to the Past

For travel via Gakuji, the chance of carrying an item into the past depends entirely on how authentic it is. An item that really existed during the target period — a genuine antique — will always make the trip successfully. An item that had not even been invented then will *never* make the trip successfully. Roll 3 dice for every other item, using the worst applicable description.

Item is new but wholly natural (e.g., uncured tobacco; an uncarved stick): Succeeds on a 15 or less.

Item is a genuine antique which was repaired or restored, at some point, with an out-of-period material: Succeeds on a 14 or less.

Item is a painstaking modern reproduction of a "period" item, made using authentic methods and materials: Succeeds on a 14 or less.

Item is a good modern reproduction of a "period" item, made using at least one modern method or material: Succeeds on a 12 or less.

Item is a quick modern reproduction of a "period" item, made using mostly modern methods and materials: Succeeds on a 10 or less.

Item is out of period due to style or design, though not technology: Succeeds on a 9 or less.

Modifiers:

Item had been invented but was not truly "period" because it was not in common use: -2.

Item was made (or, for an antique, significantly repaired) by the carrier's own hands: +1 to +3. (The +3 should apply only to heroic efforts, such as sewing a costume out of cloth you had spun and woven yourself!)

Item has been in the carrier's possession, or his family's, for more than 20 years: +1 per 20 years, up to +5.

Continued on next page . . .

Allies

Sometimes it's possible to get effective assistance from the army the Rangers are supposedly helping. Sometimes the Rules of Engagement make that impossible. But even under the best of conditions, dealing with local allies requires a little finesse. Men in the middle of a battle tend not to be interested in crazy ideas, unless they're desperate, and sometimes not even then. It may be necessary for the Rangers to conceal their weapons, knowledge of the battle, and even their objective, until the last moment. If the rules of engagement specify "don't reveal yourselves as outsiders," the Rangers will have to rely on persuasiveness, intimidation, good example and an occasional discreet fragging.

Pickup

And, again: The team hasn't done its job until it makes rendezvous for pickup. Sometimes that's the biggest challenge of all.

Rest and Recreation

When war missions get tiresome, the troops can be sent on Leave: this means a historical (or non-historical) romp through some interesting historical period, the objective being generally to raise hell and have a good time. On the average, there's one Leave for every three missions.

An example: the team is dropped in 17th-century France for exactly 72 hours, with no equipment but knives — not even period costume. The first order of business is to hold up a local, preferably a rich one, for his clothes and purse. After that, who knows? A good enough bluffer might get into the private chambers of the King — or the Queen. . .

The Recruiters *do* accept requests for specific R&R sites — not always, but often. Troops get leave by small units — again, six to 60 men — and it's customary to vote beforehand, and hope you get what you ask for. You *can* — sometimes — return to a site you have visited on a previous leave, where the locals remember you. Of course, many troops don't *want* to be remembered!

The "rules of engagement" for R&R are: Make pickup. Some troops go wild; some confine their depredations to those who seem to deserve it (Port Royal 1670 is a favorite for this type). And some see R&R as their only chance for a normal, civilized life. It's best to take R&R with buddies who share your taste in fun. If you go to Paris 1970, and you want to take in a show while your comrades want to tear up the Place de la Pigalle, somebody's going to be unhappy.

Pickup from an R&R trip is handled just like pickup from a regular mission. It is *very* bad for your record to miss an R&R pickup, or to have men under your command miss out.

The Order of the Hourglass

Overview

The time is the 1920s. All over the world, daring adventurers are pushing back the boundaries of the explored world: Darkest Africa, lost cities in Central America, the polar caps. But in the centers of the world's great cities, small groups of people are exploring an entirely different frontier.

These "circles" have discovered a kind of mental time travel. Many, like our characters, are simply curious about their ability, and about the past; but others are intent on using the power for conquest . . . and that may mean eliminating all the temporal competition.

This frame combines time traveling with Roaring Twenties pulp adventure (***GURPS Cliffhangers*** will be a useful resource). The adventurers can get into all the usual trouble, tinkering with the past, but their real enemies, both past and present, are the other time circles.

Mechanics

The ritual of the Time Circle was brought to the West by explorers who did not fully believe what they had discovered. Though they breathed the herb Gakuji, joined in the chant, and saw the visions of the past, they believed — because they had to believe — that they were only visions . . . hallucinations induced by drugs and hypnosis.

Dr. Albert Wesker Finch, physician and adventurer, brought Gakuji back to America, and began to grow the herb at his Long Island estate. His reputation already damaged by his exotic research, Dr. Finch dared not experiment in public; but he brought a group of friends together, and, under observation, recreated the Ritual. The members of the Circle went back to the Finch estate grounds before the house was built; they found an oak sapling and carved their initials into a root, then covered it with earth.

When they returned, Finch led the party to the oak, two hundred years older. They exposed the roots. The initials were there.

This is physical time travel through psychic means. No machine is used, and the actual bodies of the travelers are transported. The mechanism is more like a magical ritual than a scientific experiment.

The Circle begins by discussing the time they intend to visit, and doing study to fix the goal in their minds. This will include library research, and visits to museums to examine artifacts of the period. Normally the members spend one to two weeks on this research. They may also acquire period items (see p. 78).

Finally the Circle assembles at some safe place, usually a country house or lodge belonging to one of the wealthier members. A brazier containing the herb Gakuji is lit, and its fumes fill the room. The Circle begins chanting, clearing their minds of everything but the ritual and the target. After about an hour, if all goes well, the present-day images fade; some members see only darkness and silence, others have strange dreams. When this passes, they are in another time — sometimes a few years from the target, never more.

Returning to the present does not require the herb, only that the members of the Circle concentrate together, and be in reasonably close physical proximity. This takes about 15 minutes if everyone is conscious and close (in the same room, or equivalent); if the separation is wider, or some members are unconscious or dead, it takes more time.

All living Circle members must return together, conscious or not. Dead members may be abandoned, though their bodies will return if they are in proximity to the living. Those with a Sense of Duty will always try to bring their friends home, even though this can create legal problems in explaining the death.

The Ritual can only reach the past, not the future. This is probably due to the enormous difficulty of visualizing the future. (Think about the Twenties and Thirties images of The World of Tomorrow, as presented in pulp science fiction magazines and the New York World's Fair. On the other hand, a parallel-world science fiction adventure set in Captain Future's future might be very entertaining.)

Carrying Items to the Past (Continued)

If an item fails to make the trip, it will vanish entirely on a critical failure, or *any* roll that was missed by 2 or more. On a roll that misses by 1, the item simply remains behind when the traveler leaves. If the traveler returns safely, he may try to use it again. Note that a genuine antique works automatically; since no roll is required no critical failure is possible.

The GM may make as many rolls as he likes for separate items, and interpret the results creatively, as long as everyone is having fun. If a knapsack fails to arrive, for instance, roll for the contents; many of them may make it to the past, scattered about the owner's feet. Likewise, if an otherwise-period dress is made with a Velcro fastening, the GM could interpret a barely successful roll as "The dress arrives, but the fastenings didn't, and you feel a sudden draft . . .

Bionic implants, even simple ones like artificial hearts, would not make the trip!

Portal Dimensions

The Horatio Club (p. 79) is one example of the dramatic device called the "portal dimension." A portal dimension is a nexus of gates — a pathway to anywhere. PCs shouldn't be given *control* of a portal dimension; that is more power than they need. But *access* to such a place is power enough.

From the point of view of the GM, the portal dimension is a continuing dramatic element that can be used to "frame" adventures in many different worlds. Everything starts at the portal, and — if you survive — everything ends back there.

The Darkland, in "Lost Inheritance" in the ***GURPS Fantasy Adventures*** book, is a magically-operated portal dimension accessible from Yrth — built as a "Grand Central Station" for wizards, but now fallen into disuse. Other possibilities for portal dimensions include:

Horror: the blasphemous temple of a Thing Man Was Not Meant To Know. Of course, few of the places that it reaches are vacation spots.

Science fiction: an artifact which is capable of viewing dozens of different worlds and teleporting the viewer to any one desired.

Fantasy: a complex of caverns whose twisting tunnels seem to lead to many different times and places . . . if you only know the way.

The travelers arrive with whatever clothing and equipment they had on when they left; they may, given time and money, acquire period costumes and furnishings. (They can easily claim that the outfits are for a costume party.) However, only items appropriate to the period can be taken along; no Tommy guns in the Middle Ages, and anyone who can't get hold of proper clothing arrives as he came into the world originally. The more authentic the item, the likelier it is to make the trip successfully (see sidebar). This limitation works both ways, however; if the heroes can't carry advanced weapons into the past, neither can their opponents.

The Ritual only moves one's body into the past; it does not enable the traveler to speak the language. Remember too that dialects and accents change, even if a language remains "the same." There was more difference between a 1920 British accent and an Elizabethan one than between contemporary British and American dialects — and in a time when few people traveled far from their birthplaces, odd dialects stood out even more prominently.

Equipment

As is usual in Twenties adventures, money makes the world go 'round. It is assumed that at least one player's character will be wealthy enough to bankroll the Circle's operations.

Naturally, the GM does not have to allow the eccentric millionaire to buy anything he desires. Some things cannot be acquired for any price; others require time; and certain legal entanglements are only worsened by flashing money.

Gakuji is extremely rare and expensive. A quantity sufficient for one time-trip (for up to a dozen people traveling together) costs $5,000 in 1920 dollars (£1,000); this also assumes one has a source, normally an Oriental Herbalist of Mysterious Reputation. Finding such an herbalist requires a successful Streetwise roll in a city with a substantial Chinatown (New York, San Francisco, London's Limehouse; if one is actually in the Far East, there is a +2 bonus). Naturally, this sort of dealer takes only cash, preferably gold. This purchases the prepared herb, which can be grown from cuttings but not from seed. Cuttings might be acquired by an expedition into the wilds, or from a scientist-adventurer who had made such an expedition. (Perhaps a PC inherits the greenhouse from a relative who died under mysterious circumstances.) Even if the travelers can grow the herb themselves, gardening and preparation costs come to $1,000 per dose — which is used up even if the ritual fails for other reasons.

There are other social complications of handling Gakuji. Though it is not illegal, the police may take an interest because of the sort of people who sell it. Police aside, there are the usual hazards of dealing with such people. And any transaction involving the herb will attract the attention of the other, secret Time Circles.

Period clothes can be made to order in two to four weeks, for about $40 and up (possibly way up, for a visit to the court of the Sun King). Period weapons may be purchased as antiques for moderate prices (collector mania had not yet struck), though it may take time for a suitable one to appear for sale, or they may be custom-made. A wealthy man might have standing requests with an antiques dealer — or the dealer might be one of the PCs. If an aristocrat wants to claim that he has a houseful of old swords and pistols, that's fine (there really are such houses, especially in England and France), but charge the cost against the character's starting wealth.

The Enemy Circles

Not everyone wants to use the power of Gakuji for harmless experimentation and historical research. Some of the Circles intend to twist the past, to make themselves wealthy and powerful . . . possibly to control the world.

These groups are not linked together in a single conspiracy. (If they were, the heroes would hardly stand a chance.) They may grudgingly cooperate, especially to ensure their supplies of the essential herb, but these alliances are for convenience only, and end as soon as someone leaves his back vulnerable to the knife.

To fulfill their ends, the Circles will establish bases at key points in history, "safe houses" where they may appear and change into appropriate clothing. For example, a Circle might, using transported gold, purchase a small country villa in Renaissance Italy, where they could appear, equip, and ride into a city in perfectly normal fashion, instead of suddenly appearing from nowhere. The servants at the villa would surely believe that their employers were sorcerers (what else could they think?) but there are always people who can be trusted, or paid, to keep secrets. From such a base, the Circle could attempt to influence the whole course of politics and economics in Italy, and from it Europe.

Usually Circles will try to influence through the "normal" channels of advice and money, though the more changes they make to the past, the less useful their historical knowledge will be. The occasional convenient death may be arranged. (Isn't it suspicious that Napoleon's Chief of Staff fell from a balcony?) Sometimes they may openly portray themselves as wizards; many stories have "explained" such people as Cagliostro and Saint-Germain as time travelers.

It is much more convenient and elegant to kill an enemy in the past; if the body does not return, there is nothing for the police to investigate, and even if the victim's fellow Circle members do take him home, there will be no evidence the authorities can follow (or believe) and the friends will likely find themselves in great difficulties explaining the death.

Sometimes, however, direct action is called for. A returning Circle would be in poor condition to deal with a gang of armed killers in their Ritual room (though, on the other hand, the killers would have to be pretty hardened sorts not to be startled by their victims' appearing out of thin air). Anonymous tips to the police might result in a drug raid on the Circle's Gakuji supplier — properly timed, some of the members might be arrested as well. Imagine trying to explain to Eliot Ness or Gideon of Scotland Yard what you wanted the strange Oriental herb for . . .

The official authorities don't always have to be the PCs' enemy, however. Exposing drug or underworld connections is a game two can play. And if one of the enemy Circles were to involve a master criminal such as Doctor Fu Manchu (and indeed, how could the Insidious Doctor not be aware of Gakuji's powers?) the heroic Circle might find themselves with powerful allies — as they move in ever-higher circles of international intrigue.

But What's the Point?

We pause for a designer's theoretical argument. Many old campaigners complain that the game has stopped being rewarding; they've played wizards and spies and space pirates and elves and commandos and good priests and evil priests and occult investigators and monsters and superheroes and TV repairmen and (deep breath) none of it's fun anymore. I would like to suggest that a principal reason for this is that most games (by which I mean the game, not the rule set) offers a fully defined challenge: There's the monster (secret enemy base, supervillain, busted TV set), go fight it until it loses. Here's some experience points and a +4 pair of pliers. What do you mean, you don't feel rewarded? Okay, here's a really *big* busted TV set, go get it. . . .

Now, I have to say again that I am not attacking anybody. Roleplaying is game playing, and if you're having a good time I don't care what rules you're using or how you're using them, that's terrific, a good time is what it's about. But if the goodness is wearing off, you might try something substantially different.

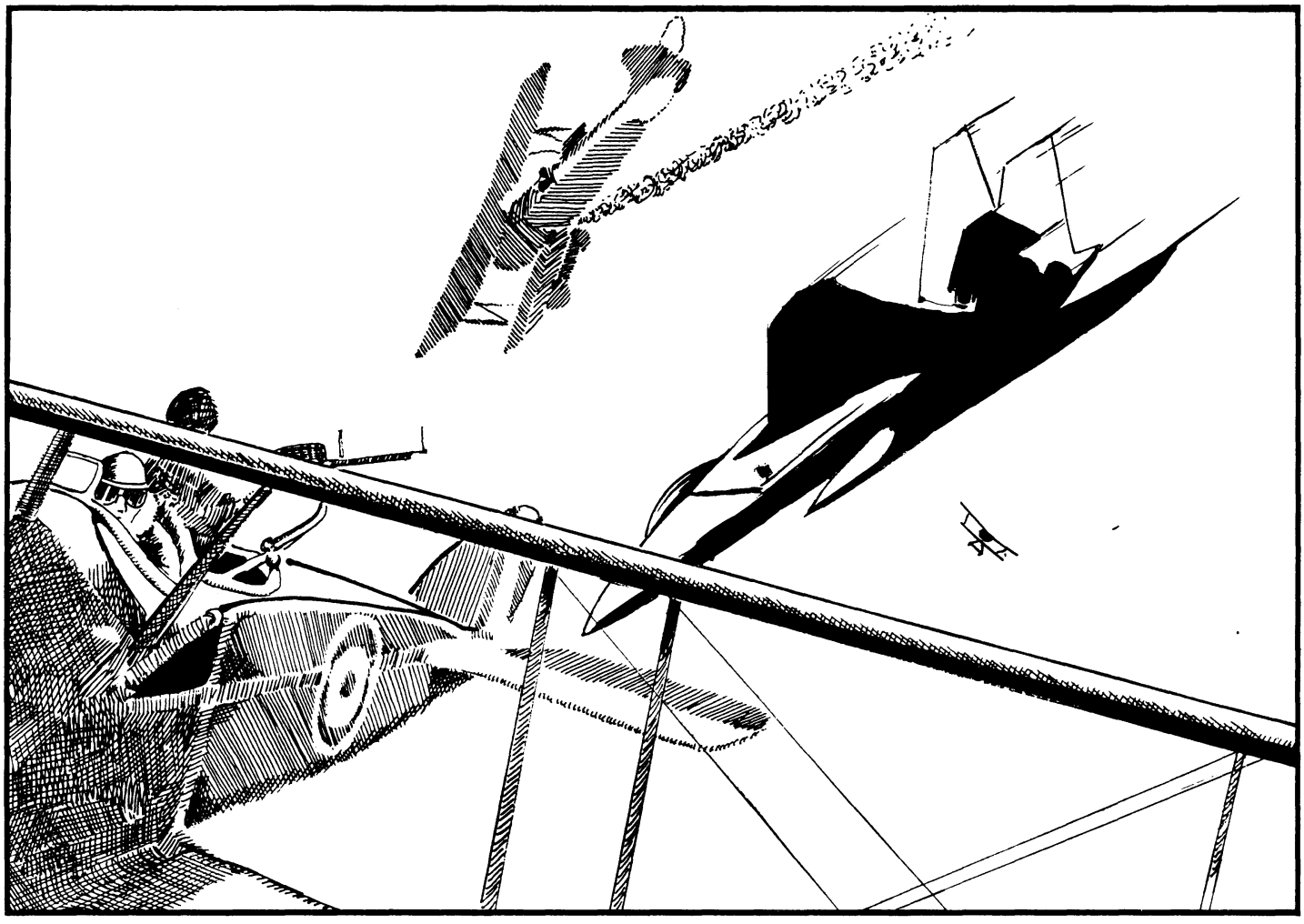
—JMF

The Horatio Club

I've forgotten what I was looking for, when I first found the Club. I was in London, I think; but I won't tell you where in London, because the details would either send you looking for the place, or bear no relation to the London you know.

It's what used to be called a Gentleman's Club — quiet, serviced by impeccable butlers who know your name and your habits, with the best food and drink; a warm haven to the members, a closed book to everyone else. It isn't fusty and exclusively male — the nature of the membership is not fusty nor exclusively anything. There are no windows anywhere in the Horatio Club; but there are doors.

They do their best to hide the nature of the place. The furniture is comfortable but nondescript; the only emblems you see are the Club's own. The pictures on the walls are of nobody and noplace you recognize. There are no clocks at all — but if you ask one of the butlers what time it is, you always get an answer that makes sense.



Stay long enough, of course, and the truth will out. You'll meet someone dressed oddly (maybe very oddly), hear a reference that doesn't fit your memories. (For a true vision of what the Club is, listen carefully to the toasts offered before dinner; but if you're present for that, you're already a member.)

I said there were doors. There are many of them, upstairs, up and down long quiet carpeted halls lined with the most eccentric collection of curios outside a museum. Some of them lead to bedrooms, with the most comfortable beds you've ever slept in (or done anything else in, for that matter, but the Club is discreet as nowhere on Earth is discreet) — no television, no radio, but a shelf of books, at least one of which you've always intended to read. Most of the doors are locked. And every now and then one opens, onto places . . . different from the one you left.

Behind one of them, the sun never set on the British Empire, and King Charles III rules from the Mideastern Colonies to the Mississippi Frontier.

Behind another, that same Mississippi Valley still belongs to the French, who seem to be in a prolonged global war with the Portuguese and the descendant of Chaka Zulu. Behind another, it's the same city you left, but there's a dome over it. Behind another, another dome, but you look up at a black sky and see the Earth; in its dark crescent, the craters of cities still glow.

Not all the worlds behind the doors are noisy, or imperial, or dead. There are paradises, too. I know, I know: every world is paradise to someone; every paradise is Hell to someone else. I'm being subjective. And I know that if most of those doors were not locked — if the Horatio Club were open to all comers — there would be changes.

That's why I'm convinced that, whatever it may sometimes seem like, no one ever enters The Horatio Club by accident. If you find your way here, you're a member, whether you know it yet or not.

Surely there must be some kind of rules, if there's going to be this sort of crossroads. Can you let just anybody go hopping from one universe to another? Good question. I can't say, though perhaps someone else can, whether the Club enforces the rules, or if it's simply part of the system.

I do know this: one time and one only, I met a fellow-traveler who spoke, not seriously at all, I thought, about finding a door into a world he could conquer — not just make his way in, but rule. I saw him again, not long after by my clock; he looked about twenty years older, a bit scarred and much quieter, and he didn't talk of conquest anymore.

I know that, and that all the members are human. I think.

The Club ("There are more things in heaven and earth, Horatio, than are dreamt of in your philosophy") is a deuces-wild alternate-worlds frame. Like Poul Anderson's Old Phoenix Inn, it is a comfortable crossroads between all the universes that are, were, or might be, both a way station and a checkpoint because, while some of the travelers are quite lost, the staff always seem to make sure that they get somewhere that they somehow ought to reach; and conversely, the selfish and destructive of the world(s) are never admitted there (though they may find their own paths between worlds).

There's no point in giving very specific rules for the Club, because it is not by its nature rule-driven; it's philosophical fantasy, not hard science fiction. Some guidelines, however:

The Club is most appropriate to small groups of adventurers, ideally the sort of people who like to explore a situation and find out its possibilities, rather than be assigned clear-cut mission objectives, or simply shake down the world for whatever wealth is in its pockets. The group need not all have entered together, or even be from the same world. Yes, this is a version of the good old "You meet in this tavern on a dark and stormy night" gimmick to start a campaign. Encourage the players to spin tales of where they came from and how they happened to find the Club door, as if they were sitting over one of the fine Club dinners. (Doing this by candlelight, over whatever you prefer to eat and drink, won't hurt the atmosphere a bit.)

The doors of the Club do not open at random. Nobody knows (or will say) what Mysterious Power controls them, but Whoever It Is has a remarkable knowledge of the guests' skills and abilities, and of wrongs and injustices on all the myriad worlds that those people are just the ones to set right.

GM advice: Have the players design their characters well in advance of the first play session, or if that isn't possible, hold the design session, the introduction to the Club and the dinner-table conversation, and then send everyone upstairs to the Club apartments and stop. Then spend some time working out

Other Scenario Hooks

Halls of Yesterday

Fantasy: a vicious undead sorcerer is on a rampage, but can't be stopped because his power source is hidden in a castle that's been ruined for a couple of centuries. (This bends the rules of magic a bit, but what kind of vicious undead sorcerer would he be if he didn't?) Our heroes have to go back in time to when the castle was intact and occupied, and con the occupants into letting them have a peek at the secret chamber.

Bloodsbane

Fantasy: someone gets the idea of going back to before the Great Bane (see ***GURPS Fantasy***) and preventing it. That won't work (every sorcerer in the world would be opposed to it) — but then someone points out that right after the Bane, there had to be only a tiny handful of vampires on Yrth. If they go back and stake all the bloodsuckers, they could completely eliminate vampirism from the world. In this one, the buildup, acquiring all the components of the spell, is almost as important as the mission itself (which will probably fail anyway).

Catch A Falling Star

SF: A populated planet has just been wiped out by a planetoid impact. If our heroes can go back just a few days, they can divert the rock with some well-placed nukes; but they find that not everybody wants the planetoid diverted. . . . (This one would have to violate the Simultaneous Existence rule, but since it's assumed that the time-trip is a once in a lifetime thing, that doesn't create story problems.)

Continued on next page . . .

what sort of world all these different people should have their joint adventure in, what uses they can make of their skills (not to mention the players' own personal talents). This is rather more involved than loading hostile critters into 10'-square dungeon rooms, but it is also rather more rewarding.

Corollary to this, most of the Club's guests are not casual universe-hoppers. Some may only visit once in their lives (in the classical fictional paradigm, traveling from a world in which they are hopeless romantic misfits to one where they can be real heroes and live Happily Ever After). In GM terms, this means a world-problem (we do need some new technical terminology in this field) that can't be solved too easily or quickly. Perhaps much of the adventure will be spent figuring out just what the solution is.

To illustrate: your Club guests have retired to their rooms, but they can't sleep. The books on the bedside table make them think odd, faraway thoughts. Independently, they get dressed (or perhaps just pull on a robe and slippers) and go out into the hallway, where one of them has found an unlocked door. There's a darkness beyond, and without really thinking why, they walk through.

Suddenly there's no more door, no more hallway, and the darkness is thinning into a blue dawn. The guests are standing in a formal garden maze, hedges twice as high as their heads. Just ahead is a stone bench, and on it sits a woman, and she's crying. They approach. She looks up. She's very beautiful (of course). Her mouth opens. And she disappears.

Well, there's a story hook. Who's the crying woman? Was she real, an illusion, an astral projection, a ghost? Was she one of the good guys? (Not all the beautiful maidens are, you know.) And, hey, whose garden is this, are they going to be annoyed when they find us here, how do we get out of the maze, it's kind of cold to be standing here in a bathrobe. . . .

And there begins the adventure. The group is certainly going to want to find out about the Weeping Whoever-She-Was, but before that they have lots of other practical problems to solve, and they're in no position to solve them by the classical dungeon-crawler's method of armed robbery. (Of course, there are still some hardcases who insist they always have full armor and weapons on their person, even when visiting the Little Warriors' Room in the middle of the night. The GM need need not be too kind. Tell Lancelot he's got a whole-body fungus infection from sleeping in his mail, and go on from there.)

Another cliché of the field that can be answered here is the notion of the characters as wandering gunslingers, who always ride on once the local wrong is righted. Maybe some of the travelers will like this world, once it's straightened out. Maybe one of them will marry the Princess, or the Prince, and settle down. The others may be joined by a native or two who want to see strange worlds; the Club will have a place at the table for them.

Of course, the GM can leave morality right out of it, and let the guests go conquer worlds (or get chewed up trying) as they please. The multiversal nexus might be not just a passive way station, but an active clearinghouse and dispatch center for the worlds, matching up teams of adventurers with adventures; an Infinity Patrol using freelancers instead of (or in addition to) its own full-time troops. Going even further, this could be crossed with the Eternity's Rangers frame, making the Club a kind of multiversal mercenary hiring hall and armory, where crossworld swashbucklers recruit and outfit for conquest, plunder . . . and maybe some of that righting-wrongs stuff too, just to stay in practice.

And the Club doesn't have to be a dim-stuffy-plush retreat. It can be a kind of Explorers' Club, furnished from many worlds and eras, decorated with souvenirs from as all over as it gets; it might look like an airport lounge, a railroad terminal in the grand old style, a medieval inn (as the Old Phoenix) or a Hilton hotel. Maybe it looks like all those things at once.

Other Scenario Hooks (Continued)

The Unforgiving Minute

Espionage: Strange events and stranger evidence point to the Other Side having the ability to send its agents back in time. Obviously this threatens the cause of world peace, and a crack team of agents must be sent to blow the hell out of — err, investigate the device. There should be significant doubt right up until the end whether the time machine is real or an elaborate hoax (and if it is real, it'll probably have to get blown up at the end).

You Must Remember This

Post-Disaster: If a handful of surviving scientists and their scattered equipment can be reassembled, it may be possible to send a group back to before the Big One, to prevent it or at least to bring back some vital supplies like plague vaccine.

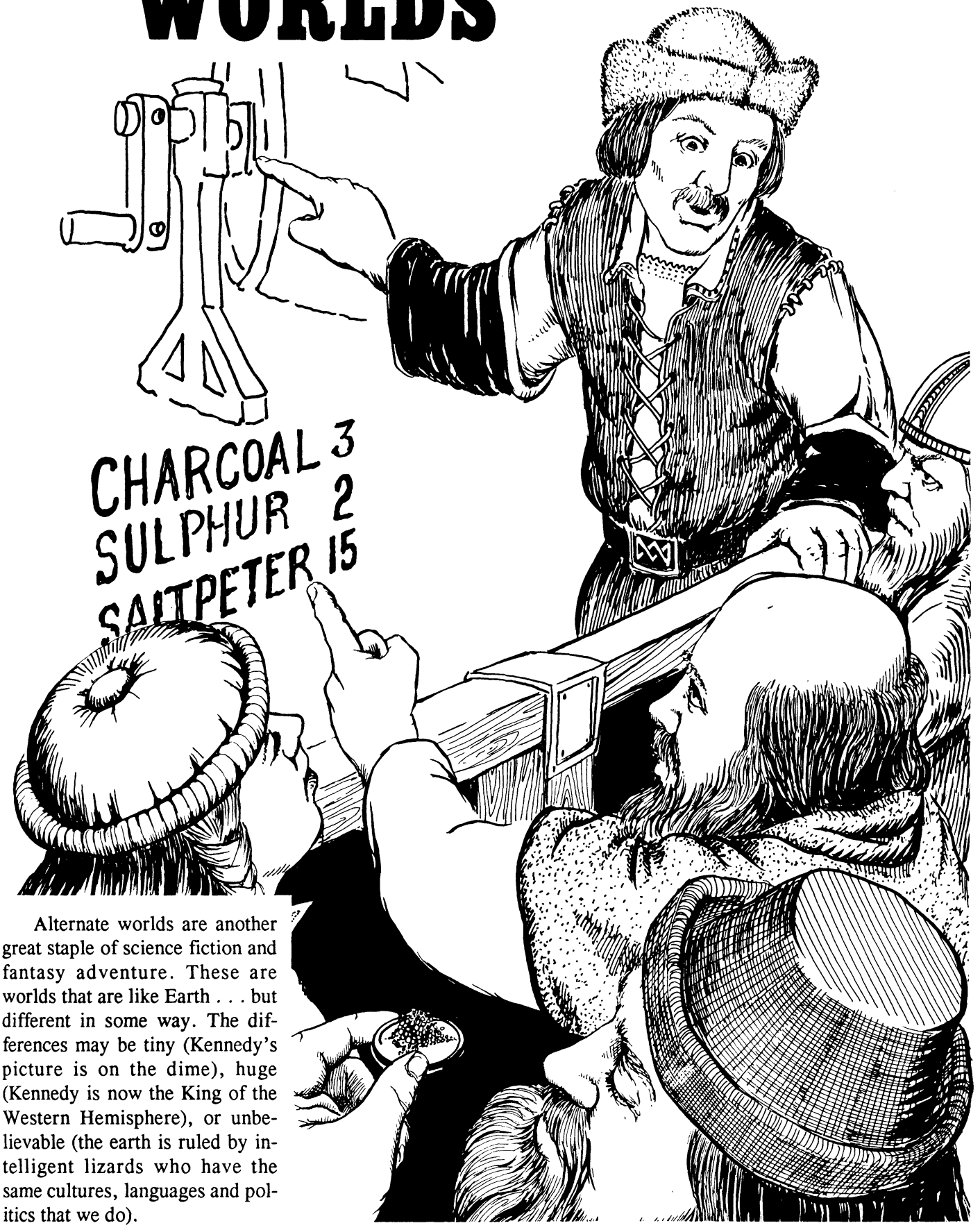
The Night of One Hundred Hours

SF, sort of: during a very strange festival on an alien planet, the adventurers are exposed to a drug that causes psychic time travel; trapped in strange bodies in their own futures, they discover a mass-murder plot in which their future selves seem to be involved — as the perpetrators.

The Pale-Eyed Demon

Fantasy: the adventurers encounter a wounded man with weird powers, being pursued by others likewise. He may be a time-traveler from the future, being chased by temporal marauders, or maybe the pursuers are the Time Cops, or maybe something even stranger is going on.

ALTERNATE WORLDS 7



Alternate worlds are another great staple of science fiction and fantasy adventure. These are worlds that are like Earth . . . but different in some way. The differences may be tiny (Kennedy's picture is on the dime), huge (Kennedy is now the King of the Western Hemisphere), or unbelievable (the earth is ruled by intelligent lizards who have the same cultures, languages and politics that we do).

Infinite Worlds Glossary

Alternate: any timeline except the original Earth. Also "alternate world."

Centrum: a rival civilization with the ability to travel between worlds. A "Centran" is a native or agent of Centrum.

Conveyor: a self-propelled device for traveling between alternate worlds, usually with a passenger.

Coventry: an alternate world maintained by Infinity as a prison for those — both Homeliners and outtimers — who Know Too Much.

Echo: an alternate world which is, or appears to be, identical to ours but at an earlier point in its history.

Eraser: a memory-affecting drug used by I-Cops and others to keep the secret of parachronic travel. See p. 103.

Homeboy: anyone from one's own original world.

Homeline: the original Earth.

I-Cop: an agent of the Infinity Patrol.

Infinity Patrol: the military "enforcement" arm of Infinity Unlimited.

Infinity Unlimited: a private organization which controls parachronic technology as a monopoly and governs access to the alternate timelines.

Outtime: any alternate world except the original Earth, or Homeline.

Outtimer: anyone from an alternate world.

Parachronics: the study of alternate worlds . . . more specifically, the study of why alternate worlds exist, and how travel between them is possible.

Parallel: an alternate world which differs from ours only in that its history has been different (some are *very* different). A "close parallel" is different as the result of one identifiable historical change.

Projector: a device which can send matter to an alternate world.

Quantum: an "energy level" in 8-dimensional space, containing many alternate timelines. A quantum level may be abbreviated, e.g., Q7 for Quantum 7.

Secret, or The Secret: the fact that crossworld travel is possible. Outtimers are *not* supposed to learn this. Ever.

Timeline: another term for an alternate world.

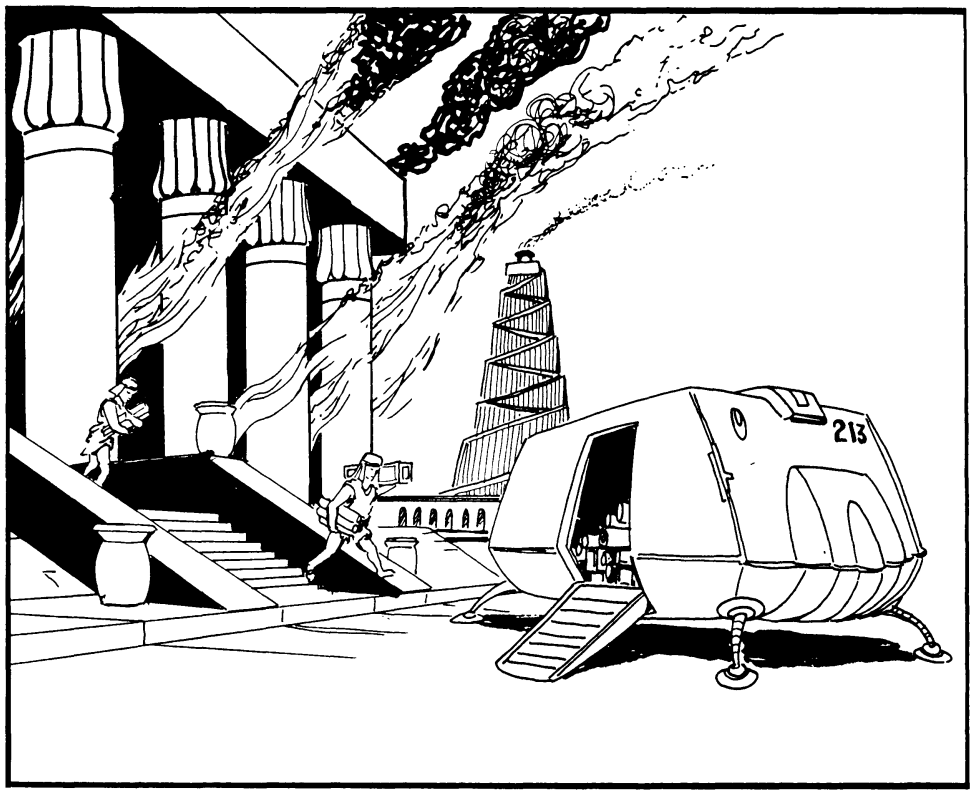
Viewer: a device which can (in effect) receive light waves from an alternate world, displaying a picture of what is happening there.

Weird Parallel: an alternate world which has many similarities to our own, but also has differences which make the similarities seem unbelievable (such as the world where intelligent reptiles speak English).

A "reasonable" alternate history is also called a *parallel world.* Inventing parallel worlds is a great intellectual game. One way to approach it is to pick a historical event and say "what if this was different?" *What if* Lincoln had survived Booth's attack? *What if* Chamberlain had stood up to Hitler? *What if* Eric the Red had died in a brawl at age 16?

And here's the connection to time travel. If someone could travel back in time and make a change, they would *create* a parallel world. Perhaps the traveler's own history would change. Perhaps his own world would remain the same, but a new "timeline" would appear, adjacent in some way. Thus, the genres are very closely related, and can support very similar adventures.

As a writer or Game Master, you can invent any sort of alternate universe. When you're creating a parallel world, you can assume as many basic points of difference as you like. But it is interesting to see what logical consequences you can develop from *one* change. Look at the Timeline in this book . . . pick any event, from great to small . . . and ask yourself "*What if* this had gone differently?



Travel Between Alternate Worlds

Some alternate-history stories just take a "what if" and run with it, creating an interesting setting. Other stories assume that travel *between* these worlds is possible. Perhaps it's a one-way trip — unlucky travelers somehow fall through the gap between worlds. This can lead to an interesting campaign; see the sidebars for suggestions.

But perhaps regular travel between worlds is possible, once you know the trick. Alternate worlds can be visited, studied, exploited, conquered . . .

The Infinite Worlds Campaign

The year is 2015. It is a time of peace and plenty . . . at least, on *our* Earth. The reason is simple: our Earth is no longer the only Earth. Our world, known as Homeline, is exploring hundreds of alternate Earths. It's also fighting an undeclared war with another world-jumping civilization known as Centrum.

History

In 1994, Dr. Paul Van Zandt developed the first working parachronic viewer, contacting the timeline which became known as Earth-Beta, or simply Beta. He concealed his observations and continued his experiments. Six months later, following a mysterious fire which destroyed his Dartmouth laboratory, he resigned to set up a "consulting" firm.

In reality, of course, he had simply freed himself to continue his experiments without the supervision of academia — or of the Department of Defense, which had supplied grant money for his original project! By 1997, Van Zandt had refined his mathematical theories, contacted 23 different worlds, and personally visited six. He had also secretly gathered a number of trusted aides, the nucleus of the group that would become Infinity Unlimited. And he had founded White Star, the interworld trading corporation, to finance further experiments.

In February 1998, he made headlines by publishing his results . . . and formally incorporating Infinity Unlimited, with subsidiaries including White Star Trading, Parachronic Laboratories, and Infinity Development (see p. 98).

Furthermore, he offered to license his designs to any government or corporation interested in crossworld travel . . . within certain limits. These were designed to keep control of the basic technology firmly in our own world's hands (see *Policy*, below) — with Van Zandt's organization making the final decisions. A police organization, the Infinity Patrol, was also to be set up to provide security — and it, too, was to be answerable to Van Zandt, not to any government.

Naturally, the governments were outraged. The U.S. Congress immediately moved to nationalize and classify all parachronic technology. The Japanese, German, Mitteleuropean and Russian governments all called for its internationalization and suppression. The next day, Van Zandt addressed a closed session of the U.N. Security Council. No one knows what he said . . . but the world powers accepted his terms.

Soon we were trading with dozens of worlds. Natural resources flowed in from the untouched ore-deposits of uninhabited alternate Earths. On our own Earth, the environment began to recover, as the worst industrial wastes — and the most polluting industries — were sent to dead worlds already blighted beyond anything mankind could do. Certainly political intrigues continue . . . but the economy of our world is no longer one of desperate scarcity.

Van Zandt retired immediately. "I plan to devote the rest of my life to travel and study," he said, "and I'm never going to touch a soldering iron again."

General Background

This is primarily a Tech Level 8 background, with a few interesting TL9 gadgets (such as the stunner). The parachronic devices which allow cross-world travel aren't on the standard TL scale at all!

The world, as a whole, is "cyberprep." High levels of technology are being used, mostly in benign ways. The GM may include any bionics and other gadgets from ***GURPS Cyberpunk.*** In this world of 2015, *most* parts of the globe are not nearly as rough as the typical decaying cyberpunk background. This is largely due to exploitation of alternate-world resources — everyone has a very good standard of living by 1990 standards!

For details about Infinity Unlimited and its sub-organizations, see p. 98.

Character Creation

Starting wealth in this world is $20,000. Note that many characters will spend most of their time on other worlds, where their beginning wealth will not be important. Agents, researchers, and others who have no use (in the game) for

Interview Questions

(From an Earth Today interview with Dr. Dayan bar-Sheba of the Institute for Parachronic Research.)

Q. Dr. Dayan, why is it that of all the timelines we know of, we are the most advanced in history?

A. Well, that's not strictly true. The Centrum timeline seems to be our equal. I assume you mean the historical parallels.

Q. That's right. Why aren't there any that are our future?

A. Just lucky, I guess. Seriously, some timeline had to be first in line, and it happens to be ours.

Q. All the reports say we are much bigger than Centrum. Why don't we just send the I-Cops to deal with them on their home grounds?

A. Because they are located at Temporal Quantum 8. We are in Quantum 5. We can't reach them.

Q. But we can reach Quantum 7, right next door to them. Why can't we just go after them one hop at a time?

A. A trip between timelines on the same quantum is easy; a self-powered conveyor can do it. To go to a different quantum requires a *projector.* It can send a conveyor across a quantum boundary, or reach out and pull it back. Our projectors are all here on Homeline, in Quantum 5. We can reach Quantum 7, but no farther.

Q. So why don't we build a projector on a Quantum 6 or 7 world?

A. We've tried. They don't work. In fact, we can't make a projector work on *any* timeline but our own.

Q. Why is that?

A. At last count, there were nine different theories to explain it, and seven of them were backed up by experimental evidence. We really have no idea. Whatever the limitation is, it seems to apply to Centrum, too.

Q. Could someone get to Q-7 in one of our conveyors, and then go to Q-8 in a Centrum conveyor?

A. Good question. I don't know what Centrum charges for bus fare.

Q. I don't really understand this "Temporal Quantum" stuff. Can you explain?

A. Basically, there are levels of parachronic energy. Actually, we know of six different kinds of energy, but we won't get into that. The most important is the T-Gamma force — Gamma, because it was the third one discovered. The Gamma force only comes in whole numbers. If a world has a force level of 5, it is on Quantum 5, which is our level.

Continued on next page . . .

Interview Questions (Continued)

Q. Are all the Quantum 5 worlds like ours?

A. Most of them are. But there are some really weird ones, too. And there are hundreds of very close parallels, what we call the "echoes," in Quantum 6.

Q. Why is that?

A. The Gamma force level is complicated. A lot of factors go into it. Can I give a really simple explanation without insulting you?

Q. Go ahead.

A. Suppose the Gamma force was the result of only two numbers. There are really hundreds, but suppose it was only two. Now, suppose the formula for our world was 5+0. That gives 5. And suppose the formula for the next world was 4+1. That's also 5. And the next world is 3+2. That's also 5. So we have these very similar formulas which give the same result. Those are the worlds that are similar to ours. Are you with me so far?

Q. Yes.

A. But you could also have a formula of 25/5, which gives 5 in a different way. Or -5×-1. Those are the worlds which are very different from ours, but their total works out the same.

Q. All right. And a world which is 5+1 is still like ours in many ways, but adds up to Quantum 6.

A. That's right. And, for some reason, 6 is an easy number to get to. We think there are more worlds in that quantum level than all the others put together.

Q. But a world can change quantum numbers. How does that happen?

A. Mathematically, it can happen for a lot of reasons, and they're all very rare in nature. But it can be induced artificially.

Q. That's what the Centrum agents are trying to do on Quantum 6, right? How do they do it?

A. It only works on the historical echoes, and we don't know why. But if they can meddle and change the course of developing history on one of those worlds, they have a chance of popping it over to Quantum 7. And from there, they can change it further and move it to Quantum 8, their home level, where we can't reach it at all.

Q. Can we do it back to them?

A. Yes. We can and we do. The trouble is, those historical worlds are already very like ours. It is hard to know what change would make them "want" to move to Level 5. We don't want to push it to 7 by our own actions. So often we wind up in a defensive position, or even trying to recover a timeline that has gone to Quantum 7. When it gets to 8, we've lost it.

Continued on next page . . .

"home" possessions may spend all their beginning wealth on TL8 bionic augmentations if the GM allows it; see ***GURPS Cyberpunk*** or ***GURPS Space.*** Such augmentations must look natural if the traveler expects to pass unnoticed in other worlds!

This is a very wide-ranging background, in which almost any sort of campaign can be played out; *any* character type from Chapter 2 can be included.

Various organizations, especially Infinity Unlimited and its subsidiaries, can be taken as Patrons. The I-Cops are an especially appropriate Patron. This is a very powerful organization with unusual reach in time and space (30 points); it will intervene to help most of its agents on a 9 or less. This point cost is balanced by an agent's Duty to the I-Cops. A field agent is on duty almost all the time (-15 points). A trooper is not only on duty almost all the time, but is also expected to risk his life regularly, making his Duty the "extremely hazardous" level described on p. 28 (-20 points). No points are allotted for the agents' access to cross-world travel equipment; they're not supposed to use it for their own purposes!

Policy

In a nutshell, Infinity Limited owns, and has the right to police, all parachronic equipment. When others build such equipment, they do so by permission. Infinity has the right to confiscate or destroy any unauthorized conveyor or projector!

Infinity is also the custodian of all other timelines. All research and penetration of new timelines is a monopoly of various Infinity subsidiaries. This policy gets broken a *lot,* in various secret labs, because it is so profitable to find and monopolize a new world.

As the legal guardian of the alternate worlds, Infinity leases various development rights to other Homeline entities — governments, corporations, or even individuals. In practice, Infinity treats itself as the *owner* of any world below TL6, and limits or forbids contact with worlds of higher levels — see sidebar, p. 89. Infinity requires that outtime interlopers "better the lot" of the people whose worlds they infiltrate and use. This is often interpreted very loosely . . .

Outtime Dangers

Infinity is the chief guardian of Homeline against "outtime" menaces. As far as most people know, the only such menace is the rival world-jumping culture of the Centrum (see p. 104). Actually, there are other many dangers out there . . . but they can't cross the dimensions on their own, and Infinity keeps them secret lest someone contact them from here.

Keeping the Secret

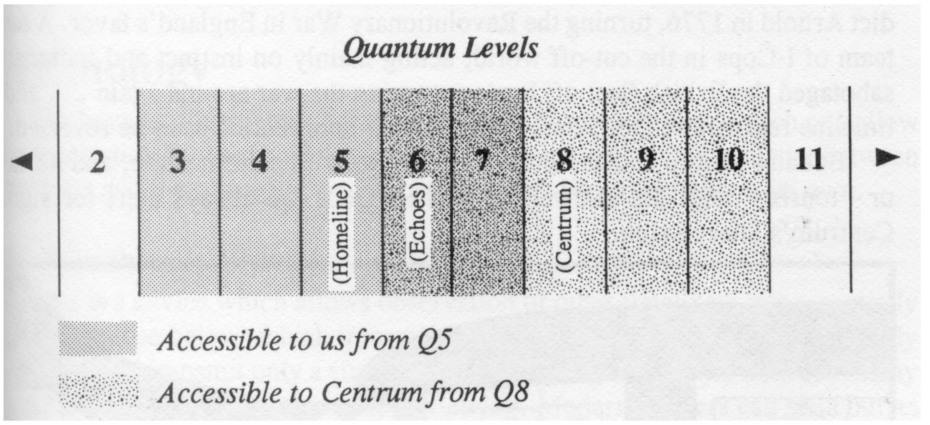
Finally, Infinity insists that the secret of parachronic travel remain a monopoly of the Homeline. An "outtimer" who learns the secret must be hired, discredited, or made to vanish (see *Coventry,* p. 105). This often means that outtimers, as a group if not as individuals, are seen as not quite real, and not possessed of full rights. On the one hand, Infinity's PR department does its best to downplay this idea. But every time the I-Cops guard their secret by taking some outtimer off to Coventry, they reinforce the idea that Homeline is somehow "superior." And every time a film-maker creates a historical epic by recording the bloody deaths of thousands of people in an outtime war, it reinforces the idea that the people of other timelines are puppets for Homeline's entertainment. It's a problem.

An Infinity of Worlds

Several hundred alternate worlds are now known. They are spread through an 8-dimensional space in a pattern which seems *almost* predictable. These worlds are divided between a number of different energy levels, or *quanta*. It is easy to reach a world on the same quantum, hard to travel outside your own quantum. We're on Quantum 5 (Q5). We can reach Quantum 4 and 6 fairly easily, Q3 and Q7 with difficulty. See the sidebar on pp. 85-87 for more detail.

Parachronic scientists agree that there must be an *infinity* of alternate worlds. They disagree strongly on *how big* an infinity. Any non-physicist caught in the middle of such an argument must make a Will roll or suffer Mental Stun and acute boredom . . .

The discussion is largely academic, because our present technology cannot reach anywhere *near* an infinite number of worlds. At the moment, there are 68 worlds known in Quantum 5, the easiest for us to reach. Quantum 6 has 377; Quantum 7 has 102. Quantum 4 has 87; Quantum 3 has 25. We believe from interrogation of captured Centrum agents that Quantum 8, where their homeworld lies, has about 45 lines, while Q9 and Q10 each have about 40.



There are almost certainly undiscovered timelines in all the quanta that we can reach; after the first ten years of exploration, new discoveries settled down to a steady rate of about ten per year.

A common misconception about the "infinite worlds" is that all possibilities must exist on some alternate world, somewhere. Of course, this *might* be true; until we can reach all possible alternates, it will be hard to disprove. But even if an infinity of worlds exist, there could be many possibilities that don't exist. As one physicist explained it: "You can have an infinite number of apples without having any oranges."

The Echoes

Of the 377 known timelines in Quantum 6, 281 are "historical echoes" — worlds apparently identical to our own at earlier points in history. No "future" worlds are known (though there *are* a few parallel worlds with higher technology than ours). No "echoes" are known on any quantum except 6. Why is our own Quantum 5 world "reflected" so many times in another quantum? No one knows.

The echoes are irregularly spaced through history. There are few echoes before 3000 BC and none before 12,000 BC, leading to speculation that the existence of the echoes is in some way tied to the existence of man, or even of civilized man. Some periods have several echoes (there are 19 scattered through the 17th century). Other periods have no echoes at all — or, if they do, none have been discovered.

Interview Questions (Continued)

Q. What about stealing their own timelines from Quantum 7?

A. It's theoretically possible. If I knew any details, which I don't, I wouldn't discuss them.

Q. Do you think Centrum has spies on our timelines?

A. We know they do.

Q. What about on our own home timeline?

A. Absolutely.

Q. I just thought of something. When we take over an empty timeline, or when we make a treaty with a parallel world and develop it, why don't those changes push it into another quantum? We made more changes in Johnson's Rome, for instance, than a hundred Centrum agents could have done in a hundred years of secret meddling.

A. Apparently it's only the true echoes that are vulnerable to this kind of shift. Or perhaps there are two kinds of echoes, some vulnerable and some not. When we find a world that is not an echo, but just a parallel, we know it's not vulnerable to shift, because if it *was* vulnerable, it would already have shifted. Does that make sense? We have seen four echoes that suffered big changes without shifting. If they become ordinary parallels, that would support that theory.

Q. What happens if more timelines learn to build projectors, and start traveling between worlds?

A. The I-Cops' biggest job, after dealing with Centrum, is to prevent that from happening.

Q. How can you justify this interference with other timelines?

A. Easily. You've seen some of those other timelines. How would you like tourists from Gotha-19 dropping in to visit? Or one of the Reich lines?

Q. Couldn't we just monitor the savage lines, and leave the peaceful ones alone?

A. No. Suppose those mystics in one of the Sivan lines build a conveyor. They'd never hurt a flea, right? So they go hopping all over the place, and they visit the Reich, and the next thing you know, the Reich owns Siva and is looking for more.

Q. What if Centrum starts teaching other lines the secret?

A. Well, if they do, we can't do much about it. But from everything we know, the last thing they'd do is create competition for themselves.

Classes of Alternate Worlds

The Penetration Service classifies alternate worlds as follows:

Empty

There is no mankind or other intelligent life on this world. It is free for exploitation. Typical uses include:

Colonization (usually on the very best worlds).

Industry (mostly on bad worlds).

Hunting preserves, including prehistoric ones.

Disaster worlds. Some are reserved for scientific use; others are exploitable, if only as waste dumps.

Reserve worlds. A few otherwise exploitable worlds are left in the "research" category. The whole timeline is set aside as a zoo, science station, etc.

Echoes

These worlds, all in Quantum 6, seem to be *exactly* following the course of our history. As explained elsewhere, interference in these worlds is dangerous, because it can shift them out of Quantum 6, perhaps losing them forever.

These worlds are open for cautious, non-intrusive research and tourism — until the problem of quantum shift can be solved, that's all they're good for. The rule is "Look but don't touch." They are also full of I-Cops, guarding against intentional quantum shifts set off by Centrum agents.

Parallel

This is a world which is not an echo, but which contains human beings following a more or less "normal" pattern. Most such worlds are penetrated as soon as time and manpower allows. Trade, development, etc., are possible without risk of "losing" the timeline. A few, including all those containing very primitive man, are left for study.

The general objective with these worlds is "benevolent guidance" away from war, especially nuclear or biological war, and away from accidental discovery of parachronic travel. Many people disagree with this, but the only coherent alternative anybody has ever come up with is "hands off." And the idea of — for instance — keeping hands off a parallel-world Hitler, as he is giving the orders for Dachau, is a bit much.

Continued on next page . . .

The echoes represent an incredible opportunity for research into our own history . . . but they also represent a significant hazard. Apparently the balance that holds them in Quantum 6 is a fragile one. If something happens to change the course of history in an echo, it may simply vanish! The first time this happened, it was thought that the world had somehow been destroyed. But after several more disappearances, as Infinity was on the verge of shutting down all travel to the echoes, one of the lost worlds was rediscovered . . . in Quantum 5!

It is now well established that the echoes — or at least some of them — can be knocked out of Q6 by interference with their flow of history, and that they can be moved even further by further interference.

Unfortunately, one reason we are sure of this is that Centrum seems to be able to do it on purpose. Of the 24 echoes that have vanished from Quantum 6 since Infinity discovered them, four are known to have moved "closer" to Homeline, going to Q5. Eleven are known to have moved to Q7, closer to Centrum; we know for a fact that Centrum was deliberately involved in six of these manipulations. One bounced all the way to Quantum 4, on the "other side" of Earth. And seven of the missing timelines haven't been found at all.

The remaining timeline was shifted to Quantum 7 by Centrum aid to Benedict Arnold in 1776, turning the Revolutionary War in England's favor. A heroic team of I-Cops in the cut-off world, acting mainly on instinct and indignation, sabotaged the British fleet off Boston, turning the war around again . . . and the timeline returned to Q6! Thus, we know that interventions *can* be reversed.

But any visit to an echo must be managed with extreme care, and no casual or "tourist" trips are allowed. And the I-Cops are always alert for signs of Centrum's intervention.

Examples of Centrum's Intervention

Centrum has intervened several times, in increasingly sophisticated ways, to try to move echo timelines "closer" to its own Quantum 8. It seems clear that Centrum has some method of predicting what sort of change will produce the desired effect.

However, these predictions are obviously not infallible. In at least four timelines, massive Centrum interventions seemed to have no effect at all; perhaps those timelines are "held in place" by something other than their similarity to our own.

Successful Centrum interventions have included:

The atomic destruction of London in the year 1902. That was the first and last time any such gross attack was attempted. We believe that it became a political issue among Centran leadership, and the parties responsible were removed from power. Nevertheless, our theorists believe that such gross intervention must not be generally effective, or it *would* be attempted more often.

The execution of Queen Elizabeth I in 1554, before her reign began. Apparently her sister Mary was influenced against her.

The sinking of H.M.S. Beagle with all hands in early 1833. Charles Darwin was among those lost. This timeline did not "vanish" until late 1837, though.

The sabotage of Yuri Gagarin's space capsule in 1960.

Infinity's researchers are concerned about the possibility of *very long-term* interventions. For instance, if Lincoln had been murdered as a young boy, no historical differences would show up for years . . . but when they appeared, they would be huge. Possibly Centrum can't compute the effects of such interventions. Perhaps it can, and does, and we haven't seen the effects yet. And perhaps, if the echoes really exist in part because of human culture, only a large and sudden shift in popular attitudes can really effect a change.

See p. 106 for more about timeline shifts.

Technology

The keys to dimensional travel are the parachronic viewer, which can allow communication between timelines; the projector, which can move matter between timelines; and the conveyor, which can travel between timelines on its own.

The Parachronic Viewer

This is a device which allows observation of other timelines; it is essentially a projector (see below) which transmits or receives nothing but light. The early viewers could transmit only a single burst — a photograph. Later ones sent many bursts a second, allowing continuous viewing. Modern viewers can send bursts in alternate directions, for continuous two-way communication. Sound does *not* travel; I-Cops, and others who must use viewers regularly, become expert at reading lips. However, for an added $500, a viewer can include a microphone and low-powered laser, to encode sound digitally and fire it through the interface. (This device is notoriously fickle, and goes out of tune whenever the viewer is mistreated.)

Normally, the viewer can "see" the area in "front" of it in the alternate world to which it is tuned. Its angle of view can be adjusted to any angle, and the point of view can be moved about. An ordinary viewer's point of view can only be moved a few feet, which is normally useless. When a powerful projector (below) is used as a viewer, the point of view can be moved by several miles.

Viewer communication is not entirely reliable. Any given viewer link will break for 1d hours at irregular intervals — but some links are better, and some are worse. Links between worlds in the same quantum are out an average of 9% of the time (when it's important, roll 3 dice; on a 6 or less, the link is out). Those between adjacent quanta are out 26% of the time (i.e., on an 8 or less). Those between worlds two quanta apart are out 62% of the time — on an 11 or less! Links cannot currently be set up between worlds more than two quanta apart.

When *one* link between worlds is broken, *all* viewer links between those two worlds are broken, though transportation is unaffected. Attempts to bypass a broken link from A to b, by sending from A to C and then C to B, simply don't work; no one knows why. In game terms, viewing can become impossible whenever it is dramatically convenient.

A typical desk viewer weighs 30 lbs. and costs $5,500; it is about the size of a large desktop computer. It can reach any viewer in the same place (or within a

Classes of Alternate Worlds (Continued)

Research

These worlds are set aside for study. Types include:

Anomalies. These are worlds which show some interesting, but not obviously dangerous, variation in physical laws.

Primitive. These are parallel worlds inhabited by Bronze Age or earlier man. (There is continuing pressure for more exploitation.)

Nature preserve.

Cultural preserve. These worlds are left as "controls" to judge the effect of intervention on other, similar timelines.

Closed

These worlds are "off limits" to absolutely everyone except a few brave and lucky researchers . . . mostly because they pose a potential danger to Homeline. Where possible, Infinity keeps the very existence of these worlds secret.

Dangerous disaster worlds. Timelines depopulated by uncontrollable disease, by nanotechnology, or by forces not yet understood.

High-tech and aggressive. The "Reich" worlds are the best example. These are timelines that would present an obvious danger if they learned about crosstime travel.

Higher science than ours. When a world has *really* high science, it is considered hazardous even if its culture seems benign. The researchers' objective here, of course, is to learn the native science without being caught!

Mysterious Forces, including magic, widespread psionics, and abilities that fall under the general heading of "super-powers."

Nonhuman intelligence.

There are also a few "special" closed worlds that fit no category; they are closed for good, one-of-a-kind reasons. Microworld (p. 96) is an example.

few feet) in another world, as long as each viewer is properly set for the other. When several worlds have viewers in the same place, each is set to scan all the "frequencies" regularly to avoid missing a call.

Viewers can be disguised and built into anything of appropriate size. Disguised viewers are used mostly for espionage and research.

Very large viewers exist, of course. They are used mainly for entertainment, especially for those who can't afford to visit alternate worlds in person. A typical auditorium-sized viewer, with movable focus and built-in recording units, might cost $200,000.

Close Parallels

These are the parallel worlds that are very like our own at some past period, with *small* differences.

Earth-Beta

The first parallel to be discovered. Like 1991 Earth in most ways, but Dan Quayle seems never to have existed; Robert Dole was Bush's running mate in 1988. This seems to have made no difference in the course of national events, but tiny differences are accumulating.

Cherokee

In this world, now in its year 1930, the Cherokee Nation was stronger and more successful in surviving Anglo incursions. The tribe was not deported to Oklahoma until 1848, and got relatively generous concessions for moving. When oil was discovered in Oklahoma, the Cherokee kept the land and the wealth. On this world, Big Oil is now an Indian-dominated business.

Holly

A music-lover's dream world. Buddy Holly's plane didn't crash; in that world, it's now 1989, and Holly and Richie Valens are both still rocking. (The Big Bopper went into politics, and is now in Congress.) Several other stars lived less self-destructive lives, and are still around, though Elvis is still dead. And the Monkees became a super-group, with Stephen Stills as one of its members.

The Parachronic Projector

A parachronic projector, or simply "projector," is an installation which can send matter to an alternate world, or (using a conveyor, described below) retrieve matter from such a world. The size of a projector depends on how much mass it has to send. Van Zandt's first projector could only send a few ounces, and took up a large room. The largest modern projectors can send up to 300 tons at once, and take up most of a city block. An "average" projector requires enough hardware to fill a small auditorium, and can move a 2-ton mass.

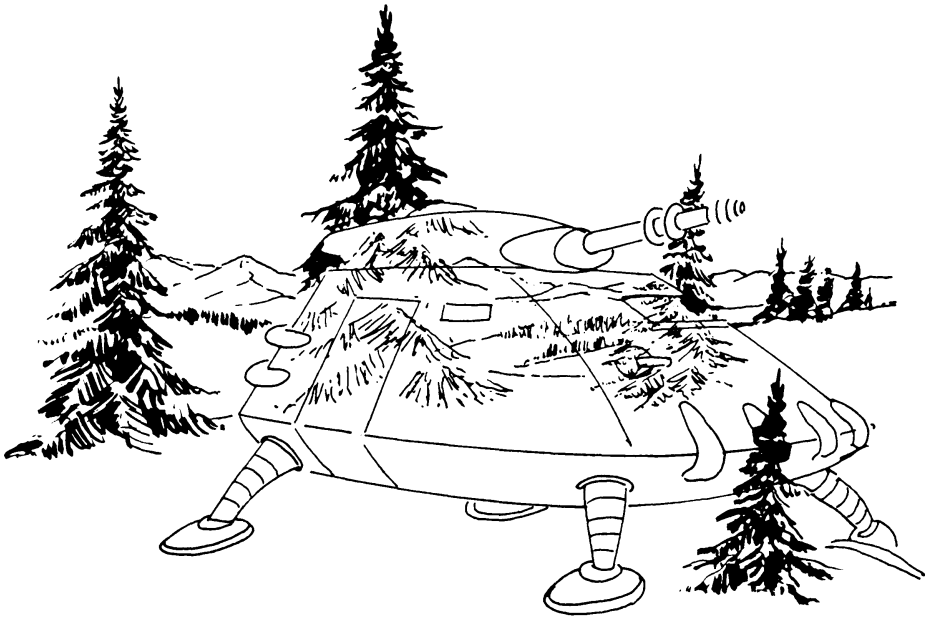
The material to be projected will arrive at a site corresponding to the projector stage; material to be brought in from another world must start at that same corresponding site. A skilled operator can vary the focus by a few feet — no more.

A projector requires a great deal of energy to run, but for a large unit, the cost per unit of mass remains low enough to be negligible, even when relatively low-value items like grain or ore are being moved.

A "send" within the same quantum level can be made with a projector and no conveyor. A send to an adjacent level requires *both* a projector and a working conveyor. To reach a timeline two levels away requires a projector and a special, expensive conveyor — see p. 92.

In practice, a pickup always requires a working conveyor. But theoretically a projector with enough energy could work without a conveyor at the sending end . . . it could just reach out and *grab* something from another timeline.

Parachronic projectors are *very* costly; Infinity Limited quotes a base price of $100 million for a simple installation, going up from there. Obviously, a lot of this is pure profit. But a great deal of this cost is also control circuitry. A basic jury-rigged projector might cost a *lot* less, but all rolls to operate or repair it would be at high penalties.



Field Generators and Conveyors

A parachronic field generator unit is a device for alternate-world travel. The unit may be mounted in any sort of shell to carry occupants and cargo between worlds. This vehicle is usually termed a "conveyor." The simplest conveyor vehicle is nothing more than a hull, with no motive power of its own. The result usually looks like a minibus with stabilizing legs instead of wheels; military versions add armor and weapons.

The parachronic field is fairly easy to control. In general, it acts on everything making a good electrical

circuit with the field generator, or everything within a three-dimensional space bounded by such a circuit. In practice, that means "Anything inside a metal hull is all right; anyone on an open platform is all right if they're holding onto something metal." Even these requirements can be broken, but it is so simple to follow them that most designers don't push it! Thus, almost all passenger conveyors are enclosed metal hulls.

The limitation on a field generator's capacity is *mass,* not size. Each generator is rated for a given mass; the bigger the generator, the more mass it can move, as described below. If a generator is asked to transport too much mass, results can vary. An enclosed conveyor just won't move (though if it is only a bit overweight, it may arrive at its destination without external antennas, riders, etc.). A platform conveyor *will* move, unless the platform itself is overweight. If the extra weight is due to cargo, some of it will be left behind . . . and some of it will neither be left behind nor taken to its intended destination. It has been proven that some of this lost material may be transported to *other* timelines. Two instances are known of lost *passengers* being dropped in other timelines, and surviving!

Generator Size: Currently, the best parachronic generators can transport themselves *plus* a maximum of 212 times their own mass. The minimum size of a generator unit is one cubic foot for each 70 lbs.; such a unit costs $10,000 per pound of its own weight. (Thus, a generator 3 cubic feet in size would weigh 210 lbs. and could carry 44,520 lbs.; it would cost $2,100,000.)

Most units are built to less exacting, and cheaper, specifications: one cubic foot for each 30 lbs., at $4,000 per pound. (So a generator 3 cubic feet in size would weigh 90 lbs. and could carry 19,080 lbs.; it would cost only $360,000.)

The smallest generator that can be built with current technology weighs just over 3 ounces, and transports almost exactly 40 pounds. This "Midget" costs $2,000; they are mass-produced by Infinity as message-carriers.

A conveyor does not move in space when traveling between worlds. An adjustment of a few feet is possible in some cases — no more. If a conveyor comes out inside a solid object, the material it displaces simply *vanishes.* No one has yet explained where it goes. This means that it is *very* foolish to stand in a conveyor "landing area," or within an area corresponding to the focus of a projector on Homeline! You could vanish. Worse, *part* of you could vanish.

Travel time between worlds is theoretically zero. Sometimes, for no known reason, a trip seems to take longer. And sometimes a trip seems instantaneous to the passengers, but takes time from the point of view of the people on either end!

Limited-Program Conveyors

These conveyors have a hardwired limitation. They can shuttle only between a few lines, all within one quantum. Many cargo platforms can travel only between two specific timelines.

Subquantum Conveyors

These units must stay within one quantum, but can accept any setting that the operator knows or has a guide-disk for. Guide-disks are optical disks containing complete setting information for one (or many) destinations.

Quantum Conveyors

These units can jump between one quantum and the next, but only with the help of a projector. The projector operator must know where and when the conveyor will be ready for pickup; thus, jumps between quanta are always carefully scheduled. Since projectors exist only on Homeline, a quantum jump is always either to or from Homeline and either Q4 or Q6.

Control circuitry on a quantum conveyor is more expensive; the mass of the generator does not change, but cost is increased by 50%.

Farther Parallels

The Thousand Year Reich

This common science-fiction nightmare exists on five known alternate worlds in Quantums 4 and 5. In all these worlds, the Nazis won World War II.

Two of these worlds are still in the early 1950s. The UN, aided by Infinity, is infiltrating agents and recruiting, in hopes of overthrowing the Axis governments. Two more are in later periods — one in 1970, and one in 1988 — and these are being observed carefully. The 1988 world is actually less advanced than the 1970 one, having suffered a Third World War in which the Nazis destroyed Japan with nuclear weapons and lost many major cities in Europe and North America.

The fifth Nazi world is in its year 1995, and is ruled by a brutally efficient world government dominated by Germany, Japan and a very Nazified United States. The science of this world, labeled "Reich 5," is TL8 in most respects, *superior* to that of our own timeline in the same year. Not only is travel to this Quantum 3 world prohibited, but its *existence* is a secret. Authorities judge that Reich 5 could duplicate our own parachronic science within two years, given a working conveyor.

Johnson's Rome

This is an alternate world in which the Roman Empire is still intact, and cheerfully decadent, in the year 1206 A.D. It is being developed as a recreational timeline by Johnson Crosstime Incorporated; the corporation is systematically bribing and infiltrating agents to take over the Roman Empire and turn it into a vacation spot. It is already turning a huge profit.

Part of the program involves outlawing public tortures and the most unfair forms of gladiatorial combat, but most of the decadent attractions of Rome will remain intact.

The Johnson's Rome project is being watched with great interest by many different groups, including those who want to exploit and/or "civilize" as many alternates as possible, and those who believe that alternate worlds should remain untouched.

Continued on next page . . .

Two-Quantum Conveyors

To make a two-quantum jump requires a specially equipped "two-quantum" conveyor (triple mass of the generator unit, and multiply cost by 8) *and* a Homeline projector. Such a jump requires special conditions, which can only be predicted about four hours in advance. (Every hour, roll 3d6. On a result of 7 or less, an hour-long window will open in four hours.)

Since this prediction can only be made by the computers and instruments on the projector at Homeline, a conveyor two quanta away must just prepare for pickup and wait . . . and wait . . . and wait. For non-critical pickups, Homeline will only attempt the "grab" at, for instance, every hour on the hour. This gives the passengers at the far end a chance to leave the conveyor and stretch their legs if they're not picked up.

A 2-quantum jump will be between Homeline and either Q3 or Q7, or vice versa.

Mobile Conveyors

A "mobile conveyor" is any conveyor that has motive power of its own. The best way to create a mobile conveyor is to start with an ordinary vehicle of the desired type, and add the conveyor unit. As a result, there is often no way to identify a conveyor vehicle from the outside — it could look like anything.

Though a mobile conveyor can move under its own power, it must be in the right location in order for a Homeline projector to lock on and retrieve it. Thus, "garages" or "landing fields" for mobile conveyors are carefully laid out, with pickup sites clearly marked. Standing on a pickup site is *very dangerous!*

Operation and Accidents

The skill to use crosstime equipment is Parachronic Operation (see p. 35). All parachronic equipment works on the same basic principles, but some is much more complex than others, and therefore harder to use. The GM should always assess skill penalties if the operator is injured, rushed, or using unfamiliar equipment. *Alien* equipment, such as that of the Centrum, would carry at least a -4 penalty for any operation except the simplest. However, "On" and "Off" are the same words in both languages!

Parachronic viewer: No roll is needed for ordinary operations; with pre-set values and a manual, it's no harder than working a TV set. A roll may be required in case of problems or interference. A roll at -1 or worse will be needed to change a setting. To operate a large viewer with a mobile viewing field would require rolls at -4 every minute!

Parachronic projector: Roll vs. basic skill to operate. Roll vs. skill-2 or worse to "send" or "receive" from a location other than exactly equivalent to the projector's own. Roll at -1 when sending to (or receiving from) a location one quanta distant, or -3 if it is two quanta distant.

Limited-program conveyor: Roll at basic skill to reprogram such a conveyor; a Parachronic Electronics roll is also required if the program was hardwired. However, just *operating* such a conveyor is as simple as finding the "On" switch and perhaps choosing a setting on a numbered dial. This may not even require an IQ roll, depending on how "friendly" the conveyor's designers made it.

Subquantum or "shuttle" conveyor: Roll at basic skill to adjust the settings for a new timeline. Roll vs. IQ to install a marked "guide disk" to go to a preprogrammed setting, unless security precautions are built in; in that case, it's up to the GM.

Quantum conveyor: The conveyor operator must roll at skill-1. The projector operator must also roll at skill-1. If either roll fails, the trip is a failure (see below). If *both* rolls are failed, add the amount of the failures when determining what happens.

Two-quantum conveyor: As above, but all rolls are at -3.

Mobile conveyor: Operation of the conveyor itself is normal. Someone (not necessarily the parachronic operator) will also have to have the required Driver, Pilot, etc., skills. Note that conveyor operation takes the full attention of the operator. If a 747 is set up as a mobile conveyor, it can cross worlds while in flight, but someone other than the pilot will have to handle the transition!

Bad Jumps

When a projector or conveyor operator fails his skill roll, life can get interesting for the passengers. Roll a die (2 dice, on a 2-quantum jump) and add it to the amount by which the roll *or rolls* were failed. The GM should fudge or re-roll any result which would kill the PCs instantly, unless that roll was made by a PC operator or modified by some PC decision.

If the conveyor was overloaded, add 1 or more to the roll below.

Several of the table results are starred. When one of these comes up, roll one die. On a 1 or 6, nothing happens, but on a 2 through 5, *add* the appropriate time-delay result, #2 through 5, from the "Bad Jump" table below.

Bad Jump: Incoming to Homeline

2 — Timing error: Trip takes 1d minutes from the viewpoint of those "outside." Note that, until the shipment arrives, there is no way to tell a simple timing error from a totally lost shipment! Any delayed shipment triggers a security alert, just in case. This is why parachronic operators have ulcers.

3 — Timing error: Trip takes 1d minutes from the viewpoint of both the passengers and those "outside."

4 — Timing error: Trip takes 4d minutes from the viewpoint of those "outside."

5 — Timing error: Trip takes 4d minutes from the viewpoint of both the passengers and those "outside."

*6 — Positional error; shipment appears 1d feet too low, or off to one side. Damage to projector stage floor and operator's ego, but not to passengers or cargo.

Farther Parallels (Continued)

Attila

In this parallel world, the Mongol invasion of Europe was entirely successful. Western civilization — and, three generations later, Islamic civilization — were entirely destroyed. All of Eurasia and northern Africa is now forest and grassland, ruled by "Mongol" tribes (many of which no longer look Oriental). They keep slaves and war among themselves; they build no cities.

The highest culture on this parallel (Quantum 5, matched with our present time) is in Japan, which has managed to repel the occasional seaborne Mongol invasion, and boasts a culture and technology equal to 1600s Japan on our own world. The next most developed lands are in South America, where the warring Indian tribes are at TL4, and southern Africa, denied to the invaders by climate and disease, where several black tribes have reached the same level and are developing rapidly past it.

Campbell

A world in which a fairly small, fairly recent change has had significant effects. John W. Campbell, the science fiction editor, was killed in a traffic accident early in his career. As a result, many science fiction writers never developed their talents, or developed them in other directions (Robert Heinlein, for instance, became a successful writer of young adult fiction and, later, TV sitcoms). The result was that the field of science fiction never developed past space opera. Apparently this dramatically reduced the number of students who became interested in science and engineering, because scientific development has stagnated here since the end of WWII.

*7 — Resonance error: shipment appears and then vanishes, reappearing where it was coming from. Try again at -1 skill penalty.

*8 — Sign change error: cargo unaffected, but conveyor electronics damaged; out of service for 3d days, 5% of original cost to repair. (If no conveyor was being used, roll again.)

*9 — Field strength error: electrical discharges do 1d-3 damage to all passengers and temporarily disable all electronic equipment not carefully packed. Result to conveyor as per #7.

*10 — Positional error; cargo appears too high. 1d damage to each passenger; equivalent damage to breakable cargo. If cargo was on a conveyor, that conveyor must be taken out of service for 1d days for examination and repair.

*11 — Severe positional error; cargo appears too high. 2d damage to each passenger; equivalent damage to breakable cargo. If cargo was on a conveyor, that conveyor must be taken out of service for 4d days for examination and repair.

*12 — Matrix error; intended shipment is lost. Something else arrives on the transport stage. Usually it is air or harmless rubble. Sometimes (very rarely, or by GM fiat) it's dangerous. In anything but an emergency, the projector will be taken out of service for 1d days while researchers gather data to — someday, they hope — build a controllable "grab" projector.

13 — Cargo and passengers are thoroughly lost, and it will take the computers at Infinity several months to *start* looking for them. Roll on the "Time to Find" table (sidebar, p. 107) but add 1d months!

*14 — Focus error; incoming shipment arrives in small pieces. Grain, ore, etc., is unaffected; other cargo is killed or destroyed; conveyor (if any) totally destroyed.

*15 or more — Utter confusion. Roll twice more, and apply both results. But if either of those new rolls also results in a 15, go instead to the Fascinating Parachronic Disasters table.

Bad Jump: Outgoing from Homeline, or Subquantum Conveyor

2 to 5 — Timing error: as on above table.

*6 — Positional error; shipment or conveyor appears 1d feet too low, or off to one side. Damage to landing site floor and operator's ego, but not to passengers or cargo. Possible inconvenience in getting out of conveyor, especially if (50% chance) it arrived too low.

*7 — Resonance error: shipment appears and then vanishes, reappearing in its starting place. Try again at -1 skill penalty for something sent by projector, or -2 for a subquantum conveyor.

*8 — Sign change error: as on above table.

*9 — Field strength error: as on above table.

*10 and 11 — Positional error; as on above table. But note that if this was a mobile conveyor, airborne, a positional error makes no difference!

*12 — Matrix error; shipment goes somewhere entirely unintended. If the shipment was projected from Homeline, it will be lost until the computers locate it. If the trip was by subquantum conveyor, it's up to the PCs to save themselves.

13 — As on above table.

*14 — Focus error; shipment or conveyor arrives in small pieces. Grain, ore, etc., is unaffected; other cargo is killed or destroyed; conveyor (if any) totally destroyed.

*15 or more — As on above table.

Fascinating Parachronic Disasters: roll 2 dice

All the event below violate parachronic law as we know it. Many of them have not happened to Infinity . . . yet. One of the hazards of such an event will

Weird Parallels

A "weird parallel" is a world which is like our own in many ways, but which also has such strange differences that it is hard to believe the similarities. Parachronic physicists explain that *because* of these similarities, otherwise improbable worlds may be found on an accessible quantum level.

The classic weird parallel is the first one discovered: the United States of Lizardia.

The United States of Lizardia

This is our name for this world — USL for short. Its inhabitants call it Earth, and they have many names for its nations. One of the leading ones is called the United States of America. In most ways, the USL, located in Quantum 4, is a very close parallel of our history up to their present year, 1991. Languages, cultures, etc., are nearly identical.

The huge difference is this: the intelligent race on the world of the USL is a lizardlike creature, seemingly evolved from a bipedal dinosaur. However, despite their scales and tails, the basic stats of this race are human-average in all ways. They give birth to one egg at a time; the egg normally hatches within a day.

Similar creatures are known on several other alternate worlds, but on all the others they have unique (and relatively primitive) cultures, and less human bodies and psychologies.

The USL is being studied in a *very* careful and secretive fashion; no official contact has been attempted, nor is any likely for some time. It seems likely that if the people of the USL knew they were being observed by ape-descended aliens, their world would be shattered. The I-Cops stay busy, keeping sightseers away. So far the USL world has passed off all reports of visitors as "UFOs" and effectively ignored them.

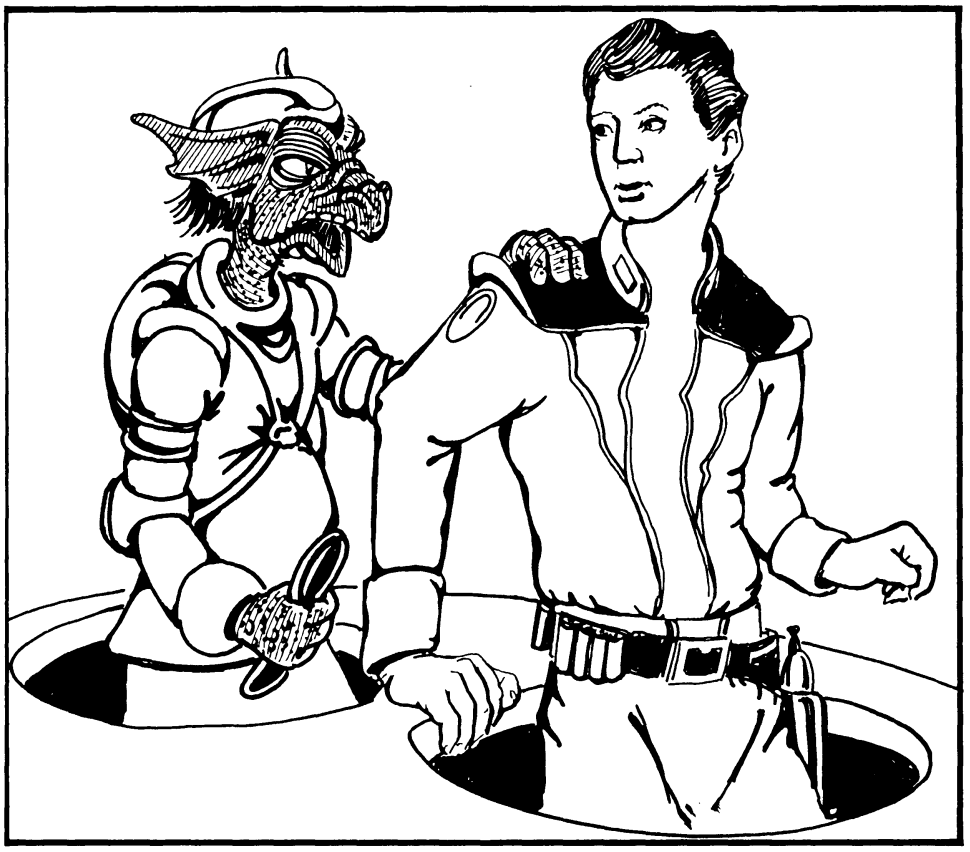
Continued on next page . . .

be the mob of researchers which will instantly appear to take possession of all equipment involved, and to debrief all witnesses within an inch of their lives.

2 — Trip takes approximately 37,000 years from the viewpoint of the passengers, even though much less time passes for the outside world. Survival is unlikely.

3 — Trip takes a very long time from the mental perspective of the passengers, but no time from their physical perspective. Each passenger gains 3d points in assorted mental disadvantages, assigned by the GM in accordance with the character's personality. (This has happened twice.)

4 — Everyone aboard gains 1 point in IQ and either 1 point in DX or Combat Reflexes — whichever has the lower point value. (This has happened four times, but in two cases the crews had the sense to keep their mouths shut about it. The other crews are still undergoing tests.)



5 — Tau-factor error: shipment appears as mirror image of itself. Ores will be unaffected; foodstuffs will be inedible; passengers will require a special diet to survive until some tinkerer can build a tau-factor chamber. If they are far from Homeline, all Survival rolls are at -5, or -2 once someone realizes, from GM clues, what has happened to them. (This has happened twice and is suspected in two other cases where the crew of a lost conveyor starved in "friendly" surroundings.)

6 — Frog error: The shipment arrives in a rain of tiny frogs. This has happened six times since Infinity started crosstime travel. Four researchers have gone mad trying to explain it.

7 — The crew is at -2 on IQ and -4 on ST and DX when they arrive. For each person, there is a 1 in 6 chance of regaining one point of each attribute, each day. (This has happened over a dozen times. There don't seem to be any lasting ill effects.)

8 — The crew experience brief telepathy. Let each member of the crew pick 20 points worth of Telepathy powers. These only last 1d days — different for each person. (This has happened twice that we know of . . .)

Weird Parallels (Continued)

Bizarro

This world's common name honors the *Superman* comic world in which everything was done backwards. The real "Bizarro" parallel is almost that strange.

The history of Bizarro seems to have followed our own until roughly 1820. Various differences appeared at that point, the most notable being fair treatment — and, before long, faddish copying — of the Indian tribes. In particular, one Indian custom that was picked up was the Plains institution of the "Contrary Societies" whose members did everything in reverse. Over the next decade, it became fashionable — indeed, a cultural requirement — to be weird whenever possible.

Somehow, the Bizarro history remained generally parallel to our own from that point, while becoming a weird mockery in almost every detail. For instance, President Kennedy was impeached in 1963 after he playfully fired a gun from his limousine in Dallas, killing innocent bystander Lee Harvey Oswald. *But* . . . impeachment, on Bizarro, is a high honor, so Kennedy remained in office. *But* . . . he resigned a week later, *because* he had been honored, and Lyndon Johnson became president . . .

Now, in the year 1985, Bizarro technology is early TL7, but its social and cultural life is highly varied. Time Tours offers limited excursions to Bizarro (TL6). The natives don't know that crosstime travel exists, but they are easy to get along with . . . if the visitor is flexible and thinks on his feet.

Continued on next page . . .

Weird Parallels (Continued)

Microworld

In this recently discovered Quantum 3 parallel, *something* very strange happened in the year 1892. Over a period of a few weeks, all mankind, and many domestic animals, *shrunk* by a factor of about 70, to an average height of a little over an inch. Their scientists never managed an explanation, and as yet neither have ours! The various laws of physics that would seem to make "tiny people" impossible have somehow been bypassed.

After an initial period of panic, the world recovered and is now in many ways very prosperous; there are more resources to go around! Ocean and air travel are much harder, of course, since weather is now a much greater hazard. Wars have continued, but there is very little nuclear threat, since the smallest possible atomic bomb is inconveniently large for inch-tall combatants. The Micro year is 1970; they are in late TL7.

Observation of Microworld has been *very* limited, on the assumption that the existence of "giants" would probably crush these peoples' spirits . . . and the fear that the shrinkage might somehow be contagious!

The "Myth" Parallels

These are parallel worlds which correspond, far too closely for coincidence, to myths or fiction of our own timeline. No, nobody has yet found a real Merlin, or Sherlock Holmes, or Captain Ahab. But there is one documented timeline where Robin Hood is a real, living person, and is waging guerrilla war on the Sheriff of Nottingham right now. There is another where a wild Arabian stallion called "the Black" became the most famous race horse of the 20th century, and another where a boy named Tom Sawyer grew up to be a Civil War general and later a Senator from Missouri. There are two where real mermaids are common, and one where unicorns exist and behave toward virgins exactly as myth indicates they should.

The most logical explanation is that some writers are psychics or world-jumpers. All the "myth" parallels are closed to everyone except researchers . . . except for the Robin Hood world, known as Nottingham. Infinity researchers decided fairly quickly that Robin Hood had just been a lot more "real" than anyone thought. That world is now a popular Time Tours destination.

9 — The conveyor appears twice, 1d minutes apart. (This has only happened once. The second conveyor displaced the first one when it was partially unloaded. No one was aboard. Was the duplicate some sort of "mirror" effect, or was it from another timeline? It is unknown what would have happened if there had been passengers. Would they have been duplicated?)

10 — The conveyor is switched with a very similar shipment or conveyor belonging to Centrum.

11 — The conveyor is switched with a very similar shipment or conveyor belonging to some other, as yet unsuspected, race of crossworld travelers.

12 — The conveyor is switched with a shipment or conveyor belonging to some very different crossworld-traveling culture. The mass of the switched shipment is identical, but nothing else need be the same.

Stranded or Crippled Conveyors

A conveyor may be "stranded," unable to travel or even to be picked up by a projector, by a bad jump result which damages it in some way. It may also take damage from accident, sabotage or attack. Sometimes damage simply reduces the conveyor's abilities.

For most purposes, the GM may assume that any damage which penetrates the conveyor's DR (which may be aluminum-thin, or armor-thick) has a 1 in 6 chance of injuring the "drive." Here are two "generic" tables to be used to deal with moderate damage to conveyors:

Is the Damage Detectable?

1 — The damage is hidden: a roll at Parachronic Electronics-4 will be necessary to see it. It can be repaired with a successful skill roll; each attempt takes 1d minutes.

2 — As above, but each attempt takes 1d hours.

3 — The damage is fairly obvious; a roll at Parachronic Electronics will be necessary to see it. It can be repaired with a successful skill roll; each attempt takes 1d minutes.

4 — As above, but each attempt takes 1d hours.

5 — The damage is glaringly obvious; roll at Parachronic Electronics+3, or any Electronics skill at all, to spot it. But it is also severe. It can be repaired with a successful skill roll at -3, and each attempt takes 1d hours.

6 — It is easy to detect the damage; it's hard to find *undamaged* pieces. The unit cannot be fixed.

What Happens If It's Not Fixed?

1 — Conveyor can make one more jump, but will totally fail then.

2 — Operator will be at -(1d) to any skill rolls with this conveyor.

3 — Conveyor's capacity is reduced by (1d×10)%.

4 — Operator will be at -(2d) to any skill rolls with this conveyor.

5 — If the conveyor is not completely enclosed, each passenger or cargo item has a 50% chance of being lost (see below). All lost material will wind up in the same place. If the conveyor is completely enclosed, roll again.

6 — If the conveyor is not completely enclosed, it will pick up one or more interesting items or passengers (GM's choice!). If the conveyor is completely enclosed, roll one die; on a 1, a pickup occurs anyway. See below.

The GM should roll secretly, of course. More detailed tables can be created, but the dramatic effect of the damage is more important than the specifics.

Lost Cargo or Passengers

Cargo and passengers are usually lost only from "open" conveyors, and usually only when they are overloaded, or operated while damaged, or both.

There have been two instances of lost passengers being recovered, alive, from other timelines. Both times the trip was a subquantum one and the survivors were found in another timeline in the same quantum. In both cases, several people and several items of equipment were lost, and all the lost material ended up in the same place.

Accidental Pickups

Much more common is the reverse effect: items or living beings are picked up by conveyors. This is likeliest when the conveyor has been damaged, and is far commoner with open conveyors. It seems to be linked to electrical effects (including, in two cases, the electromagnetic pulse caused by a nuclear blast) in the timeline from which the "foreign object" comes. This accidental pickup seems to have no ill effects on the people, creatures or things picked up.

Lost Conveyors

A conveyor can become entirely lost — that is, fail to arrive where it was expected — for a variety of reasons. These boil down to "operator error" and "bad luck."

If the conveyor was on a regular schedule — or, of course, if it was being picked up by a Homeline projector — then it will immediately be missed. If it was being *sent* by a Homeline projector, everything depends on where it was going.

The Hell Parallels

This is a general term for alternate worlds which have suffered some great disaster or holocaust. Some of these timelines are off-limits due to continuing hazards; others are of interest only to the hopelessly morbid. There are a distressing number of hell parallels!

Atomic Warfare

More than 20 post-nuclear-war alternate worlds have been identified, with results ranging from a dead, radioactive planet, to a frozen ball, to a mutant-ridden jungle. All but two are off limits. In one, dubbed Rubble, the war used neutron bombs, wiping out most of humanity but leaving little radiation. Rubble is being systematically looted of surviving art treasures and refined raw materials. In the other, known as Ragnarok, only about 20,000 survivors remained, ten years after the war, huddled in Antarctic bases away from the radiation. In a massive humanitarian effort, all these survivors were jumped crosstime to an uninhabited world being developed as a special Infinity project.

Disease

On four known alternates, mankind has been wiped out, or nearly wiped out, by disease. Three of these worlds were depopulated by deliberate biological warfare. They are strictly off limits, their coordinates secret. On two of these worlds, the first scout died, despite all precautions.

The fourth world, now called Ariane, was hit by a mutant influenza in its year 1915, with over 99.9% mortality. This "bug" is fully controllable by TL8 health procedures, and Ariane is being colonized, looted and developed, despite occasional skirmishes with tribes of TL2 survivors.

Asteroid Strike

The world called Lucifer, in Quantum 7, was evidently struck by a very large meteorite about 100 years ago, its time. The damage was great enough that few traces of human civilization have survived; no land mammals larger than the rat still exist. Continuing vulcanism has rendered Lucifer's air nearly unbreathable in most areas. There are no restrictions on travel to Lucifer, but no one goes there except scientists.

Sterility

In the 1930s — 60 years ago, local time — the world now called Taft-3 was afflicted by radiation sickness leading to near-total human sterility, apparently caused by a massive episode of solar flares. Civilization fell messily, due less to war than to a gradual collapse of morale. Eventually, every man's hand was turned against every other. Humanity is apparently extinct on Taft-3. The world is open only to scientists and historians.

The IST World

One "weird parallel" that has *not* yet been discovered by Infinity Unlimited is the world of the IST, as described in the *GURPS* sourcebook ***International Supers Teams.*** This world has followed almost the same general history that ours has, despite the fact that metahuman powers have been known since World War II. It is currently in 1991.

It is up to the GM whether to allow the IST world to be discovered and visited. It would no doubt be put off limits quickly, like any world whose people display unusual powers. However, there are two reasons why closer contact might be made.

In the first place, the IST timeline has a stable world government which has repeatedly demonstrated its commitment to peace and its ability to use controlled force against aggressors. If Infinity Limited could ever trust any outtime body, it could probably trust the IST's U.N. — and the two organizations could give each other a lot of help.

In the second place, among the metahumans of the IST world there might very well be some with the World-Jumper ability (see p. 32). If that happens, the first contact might come from the IST side!

The Evil IST

An alternative possibility: Suppose that the U.N. of the IST world is corrupt, as outlined on p. 59 of ***International Super Teams.*** Some of the IST supers would be knowingly evil; others would be unwitting pawns of the rulers. In a case like this, Infinity would be torn: Keep a hands-off policy and pray they never develop world-jumping, or try to hit them first?

Loss of a regular supply run to a viewer-equipped base will be reported immediately. Loss of an explorer mission might not be noticed for days or weeks.

And a conveyor on no fixed schedule — such as one assigned to a trouble-shooting team of the sort that might comprise a PC party — could be missing for months before anyone realized they had dropped out of sight.

The sooner a conveyor's loss is noticed, the better the chances are to recover it. The Infinity Unlimited computers can get to work on the problem, taking into account every known variable, down to the exact mass and capacitance of the conveyor. Sometimes they can predict where it might have appeared. If they're lucky, it is a charted, habitable timeline.

But sometimes it's not. Occasionally the computers can predict a location anyway — and, in fact, several new timelines have been discovered that way. But randomly being dumped onto a brand-new timeline, while it makes a great adventure, is a trip most crosstimers would rather avoid.

Lost/Moved Timelines

This is not an operator-created problem — but when it happens, it causes operator headaches! See pp. 88, 106.

Paradoxes

Paradoxes don't happen, because this is *not* real historical travel. (A continuing nightmare of some of the more imaginative types: What if one of the historical parallels is really, somehow, our own past, and we change it without noticing? But it hasn't happened yet.)

However, in a "echo" — a timeline that duplicates our own history — any intervention that changes the flow of events can lead to a *quantum shift,* which is an expensive nuisance at best, a disaster at worst. See pp. 88, 106.

Infinity Unlimited

Infinity Unlimited, usually called just "Infinity," is the entity through which Dr. Van Zandt and his chosen aides (the "Infinity Council") exploit and attempt to control the fruits of parachronic technology. It is a huge, wealthy organization; it is not always efficient, but it is effective.

Any use of viewers, conveyors or projectors is under the direct supervision of Infinity Unlimited, and licensing fees *are* required!

Infinity has a number of subsidiary organizations which perform different tasks. They usually cooperate closely, though communication breakdowns and low-level infighting are not unknown. And, no matter how carefully the employees are screened, there is always the chance that among them are Centrum agents, agents from governments and corporations, and ordinary thieves — leading to adventures with no outside enemy.

Parachronic Laboratories

This is a pure-research organization, dedicated to improving both parachronic hardware and our understanding of the mathematics behind crosstime travel. Agents of any Infinity organization might be asked to test prototype equipment produced by "Paralabs." And when the party survives some new and devastating conveyor accident, Paralabs researchers will be in the middle of the investigation . . . probably demanding that the victims do it all again, more slowly.

White Star Trading

The original interworld trading company, and probably still the biggest. Van Zandt financed most of his original development by trading back and forth with a single world. White Star now has offices in *hundreds* of dimensions, always

disguised as ordinary businesses. Some are small, handling a few hundred pounds of rare commodities a day. Others ship hundreds of *tons* of grain or ore every day, loading them onto barges which go out of sight of land and then jump between worlds.

Infinity Development

This organization is responsible for parceling out "trading territories" among the timelines. When a new world is opened for commercial exploitation of any kind, interested parties must submit bids to ID. Cash is *not* the only consideration; the bidder must also show how they will protect the local environment and population, keep security, and so on. Outworld installations are always subject to inspection by either ID bureaucrats or I-Cop agents — or both.

Many Homeline organizations object very strongly to the implication that Infinity "owns" the other timelines . . . but that's the way it works.

Miracle Workers

This is the non-profit "do-gooder" side of the organization. Miracle Workers is heavily financed by profits from other parts of Infinity, as well as by outside donations; still, there is never enough time or money to help everywhere. And — to the great frustration of the Miracle Workers staff — any attempt to help out in the historical echoes is completely prohibited, for fear of shifting the timeline (see p. 106).

Miracle Workers is nonprofit, but not stupid. When disaster victims are resettled, for instance, they are usually required to pay their way — usually by working for other Infinity operations. Though there's no such thing as a free lunch, the contracts are always more than fair to the people being helped.

Vaccines, antidotes, food crops, etc., are also supplied where they will do good. The biggest challenge faced by Miracle Workers is covering their tracks, except in those rare (and usually depopulated) timelines where Infinity simply moves in and takes over.

The Infinity Patrol

The "I-Cops" are the enforcement branch of Infinity Unlimited. They are a large organization, with *at least* 10,000 agents in the field. The I-Cops are not just paramilitary; they are overtly military in organization and mission.

An I-Cop field agent may be an "agent" type of character (see p. 21) — but he may also be a soldier. The general mission of the Infinity Patrol is to protect Homeline against any misuse of parachronic technology. It does this in four ways:

Outtime policing. Inevitably, Homeline governments and corporations will use the timelines in "wrong" ways — exploiting natives, wasting resources, importing mercenaries and equipment for military adventurism. And this happens constantly, despite the I-Cops' best efforts. But they keep trying.

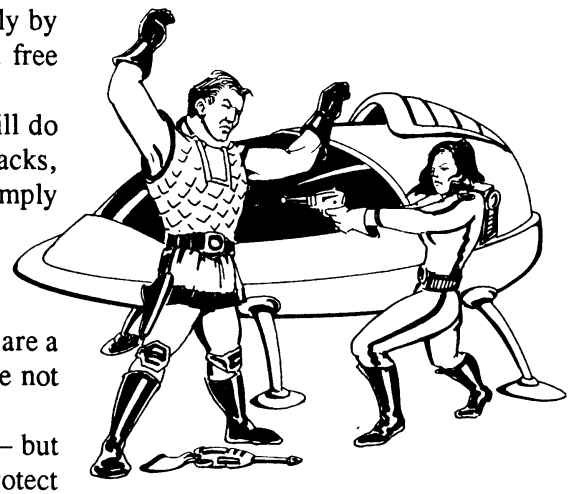
Homeline security. Even one mobile conveyor in the wrong hands could lead to disaster for Homeline. Imagine a bomber that could jump into an empty timeline, cross a border undetected, and appear over its target just long enough to release a deadly payload.

But nothing like this has ever happened. It is generally understood that the I-Cops have more going for them than just vigilance . . . that there are ways of detecting, and possibly even preventing, intrusions over a fairly wide area. But the I-Cops absolutely refuse to discuss this.

Outtime security. A key pillar of Infinity's policy is this: no timeline outside our own is to learn that cross-time travel even *exists*, let alone *use* it, except

Enigma

On July 12, 1982 — which was 26 years ago, by their time — the entire population of the world now called Enigma . . . vanished. We discovered this timeline in 2012. Six months of careful study produced no evidence as to what happened. The Council declined to appropriate funds for further investigation, and has declared the world off limits.



Dead Worlds

A "dead world" is an alternate which was never alive. It wasn't destroyed by a disaster; life just didn't develop. Dead worlds do not have a breathable atmosphere.

More than two dozen of these worlds are known. They are useful only for mineral exploitation (they have petroleum, which has shattered the dead-dinosaur theory of oil deposits). They are also a convenient dumping ground for wastes too loathsome to keep on the same world with any human being.

under close control. In practice, that means that careful recruitment from other timelines is all right, but any large operation must be disguised or concealed. There are exceptions, of course; there are always exceptions. But in general the secret is kept. If an outworld trading office is revealed as strange or suspect, for instance, the problem *must* be "explained away" quickly in local terms. If that is impossible, it is supposed to close immediately and untraceably. If that doesn't happen, the I-Cops can close it down.

The Infinity Patrol will go to very great lengths to protect the secret. It won't murder, but it *will* kidnap someone who knows too much, and leave them in Coventry, the "isolation" timeline (see sidebar).

Defense against Centrum. This includes counterespionage against Centrum spies, espionage to try to learn more about the enemy, and, of course, the most "romantic" job in the Infinity Patrol: defending the echo timelines against sabotage. See pp. 88, 106.

World-Jumpers

Infinity has seven people with this ability (see p. 32) on its payroll, and is always on the lookout for more. It also has dossiers on 12 known world-jumpers, not all of them from Homeline, who are *not* its employees and don't want to be. Some of them are criminals, some are opportunists, and some are just too individual to put their talents at anyone else's service.

The Infinity world-jumpers are top couriers and troubleshooters, of course, because they don't need conveyors. They *can* ride in conveyors if they need to, which makes a convenient way to learn new worlds.

The "quantum" levels of alternate worlds do not imprison the world-jumpers in quite the same way that they do standard parachronic devices. Jumps within the same quantum are no problem; jumps to adjacent quanta cost 10 fatigue. Jumps two quanta away are not possible. But a world-jumper *can*, in a series of jumps, reach quanta where our machines cannot go! However, the huge fatigue cost of such a jump (20 points, which would reduce *anyone* to exhaustion) makes it even more dangerous than a "normal" blind jump. Infinity has already lost one world-jumper on an exploratory mission, and seems unwilling to risk the two remaining jumpers who are capable of visiting new worlds.

A world-jumper can automatically "feel" what quantum he is on. A few jumpers can handle an object and (sometimes) go to the world it was from, even if they had never been there. But no known Jumper can visit a new world simply from its description, or by knowing the mathematical settings a conveyor would take to get there. Similarly, there are several worlds which can be reached *only* by jumpers; the proper conveyor settings haven't been found yet. For jumpers, finding a new world seems to be very much trial and error.

Rescue Missions

There are all kinds of reasons why a crosstime party might fail to make it back on time, ranging from the trivial (conveyor blew a fuse) to the disastrous (party was eaten by dinosaurs, or taken hostage by renegades, or burned as witches). There's also the chance that the party interfered with history and caused a timeline shift (p. 106).

When a party fails to check in, the I-Cops will send out a rescue mission. There is no "standard" rescue team; it depends on the timeline and, frankly, the importance of the people who are stuck out there. The minimum response (say, for a party in 1700 Tahiti) is two junior troubleshooters with a tool kit . . . but

they still carry Uzis, *just in case*. For some timelines, the *first* response might be three armed shuttles, with a 50-man troop-carrier ready to launch as a backup.

The I-Cops may not be called immediately if the missing party belonged to some group other than Infinity. Time Tours (see p. 108) has its own reaction force. Other groups and governments have their own security forces as well — some are competent, and some are likely to make the problem worse.

A rescue mission is a good, and potentially violent, adventure. And remember . . . if there wasn't already a timeline shift, a massive intervention might *cause* one, which will create new problems.

If no rescue is possible, then a whole different adventure starts. See *Marooned!*, p. 112.

Penetration Missions

The Penetration Service of the Infinity Patrol (informally, the Time Scouts) is responsible for checking and opening new timelines. New timelines are discovered mathematically, though a lot of trial and error is also involved.

The first entry into a new timeline is always made by robot, with a complex chemical and biological sensing package. Many timelines get no further visits . . . they're not suitable for human life. But when a timeline *looks* safe, a human has to go in.

The first scout's job is to get in, look around, and find out whether the timeline is inhabited — and, if so, by who or what. If a timeline is uninhabited, it can be classified (see p. 88) for colonization or other use, and turned over to Infinity Development.

But if the timeline is inhabited, it remains the property of Penetration, and survey proceeds very carefully. The first scout isn't expected to bring back anything more than an estimate of TL and a recorded sample of the language. Later teams learn a bit more each time. If the timeline is similar to a known parallel or historical period, experienced agents can be brought in quickly. Otherwise, the timeline must be explored a careful step at a time. The higher its technology, the more careful the explorers must be.

Normally, only *very* well-penetrated timelines are opened up to organizations like Time Tours. Usually these are on Quantum 4 and 5, where Centrum's agents cannot reach. But many of the Q6 echoes are also (carefully-supervised) tour sites.

Naming New Worlds

When a new timeline is first located, it is given a code number based on its "frequency." A world which is penetrated and explored is usually renamed, informally, by the researchers. Eventually, a name sticks well enough to become official.

Unauthorized Penetrations

Beyond a doubt, organizations other than the Penetration Service have entered and explored new timelines. This is grossly dangerous, strictly illegal, and potentially very profitable. When an unauthorized penetration is discovered, the I-Cops go into action immediately. The policy is to close the penetration down instantly if the Secret seems likely to be breached . . . but otherwise, to penetrate the penetration, in order to roll up the entire gang and not just the field agents. An experienced Time Tours guide or retired scout might be approached for such a mission, and could accept either as a criminal or as a double agent.

Penetration Adventures

An adventure, or a whole campaign, can be built around the first penetrations of a new timeline — especially if it is has high technology and is *not* a close

The Worlds That Break The Rules

Out of the hundreds of timelines that have been explored by Infinity, a very few are different in . . . well, in a *different* way. These are the rules where physical laws don't work in the way we think of as "normal." GMs can create new Weird Worlds as needed to support unique adventures.

The best-known examples are the worlds where crosstime travel, itself, works differently. Earth and Centrum are the only known timelines from which a projector can operate. Coventry cannot be reached by any means except projector. There are several other worlds with less spectacular differences.

But there are also timelines where gross physical laws are different. To start with, there are several worlds where *magic*, or something very like magic, works. All these worlds are now strictly off-limit except to a very few researchers, and their very existence is a secret — though, of course, there are rumors.

Microworld (see sidebar, p. 96) is another example. There are several scientific reasons why inch-tall people should be impossible. None of these reasons seems to apply on Microworld.

There are two worlds in which the speed of light is measurably greater by some half of a percent, and one in which it is less by almost a full percent. These timelines seem otherwise normal.

There is one Quantum 3 world in which no technology higher than "simple mechanics" works. This timeline, codenamed Rustic, is inhabited by humans, who have progressed to TL4 and seem unlikely to get any farther. Essentially, it is impossible to produce an artificial electrical discharge on Rustic. This timeline was discovered by a world-jumper; if a conveyor had gone there instead, it wouldn't have been able to return, and Rustic would no doubt have been written off as a deadly setting.

The Deadly Settings

There are also, at last count, 41 projector/conveyor settings which show all the signs of validity — in other words, they seem to correspond to real timelines. But nothing has ever returned from a trip to these worlds.

Some researchers speculate that these are worlds where the physical laws are *very* different, killing visitors immediately and crippling their machinery. Of course, no such elaborate explanation is necessary; if a conveyor pops into the heart of a sun, it will be destroyed instantly by perfectly normal physical laws. But we *know* that some worlds have alien physical laws; it's easy to imagine that some of these might be deadly.

parallel. One of the first steps is to grab a daily paper . . . Imagine the gradual penetration of, for instance, a world in which the Nazis won World War II and it is now 1960.

Keeping the Secret

It's reasonable to expect highly trained Infinity Unlimited personnel to keep the secret of parachronic travel. But when a crowd of tourists goes charging off into another world, there's always the *strong* likelihood that somebody will let something slip.

Of course, tourists are warned in advance, and constantly reminded during the tour. And Time Tours rarely goes anyplace *really* sensitive. When they do, they take *lots* of guides (and charge *lots* of money.

Still, mistakes happen. When a tourist Says Too Much, the guide on the spot has to try to cover it up; time for a Fast-Talk roll. Some of the best lines are:

"An ordinary drunk is bad enough, but a drunk science fiction writer is hell to deal with. You think that's crazy, you should have heard him yesterday when he was the reincarnation of the Angel Gabriel."

"Yes, she's quite mad. It's shocking. The family really wouldn't want it known that she was babbling again. Here's a crown for your trouble. Thank you for your understanding."

"Great reaction. Let me get your name and address and we'll get back to you. Yes, you're on Psycho Video!"

If the outtimer won't laugh it off, sterner measures must be taken; see the next sidebar.

Outside Organizations

Many different organizations, both government and private, have access to cross-dimensional conveyors. All these units are theoretically under the control of Infinity Unlimited and are open to I-Cop inspection at any time. In point of fact, conveyors are often reported as "lost" and converted to covert use — or just stolen by untrustworthy agents or employees. These are a constant headache to the I-Cops.

More than 30 different organizations have their own projectors. Fortunately, these are easier to police, and every projector has a 24-hour I-Cop monitoring team.

The United Nations

The U.N. has found itself with less and less to do, with many of its functions being usurped, often undiplomatically, by Infinity. However, the U.N. maintains a parachronic capability specifically for the purpose of intervening in other timelines to aid world peace. They have one projector located in upstate New York, 26 assorted mobile conveyors, and approximately 100 agents. At any given time, the U.N. may be actively intervening in two to four different timelines. Usually any U.N. member will protest an intervention against its cross-time analog, so most interventions are in very different parallels, or are designed simply to help the "local" U.N. survive and grow.

Governments

Several national governments (most notably the USA, Japan, Germany, Russia, Mitteleurope, China and the United Kingdom) have a large "official" parachronic capacity, with their own projectors and large conveyor fleets. In addition to mining, waste-disposal and research projects, the governments all maintain "colony" worlds, on permanent lease from Infinity (see p. 104).

To Infinity, the biggest problem with the governments is their unceasing nibble of "deniable" secret operations, as they constantly try to escape from the limitations Infinity places on them. Each major government maintains a covert parachronic capacity which could be used for secret exploration, weapon testing, outtime exploitation, and even for war. Conveyors can be built secretly, and are; I-Cops often run into highly-trained agents who they *know* came from Homeline. Sometimes they can prove it.

Projectors can also be built secretly, but so far no one seems to have done so on Homeline — again, giving rise to speculation that Infinity has detection methods it isn't revealing. And so far, no projector built off of Homeline has worked.

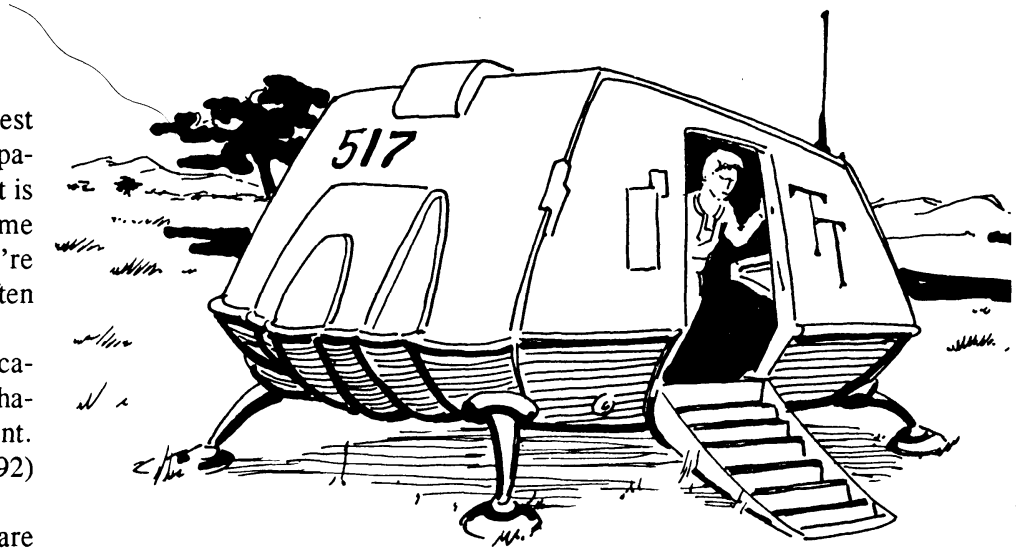
Research Foundations

The worlds of alternity are fertile ground for research. Scientists can study totally unspoiled biomes . . . or worlds that have been totally destroyed by a dozen different disasters. Infinity will permit almost any kind of non-destructive research. And, if the proposal is well enough written and the gains seem to be great enough, Infinity would probably allow a little scientific destructiveness.

But by far the most research has been historical and social. The historical parallels offer answers to dozens of intriguing "what if" questions. And the echoes offer — or at least *seem* to offer — a window into Earth's own past!

Thus, there are many, many expeditions mounted to these worlds, to observe and learn. But they are bound by very strict rules. The secret to the parallel worlds must be kept hidden . . . and the history of the "echo" worlds may not be changed, lest those worlds be lost to us (see p. 106).

Corporations



Time Tours, Ltd.

Time Tours is by far the best known of the "independent" companies using crosstime technology. It is fully described on p. 108. Time Tours has competitors, but they're not different — just smaller and often shoddier.

Similar companies offer vacations, rather than tours. They emphasize luxury rather than excitement. Johnson's Rome (see sidebar, p. 92) is the best-known of these.

Crosstime hunts (see cover) are also available for the sportsman who wants a really unique trophy.

Miners

Many huge operations exist solely to wrest mineral wealth from uninhabited timelines. Most of the mining leases granted by Infinity are for otherwise-worthless worlds; some mining worlds are uninhabitable without artificial aid. But there's a great deal of wealth to be had by mining . . . and several good timelines have been raped, in secret, by greedy miners.

Traders

Many corporations of all sizes are getting rich by crossworld trading. Goods that are cheap on Homeline are often valuable elsewhere . . . and vice versa. But, as always, the secret of Infinity must be kept.

When a new timeline is opened up, the traders' agents are the first in, looking for new goods and new markets. Some are unscrupulous, even dealing in slaves and drugs; others are the best allies the I-Cops have.

White Star (p. 98) still dominates the interworld trading scene, but there is so *much* business that there's no need to hog it all.

Waste Dumpers

Only the real hell-worlds — the worlds that can't get any worse — are used for waste dumping. Radioactives, toxic chemicals, biological waste . . . various sorts of noxious brews too foul to stay on an inhabited planet . . . now don't have to. The greatest precautions must be taken to make sure that these wastes can be transported to the projector site in safety.

Wealthy Individuals

A few very rich individuals own conveyors, simply for hobby purposes. The actual crews are all Infinity employees; theoretically, this will prevent any flagrant misuse. Most of these people are simply tourists, collectors, or sybarites who want to enjoy lording it over some "backward" setting.

Keeping the Secret: Eraser Drug

Sometimes fast talk just won't do the job — especially when an outtimer actually sees visitors appear and disappear, or witnesses some use of Homeline technology. The preferred reaction then is to make them forget, and Infinity has an excellent drug for the purpose: Eraser.

Eraser is a sedative and short-term memory blocker. It will permanently destroy all his short-term memories for (5d+45) minutes before he was dosed. Thus, if an I-Cop or guide can get Eraser to someone *quickly*, there will be no harm done.

Eraser has no untoward side effects, even in massive overdoses. However, because of its potential for abuse, it is *very* tightly controlled. It is not officially for sale at any price, and authorized users must account for every single dose used. Still, it turns up on the black market at an average price of $500 per dose.

Eraser may be delivered in pill form, or as a quick-dissolving powder for use in liquids (knocking the victim out in HT/2 minutes) or in hypodermic or tranquilizer-dart form, suitable for firing from a disguised air-gun (knocking the victim out in HT seconds). Special troubleshooting teams also have Eraser gas grenades that can deal with a whole roomful of people at once, also acting in HT seconds.

All authorized users of Eraser are given a treatment which makes them permanently immune . . . just in case.

Crosstime Colonies

Infinity has opened several beautiful but empty worlds for colonization, and some companies have leased good worlds and then sub-leased them to pioneers. These colonies vary from Tech Level 4 pioneering to fully modern. Colony worlds have also been sponsored by several governments. Most of these are simply outlets for excess population, but some (five sponsored by the USA, three by the United Kingdom, and one each by Mitteleurope and Japan) are deliberate attempts to set up alternative societies. One, called Uhuru, even declared its independence from the USA and made it stick.

Beyond a doubt, there are "secret" bases and whole colonies — sponsored by governments, by corporations, or just by organizations that have somehow stolen a mobile conveyor. Some of these are hidden away on known timelines; others are on worlds as yet unknown to Infinity. Some have special purposes — mining, trading, research. Others are just groups of people trying to get away from it all.

Keeping the Secret: Extreme Measures

When someone has seen too much and Eraser won't solve the problem, troubleshooting teams may have to be called in to deal with the security leak. Infinity has made it very clear that they *will not kill* to protect the secret. Many doubt that that's true . . . but certainly Infinity will go to great lengths to avoid killing.

The precise action depends on the person involved. Sometimes a "logical explanation" can be provided. The victim can be convinced that he didn't see what he thought he saw . . . or that it had a mundane explanation. A patriot might be told "Yes, you saw it. It's a vital government secret. Please never tell anyone!" Often this works!

If the victim had actual evidence, he will sometimes be silent if the evidence is destroyed . . . and very few precautions will hold evidence safe against a raiding party from Homeline.

Threats and blackmail may succeed, though they're risky; the victim might have a change of heart later. It's usually safer to discredit the person so that nobody will *believe* what he says. There are many ways to do this, including drugs that create temporary insanity.

The more clever and elaborate the troubleshooters' plan, the likelier it is that something will go wrong. One of the easiest solutions, when possible, is for the target to vanish. He is kidnapped . . . and taken to Coventry.

The Manor Worlds

A few very rich lovers of nature (or of privacy) live on the "manor" worlds, each divided up into a few thousand private estates. If you're wealthy enough, you can have your own private Hawaii, or Ozarks, or St. Tropez, or Jamaica — and be an instant commute, by conveyor, to Homeline!

Centrum

The enemy, across the infinite dimensions, is a world called Centrum. This is the only other timeline, as far as we know, that has developed parachronic science. Throughout the worlds, agents of Centrum intrigue against our own Infinity Patrol agents for domination of all the alternate timelines.

We do not know Centrum's history in any detail. It is a world government descended from a united Anglo-French Empire. The exact point of divergence from our history has not been identified, but one of the last historical figures to exist in both worlds was Eleanor of Aquitaine, who either created or stabilized the Empire and ruled it for over 20 years.

The Empire grew and expanded, dominating Europe before 1700, Africa and Asia before 1850. The New World was colonized in an orderly fashion; the Indian tribes were enslaved or destroyed.

Around 1900, the Empire collapsed in a worldwide civil war; the aristocracy had become decadent, and with nothing left to conquer they turned on each other. The war proved to have been engineered by members of the technical and military class. Educated, trusted and trained to serve, they had grown contemptuous of their titled masters, and removed them efficiently. Fifty years later, world government was restored: a harsh meritocracy called the Centrum.

The rulers of Centrum value science, order, and power for its own sake. Children are constantly tested and re-tested; all training and promotion is based on talent and achievement.

Language

The native Centran language is a heavily-accented dialect of English. Speakers of English can understand it at -2, or learn it as a separate Mental/Easy skill (and vice versa for natives of Centrum).

However, two generations ago, Centrum wiped out all other languages on its own world. This puts them at a very great handicap in penetrating worlds or areas where the language is unlike English. Until recently, they did not even have a science of linguistics; they didn't need it! They are now experimenting with methods of teaching language quickly, but right now, any fluent speaker of, say, Japanese is certainly not a native Centran.

Technology

Centrum's technology is basically TL8. Like us, they have had over a decade to travel the dimensions, learning from other advanced worlds. In general, assume that our medicine and entertainment technology is a bit better than theirs. Their weapons and interrogation technology is often a bit better than ours. Our parachronic capabilities seem to be effectively the same, but they have a better understanding of basic theory; see below.

Characters

A Centran agent can be built on anywhere from 75 to 200+ points, depending on rank. Centrans may be of any race, though Anglos predominate and Indians are very rare. Centrum makes no social distinction between sexes, so half their agents are female.

Significant peculiarities about Centran agent characters: First, they will not have high skills in any language except English, and are very unlikely to know anything at all of Oriental, Indian or African languages.

Almost without exception, they have a Fanatic loyalty to Centrum.

They are quite likely to have bionic implants — Centrum itself is fabulously wealthy, and can equip individual agents well.

They will kill mercilessly if necessary, but it is not true to say they have "no regard for human life." They respect talent, and will often try to recruit talented outtimers. They have normal human feelings of loyalty toward friends, desire to protect children, and so on. They are not monsters or machines.

Keeping the Secret: Coventry

Coventry is the "isolation" timeline of the Infinity Patrol. It is a Quantum 3 world in which humanity didn't develop. But there is something much more important about it: unassisted conveyors can't enter or leave it. Neither can world-jumpers. Nobody knows why, but it is a useful peculiarity, because it means the only access to Coventry is by projector-assisted conveyor from Homeline.

Thus, the I-Cops can use Coventry as a place to maroon people who Know Too Much. It is a comfortable exile, maintained at Tech Level 4 to 5 in most things, with medicine at 8.

Many of the inmates are people who stumbled onto an Infinity operation, or another licensed Homeline operation. Others are Homeline offenders against Infinity regulations — especially the operators of unlicensed conveyors — along with their "native" accomplices and dupes. A few are scientists from other timelines, kidnapped because the I-Cops feared they *might* be coming close to developing parachronic technology. And some are disgruntled ex-employees of Infinity itself!

Not everyone on Coventry is a foe of the I-Cops. Many settlers there are volunteers, rescued from out-time disasters. They have been given homes on Coventry, and their only obligation is to live and be happy — and warn the Patrol when the exiles are up to something. Since the exiles have no way of knowing who is a "ringer," most of them simply resign themselves to their fate.

All sorts of adventures are possible on Coventry . . . including a rescue attempt from within Infinity, by employees who are morally opposed to the whole concept.

Effects of Tampering With Echoes

For game purposes, assume that very minor changes will not create a shift — or, at least, it won't happen immediately. If outtimers, either PCs or NPCs, do something that the GM thinks might "change history," roll 3 dice.

If the tampering was a deliberate effort of Centran agents, add 3 to the die roll result. The GM may also add from 1 to 5 to the result, depending on the apparent importance of the change:

Under 9: no result — but add 1 to any further roll made within a week.

10, 11: no result — but add 2 to any further roll made within a week.

12, 13: no *immediate* result — but if the change is not reversed, roll again in 1d×10 hours, at a +2. This modifier is cumulative if rolled more than once!

14, 15: A shift of 1 quantum, but not immediately — see below.

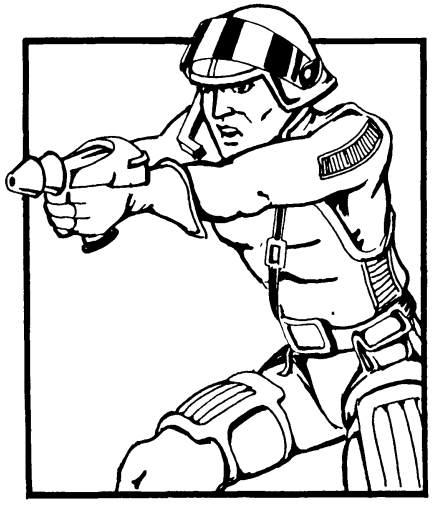
16, 17: A shift of 2 quanta. See below.

18 or more: A shift of 1d quanta, minimum 3. See below.

If there is a shift, it will never be immediate. The GM rolls secretly on the table on the sidebar on p. 107 to determine how long it will be before the shift, but ignore the modifiers given there for its quantum level. If the change is effectively reversed before that time, the shift will not take place.

The *direction* of a shift is chosen randomly unless it was caused by Centrum agents in accordance with a specific plan. In that case, there is a 5 in 6 chance the shift will be to a higher quantum — that is, toward Centrum!

Any shift will result in the timeline becoming *lost* — see p. 107.



Crosstime Conflict

Centrum is in Quantum 8. They can reach Q7 and Q9 fairly easily, Q6 and Q10 with difficulty. So our territories "overlap" at Quantum 6 (easy for us, hard for them) and Quantum 7 (hard for us, easy for them).

One might think that would provide a natural border. Unfortunately, it doesn't work that way. For one thing, Centrum just doesn't seem to be nice people. For another thing, Quantum 6 seems to have many more usable worlds than all the others put together. We don't have any idea why.

Centrum has apparently had crosstime travel for longer than we have, but used it mostly to enter empty worlds for resources. Their mastery of parachronic mathematics is definitely better than ours. They can apparently detect whether a timeline is unstable, and plan an intervention that will push it in the direction they want. We can't do that — or, if we can, nobody outside the top levels of Infinity knows it.

We did not even become aware of Centrum's existence until 2006, when an intruder was captured in one of Infinity's most secret labs. He told a very strange story under truth serum!

That first agent was released with an offer of friendship. Centrum immediately accepted, with apologies for their earlier penetration of our territory. It quickly became obvious that their "friendship" was entirely treacherous; they didn't have enough experience in true cooperation to fake it believably. In 2007, they "stole" four of our timelines from Quantum 6 — see p. 88. By 2008, the "dimension war" was a reality.

Apparently Centrum does not have "historical echoes" of the sort that we do . . . or, if such echoes exist, they are in a quantum we can't reach. This deprives us of a possible source of insight into Centrum's psychology.

Interestingly, Centrum seems to be at the exact same "time," measured by the stars, that we are. Could this be connected with the fact that it is the only known timeline, other than ours, that will support a parachronic projector? Nobody knows.

Timeline Shifts: Changing "History"

Anyone visiting an echo is carefully cautioned against doing anything that might make a significant change in the timeline they are visiting. The reason has nothing to do with ethics. It's a question of safety. A significant change can cause the whole timeline to "move" to a different quantum level. And Centrum has agents in many echoes, *deliberately* creating significant changes to move the timelines closer to their own.

Note that we haven't defined "significant" change. That's up to the GM, because nobody *knows* what kind of change is really significant. Studies have shown that the mere presence of a group of strangers doesn't seem to make much difference (historical inertia and Strange Attractors again). But there's always the chance of hitting a key moment in history; the visitor to reflected 1938 Washington gets the last seat on a subway, so a senator is late to a meeting with the President, so a key military appropriation fails . . . so when World War II comes along, the U.S. loses.

In general, if a change seems like it can lead to a distinct "what if" variation in history, it's significant. And a really major change (somebody smuggles back a nuke and takes out Rome) *cannot* be fixed, and you'll just have to ride it out. In such a case, the GM can also apply a penalty to the roll to decide whether the timeline is shifted.

If a significant change does take place, and is not fixed within a day, the GM rolls 3 dice, with results as shown in the sidebar.

Results of a Timeline Shift

A timeline shift is *very* inconvenient. Even a one-quantum move means that no conveyor can make it home on its own; the party is stuck.

The shift cannot be detected by those on the world, except for World-Jumpers, who will know instantly. Homeline won't notice anything until the party fails to return on time, unless another trip is scheduled to that timeline in the interim.

And, when they dispatch a rescue team, the target timeline *won't be there any more.* The rescue team's projector or conveyor won't get a lock, and won't go anywhere. And a squad of technicians, cursing, will start calculating and probing to find out where that timeline has gone.

The time required to relocate a missing timeline depends on where it has gone! Roll on the table in the sidebar.

World-jumpers who are familiar with the timeline each get *one* attempt to find it, at -4. If they succeed, they can take other jumpers there, and can determine what quantum it is now in, halving the time required to relocate it. World-jumpers *on* the timeline can leave with no problem.

If a Quantum 6 timeline is shifted to Q7, it will immediately be invaded by Centran agents who will attempt to kill or capture all Homeline personnel, as the first step toward developing the line as a satrapy of Centrum. This will sometimes be an overt attack; more often it will be undercover (probably to avoid any chance of the line bouncing back where it came from). Since Q7 is accessible by regular quantum conveyor from Centrum, and only by two-quantum conveyor from Homeline, the Centrans can quickly outnumber the defenders.

If a timeline is shifted into Quantum 8 or higher, Homeline personnel are simply trapped, unless they can somehow steal a conveyor or otherwise get to Quantum 7 or lower.

GMing an Intervention Adventure

Trying to stop a Centrum intervention makes an excellent adventure for a PC team of I-Cops. The GM can make the following assumptions:

First, the enemy agents will be outnumbered and secretive. It is difficult and expensive to send anyone from Centrum to Quantum 6.

Second, the enemy plan will require split-second timing . . . because, if it didn't, they would have pulled it off already. Whatever the Centran method of computing an intervention, if the answer was always as simple as "Nuke London in 1902," they'd succeed a lot more often. However, the enemy *will* have backup plans.

Third, the field agents will be given some general information about the enemy penetration. The means by which their superiors get this data is none of their business! They'll simply be told, for instance, that "It's 1453 on echo Sigma-6A. There's evidence of Centrum penetration in Germany. If they're working close to home, their target might be Gutenberg's printing press . . . other teams are checking out other possibilities." And, of course, that's one reason that counter-intervention teams are small . . . Homeline has to check out *everything.*

If the Centrans pull off their intervention, roll on the table on p. 106 to see if it worked, and how long it takes to come into effect. Note that the shift will never be instant — the Centrans have to stay in place at least until the shift, in order to protect their work! And even after the shift takes place, there is a chance it can be reversed if the effects of the intervention can be counteracted.

Intervention in Reverse

The GM can turn the whole thing around by assuming that a string of Centran echoes has been discovered in Quantum 7, and Homeline strike teams

Time Before a Shift, and Time to Find a "Lost" Timeline

Roll 3 dice on the table below. When determining how long it takes to find a "lost" timeline, modify the roll as follows:

+1 if it is now in Quantum 4 or 6.

+3 if the timeline is now in Quantum 3 or 7.

If the timeline is now below Quantum 3 or above 7, it won't be found.

6 or less: 1d days.
7, 8: 2d days.
9: 1d weeks.
10 — 2d weeks.
11 — 3d weeks.
12 — 3d × 2 weeks.
13 — 2d months.
14-16 — 2d × 3 months.
17 or more: Two years, plus two more rolls on the table!

All this assumes that Infinity is doing the searching. If Infinity is not *aware* of the lost timeline . . . e.g., if it was a secret development of some government or corporation . . . add *at least* a +4 to the roll. Many clandestine operations would not have the facilities to find a lost timeline if they had 20 years to do it.

This also assumes that all the searching is being done by a faceless team of researchers. If a PC scientist (or important NPC) is involved in the search, he may attempt one Parachronic Physics roll. For every point by which he makes his roll, *subtract* 1 from the search roll.

Mysteries

The infinite timelines are still not well understood, and situations that "break the rules" can be interesting springboards for adventure. The PCs don't even have to solve the mystery; they just have to survive.

Boojum. A perfectly ordinary timeline, *not* an echo and *not* on Quantum 6, vanishes. Four months later, it reappears. Six months later, it vanishes again. So . . . *something* can quantum-shift an ordinary timeline. Or maybe this timeline isn't ordinary! Either way, the Homeliners on Boojum are in a panic, as are the administrators and researchers at Infinity.

Centrum Beta. A newly-penetrated Quantum 7 timeline seems to be exactly like we *think* the world of Centrum was in the year 1910. Could it be an echo? Even an ordinary parallel would be interesting. Either way, why is it the only one we've ever found? And remember, Quantum 7 is more accessible to Centrum than it is to us; there are almost certainly Centran agents here.

Blip. This timeline seems to have a different time-flow speed . . . sort of. A day spent there is equal to only six minutes and 12.5 seconds elsewhere. The world is inhabited; its people are currently at TL3, but they're advancing quite rapidly!

have been sent out to mess things up. Just work it all in reverse. The Homeline team will be given a specific assignment; the computers predict that if it is carried out, the timeline will shift in a useful fashion. The Centran opposition will consist of lots of small teams, but if one is put out of the way in an *obvious* fashion, it will tip off the defenders, who will reinforce the area very heavily.

Time Tours, Ltd. (or, If It's Tuesday This Must Be 1066)

. . . so Flaherty comes into the Guides' Lounge looking like he's just done the Sack of Rome with fifty Boy Scouts in full kit. He gets a double bourbon and he does not sip it, and then he sits down across from Ringgold and me and moans.

"Thirty Years' War?" Goldy says helpfully.

"Roaring Twenties?" I say.

"Camlann," Flaherty says, and moans again, and Goldy gives him a big sisterly hug. Camlann is one of the bad ones.

In case you don't recall, there is a note in English history that in the first third of the 6th century there was a battle at Camlann, where Arthur and Mordred (well, it says Medraut really, but you know how those chroniclers were) died. We have a pretty good date and a good location.

Now it says in very big print in all our informational brochures that our standard tours are strictly historical. We can do alternates, might-have-beens, should-have-beens, or wish-it-wases, but when you sign up for the historical tour, you get straight vanilla.

So you see, when you find out that King Arthur is not wearing the sort of jointed full-tinplate armor they will not invent for another thousand years or so, and his sword shows no sign of ever having been in a lake or a rock, and the French have not yet written Lancelot in there at all, you are not entitled to a refund in whole or in part, Terms of Service section three, paragraphs one through five.

But back to Flaherty, who was saying, "One of 'em got hold of a gladius, I think he knew how to use it, too. Went wallopin' down the hill toward the guy he thought was Mordred, howlin' "Eat steel, ya traitorous bastard!" I tell you, I thought about lettin' him go."

"Oh, you didn't," Ringgold said.

"Course not. I boinged him good — from forty yards, too. Got a couple of the others to haul him back." It is true, seeing the Boinger in action has almost more effect on people than using it; you rarely have to knock out more than one of them. "Had a straggler, said he was looking for the mulberry bush with the crown on it." Flaherty snorted. "Couldn't even keep his kings straight."

Time Tours is a company that sends groups of tourists on exciting expeditions into parallel timelines. The PCs are the tour guides and support personnel who organize, equip, and lead these expeditions. The goal may not be pure sightseeing: one popular trip is the Dinosaur Safari, in which the party is out after really big game.

Played seriously, the dramatic conflicts are going to be of the Unpleasant Surprise sort: the tour group stumbles across (or inadvertently creates) a situation not described in the attractive color brochures. The party gets scattered, and must be rounded up/rescued before going home; the big lizards prove to be not such easy prey after all; a careless word or action threatens to upset history, and the guides have to fix things (in usual Repair Mission fashion); there turns out to be a cross-time war going on that the Company doesn't know about, or maybe just a bit of industrial sabotage from a competitor.

In such straight adventures, the tourists should be at least normally competent characters (with some Disadvantages not usually found among heroes, such as Cowardice); they may all be player characters.

Visits to Alternates

Trips to *alternate* worlds are an even bigger commercial success than the historical franchise. For better or worse, the real past is a specialty interest; the market for The Way Things Should Have Been is limitless.

Scheduling and Fees

TTL doesn't accept reservations too far in advance, and charges what the market will bear. There are always more customers than there are available slots; Infinity views the tourist trade as a necessary evil, and isn't always generous with the travel permissions it grants TTL and the other tour companies.

If the cost of a tour ever matters in the specific campaign, the GM is free to set it as he likes — even a short tour will have a price in four figures. In a continuing campaign, the PCs are likely to be TTL employees, rather than tourists. In a one-shot adventure, they might be tourists, but Homeline wealth doesn't really matter in a one-shot.

Rules and Regulations

All Time Tours clients sign a very strict waiver before the trip. Time Tours does *not* guarantee to bring them back, let alone bring them back alive, and is *not* responsible for their health, sanity or enjoyment of the trip.

Time Tours also reserves the right to do absolutely anything required in order to prevent "cultural contamination" (e.g., telling the Secret) or to correct contamination once it has occurred . . . up to and including a complete abort of the trip.

With that out of the way, note that Time Tours will bend over backwards to make sure that a trip goes well. Satisfied customers are the best advertisement; unsatisfied customers are Bad Publicity. Someone who has a serious gripe can usually be bought off — usually by an extra-special extended trip to one of the more sybaritic timelines.

But *during* a trip, the Guides have total authority. TTL will fire a Guide for a total foulup, and (in public) back them to the hilt on anything less. Part of the

The Boinger

This gadget is designed to help Time Tours guides control their "difficult" clients. It is an electronic homing stunner, looking like one of those flying saucer toys (whose name we all know, but is trademarked anyway). This somewhat complex description is intended to provide a framework for other "homing" personal weapons. For a simpler version, treat the Boinger like any other thrown weapon.

The Boinger can be used when a tourist gets away from the group and doesn't seem willing to come back (and people in the real world do this all the time — just ask any real tour guide, park ranger, or museum guard). To aim, the operator frames the target in a central reticle and presses the Scan control; this sets the device for the target's brainwave and cardiograph patterns. Then the user presses Seek and lets the disc fly in usual saucer-toy fashion. The Boinger is powered internally, but its accuracy and time-to-target are affected by the initial toss.

If everything goes right, the Boinger swoops down on its victim, delivers a dramatic bonk on the head (and a dose of induction-stun energy) and flies back to the user, whose pattern is permanently stored. (No, it doesn't bonk the guide; he's supposed to catch it, impressing the other tourists.) The Boinger has a No-Home button, which if pressed will cause it to drop cold by the target instead of returning (let the Guide's player figure out what this is useful for). It will only Home, not Seek-and-Stun, on a user whose pattern it has stored, so even if a tourist gets hold of it and figures out its operation (or if the guide teaches one how), it can't be used against the guide.

That's Stupid! What If Somebody Notices?

Tour guides are supposed to blend in with their surroundings, and bopping people with a flying saucer is unusual behavior in most cultures. Why does Time Tours depend on such a thing?

Well, they don't *depend* on it. A TTL guide is likely to have at least one stunner on his person, even if it's disguised. And certainly it's the weapon of choice if natives are around. The Boinger is used when there are no outtimers to see. It *is* a bit more reliable than a stunner, especially among trees. But mainly, it's a TTL trademark . . . and the embarrassment of "getting boinged" often brings people into line in a way that a discreet stunning wouldn't. When somebody gets boinged, the spectators *laugh*. And that's potent.

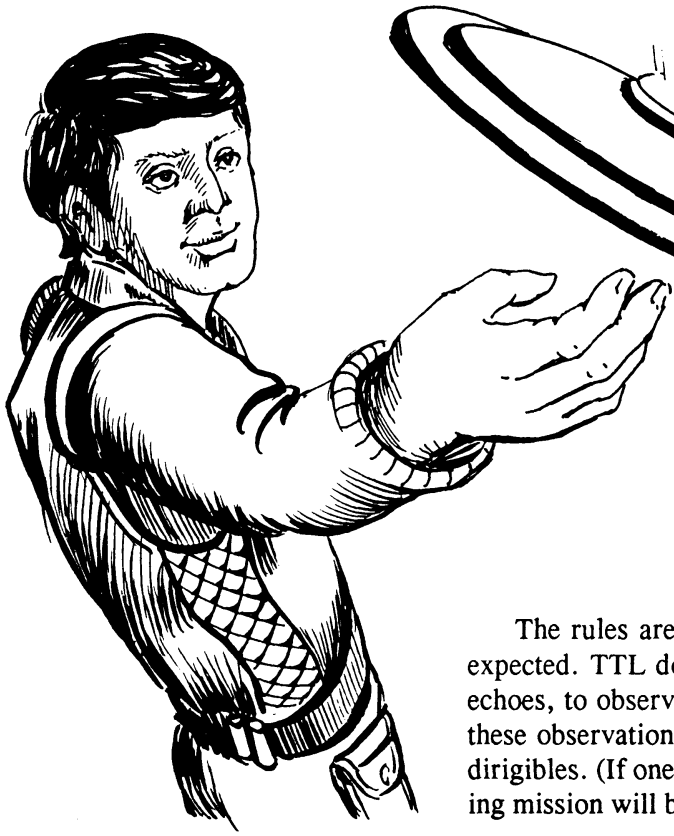
Continued on next page . . .

TTL mystique is the supposed super-competence of the Guides. "Do what you have to, and let Customer Relations sort it out" is the motto.

What Can We Take On a Time Tour?

Pretty much anything you want, as long as it's not obviously alien to the timeline being visited. TTL does a big business in disguised cameras of all sorts, for instance.

Weapons regulations depend on the trip. Hunting parties go loaded for dinosaur. Tourists in historical parallels can carry whatever weapons are appropriate for their costumes. (If the guide doesn't trust them with weapons, they don't carry them — or they don't come on the trip.) Disguised stunners may be permitted; this is up to the guide. In general, a tourist who seems stable and competent will be allowed such a weapon if the world is one where it might really be necessary for self-defense, and not otherwise. And still, a few guides get stunned from behind every year, for reasons ranging from spiteful whim to international espionage.



Gadgets and gewgaws "for trade with the natives" are permitted, but they must be native-authentic, and bought from TTL's own supplies. A tourist can buy all the cowrie shells he wants before visiting 1700 Tahiti, but he can't take a cigarette lighter to impress the natives!

The rules are looser for a trip in which no interaction with the natives is expected. TTL does a regular, and very expensive, business in trips to actual echoes, to observe historical battles of the 16th through 19th centuries. But all these observations are made from a few thousand feet up, in stealthy sky-blue dirigibles. (If one of those dirigibles ever goes down, an *immense* troubleshooting mission will be needed!)

What Can We Bring Back?

Unless the trip is to a historical echo (and ordinary tourist trips *aren't*, unless the echo has been proved stable) a little discreet collection of mementos is perfectly all right. The Guides will not permit outright thuggery, because it attracts attention and gives Time Tours a bad name on Homeline. But tourists are given the opportunity to buy native money at the beginning of their trip, and they can spend it pretty much as they will. The I-Cops run an official "customs check" when each tour returns, but unless the outtime world is known to contain some specific danger, it's mostly a formality.

However, any souvenir that could be mistaken for a "real" Homeline antique, fossil, etc., is supposed to be photographed for reference and marked in an inconspicuous way. These precautions don't make later fraud, or scientific confusion, entirely impossible — but at least it's an attempt.

The Slapstick Variation

Time Tours can also be played for laughs. In this version, the tourists are Innocents (or maybe Idiots) Abroad: bumblers who can't manage the clothes or the language, but will walk right into the Charge of the Light Brigade to get a good snapshot for the folks back home. These will probably be NPCs, though a player with a talent for comedy can have a field day.

On Homeline, the machine never works right (especially when the technician spills his Coke into the console). The historical figures met in the field are just as silly ("Invade Gaul?" Caesar said. "Who, me? I just wanted to open some Italian restaurants in Paris.")

Another good encounter, or running joke: a gang of lovably incompetent crosstime marauders (who look and sound scary but couldn't conquer a prairie dog village). Or maybe they spend a lot of time *trying* to conquer a prairie dog village, under the impression that they're the real Rulers of Earth.

Time Tours in the Time Campaign

The GM of a *time*-traveling campaign may be tempted to include a time-tour adventure. Go ahead . . . but if you're playing with real history, Time Tours requires special attention to the mechanics of time travel. Ordinary tour agencies take their clients to popular places, but at different times. TTL is offering a visit to an interesting *moment in time.* Sooner or later all those little groups of temporal visitors, plus the multiple copies of their guides, are going to add up, and perhaps outnumber the natives.

There are several ways to cope with this:

Ignore it. Tour groups just don't run into each other, unless the GM wants to do something interesting with the encounter. This lends itself best to a comedy game — imagine two groups of tourists in the marketplace at Alexandria, haggling over the same souvenir, while their guides try to decide whether to intervene or sneak away for a drink.

Ignore it, but make some excuses. The tour groups are small, the world (and the past) is big, and TTL Mission Control makes elaborate plans for traffic control. Not many people can crowd into the Deadwood Saloon for the shooting of Wild Bill Hickok without attracting attention; a dozen little groups, moving carefully, could probably hide out around Gettysburg; the Normandy invasion might swallow hundreds. This is stretching points, but gamers are used to that.

The point will stretch farther if Time Tours Ltd. sends its clients to general eras rather than specific important dates. Elizabethan London or Twenties Chi-

The Boinger (Continued)

Boinger Weapon Stats

Boinger operation is a P/A skill. All TTL guides know it at level 13 or better. It defaults to DX-4 or any Thrown Weapon skill-1. A skilled user makes only one roll for both successful lock-on and accurate toss; an unskilled operator makes separate rolls for each.

The Boinger has SS 11, Acc 9, ½D (for targeting purposes only) 20, Max 45, 2 lbs., no minimum ST, no recoil. Cost $1,500; TL 9.

It takes one turn to set and throw the disc; the roll to hit is made at this time, but not resolved yet. Make a note of the roll. The disc is airborne until the next round, at which time the range is determined between where the throw was made from (even if the user has moved away) and where the target is at time of impact; modifiers for target cover are based on the impact round. (This is why the Boinger is best as a surprise weapon; a potential target has a full round to take cover if he knows what to expect.) If the target has moved beyond maximum range, the disc returns to the user, arriving next round.

Effects of failure for a skilled user: On an ordinary failure, the disc misses its target (by inches) and swoops around for another pass next round, with the appropriate new range and cover modifiers. This goes on until:

(a) The target is hit.

(b) The target moves beyond range (range is always calculated from where the disc was launched, no matter where the user goes after that).

(c) The target enters cover that completely prevents the Boinger's scanning his pattern or flying after him; a closed building, for example (but not even dense woods).

(d) The Boinger is physically stopped by an attack (shot or knocked down, or simply grabbed out of the air). Such attacks are at -4 for size and speed of movement. Any non-critical successful attack will simply knock the disc down without damaging it; once on the ground, it has DR 4 and 10 hit points.

Despite its capacity for extended powered flight, the Boinger cannot take off unassisted.

Continued on next page . . .

The Boinger (Continued)

On a skilled user's critical failure, the disc may lock onto the wrong target. Determine the line of sight when lock-on was attempted, and if any other humans are within the user's cone of vision, randomly select one of them as the new target. (Use common sense. The cone of vision is no greater than 30 degrees to each side.) If there are no reasonable alternate targets, the disc flies toward the target, but hits an inanimate obstacle (a wall, a tree, etc.) and drops, undamaged but inert until recovered. If the failure was disastrous, the disc hits hard enough to be damaged, or flies into an inaccessible area (drops into a well, for instance).

If an unskilled user fails the lock-on roll, the results are as for a skilled critical failure. A critical failure is equal to a skilled user's disaster. For a disastrous failure, think of something really fiendish — the disc locks onto the user (this cannot happen to the assigned operator), caroms around madly in a crowded area, or the like. A successful lock-on followed by an ordinary failed toss is the same as a skilled user's ordinary failure; a critical failure causes a disc crash.

Once a hit is scored, the target rolls vs. HT-5. If the roll is failed, the victim is knocked cold for 1d+10 minutes. Even if the roll succeeds, the target is subject to a Slam attack (see p. B100) as if by a person of ST 15. (This means that a guide should not use the Boinger if it might knock the target off a wall, bridge, or the like.)

The Boinger can deliver six stuns before being recharged; it takes wall power from any TL8+ installation.

Stunner Weapon Stats

Stun pistols (see p. B119) use the Beam Weapons skill (p. B49). All TTL guides have it at level 13 or better.

Stunner stats are on p. B208 (pistol) and B209 (rifle). A *disguised* stun weapon may be built into anything of appropriate size; cost is $1,200 and up for a pistol, or $1,500 and up for a rifle.

Stunners can also be used on wide-beam setting, for a "fan" effect; see p. 55.

cago can no doubt absorb as many Time Tourists as the Company can send, meeting only when it's dramatically useful. The guides would be instructed to keep the tourists away from important moments their presence might upset; naturally, it's not possible to predict what all those moments might be, and the tourists (who would probably not be aware of the Not Too Much Excitement policy) might have to be kept away from trouble rather firmly.

Provide a mechanical solution. New Timelines (p. 42) will work well here, since the main action involves running around in the historical period, not changing it. In a comedy game, this works almost too well, since the intruders may safely make any sorts of crazy changes they wish, up to and including a Marx Brothers bring-the-house-down finale (A Night at the Fall of Rome?). This may, of course, be exactly what the campaign needs.

The Faked Tour

The next logical development is the agency that doesn't have a real time machine at all: the tourists visit a movie-set world populated by actors or robots (as at Michael Crichton's Delos, shown in the movies *Westworld* and *Futureworld,* or Larry Niven and Steven Barnes's novels *Dream Park* and *Barsoom*). Here the whole idea is to have swashbuckling adventures; high-tech gadgets are used to simulate weapons and their effects, and nobody really gets hurt.

Which is about as far as the idea goes. Roleplaying is already about simulated adventures with simulated risk-taking. It hardly seems necessary to add another layer of unreality. This doesn't preclude a Something Goes Wrong adventure, like the Delos movies, or one in which the amusement park is only the backdrop for a mystery adventure, as in Niven and Barnes' books; but these are really straight science fiction/mystery adventures, not time travel.

Marooned!

The party is made up of researchers . . . or tourists . . . or even highly trained agents. Their trip is over — they think. They're sitting in the conveyor, waiting to go home. And nothing happens.

All right. Don't panic. Something's wrong, but it doesn't have to be a big deal. Somebody will be along to pick us up in a little while.

But suppose the rescue mission never comes. Maybe there was a timeline shift. Maybe a projection accident or conveyor breakdown has sent the party to the wrong timeline . . . perhaps even an unexplored one. And maybe it was something entirely unexplained.

In that case, the PCs will be stuck in a strange world for a *long* time. Depending on how they got there and what they know, they may have no *chance* of getting home by their own efforts. This makes a good beginning for a whole campaign. The "story" is not about trying to get home — usually, they can't — but about making their way in a new world. If they have superior knowledge, they can use it to help both themselves and their hosts. See *Cross-Time Inventors,* p. 14.

This situation can also be used for adventures outside the time-travel genre. Anyone trapped away from civilization — or on a primitive world — would face similar problems. In Jerry Pournelle's *Janissaries* and its sequels, the heroes are merely on another planet; there is no time travel or dimensional warp involved. But they are still using their advanced knowledge and equipment to dominate and develop a primitive world.

Likewise, in Jack Vance's *Planet of Adventure* series, a lone scout, trapped on an alien world, spends four books scheming to build or steal a starship . . .

TIMELINE

Human history is a vast subject, and this timeline does not pretend to present it in its entirety. It is merely a chronological summary of a few of the major turning points in history, together with a handful of intriguing mysteries and minor events which have taken on a life of their own in our cultural folklore. In short, this summary will be of no use at all to the social, political or scientific historian, but it should serve as a useful source of ideas and ready reference for ***GURPS Time Travel*** GMs.

SJ Games is planning a ***GURPS Time Travel*** supplement, ***Timeline,*** which will present a *much* more complete chronology, along with historical adventure seeds.

-10 billion to -925

-10 billion to -2,750

-10 billion The Big Bang . . . maybe.

-4.7 billion Earth and solar system existed by this time.

-4.2 billion Origin of life on Earth.

-3.5 billion Blue-green algae, bacteria; oxygen enters atmosphere. (Before this date, a traveler will find that Earth is not an "Earthlike" planet; the air is unbreatheable.)

-570 million Cambrian; first invertebrates, trilobites.

-500 million Ordovician; mollusks, jawless fishes.

-435 million Silurian; fishes with jaws and first land plants.

-410 million Devonian; insects, amphibians.

-360 million Mississippian; reptiles, giant insects.

-330 million Pennsylvanian; reptiles continue to develop.

-290 million Permian; seed-bearing plants appear, trilobites die out.

-240 million Triassic; First dinosaurs, turtles, crocodiles.

-220 million First mammals.

-205 million Jurassic; Birds, largest dinosaurs.

-200 million Pangaea begins to split into present continents.

-138 million Cretaceous; horned and armored dinosaurs.

-70 million First primates appear.

-?? million Dinosaurs are all extinct.

-63 million Paleocene; mammals dominant.

-55 million Eocene; horses, camels.

-38 million Oligocene; first apes.

-24 million Miocene; mammals continue to diversify.

-12 million *Ramapithecus* diverges from human evolutionary line.

-6 million Human line diverges from chimp and gorilla lines.

-5 million Pliocene; human-like apes.

-4 million *Australopithecus afarensis* appears in east Africa.

??? million Australopithecines develop first stone tools.

-2.3 million Australopithecines become extinct or evolve.

-2 million Pleistocene; the Ice Ages. *Homo habilis* fossils date from this time.

-1.75 million First bone point is made.

-1.65 million *Homo erectus* appears.

-1.5 million *Homo habilis* becomes extinct, hand axe invented.

-1 million Cooperative hunting, spear invented, language begins to develop.

-800,000 to -700,000 Fire domesticated.

-550,000 to -330,000 Man learns to make fire.

-300,000 Early *Homo sapiens* appears, *erectus* becomes extinct.

-280,000 to 130,000 Development of true spoken language and animistic religion.

-150,000 to 125,000 Neanderthal Man appears.

-40,000 First men migrate to America from Siberia.

Aborigines arrive in Australia.

-35,000 *Homo sapiens sapiens* appear, archaic *Homo sapiens* vanishes.

-32,000 Neanderthal Man vanishes.

-32,000 Venus cult arises: worship of fecund mother-goddess.

-20,000 to -10,000 Beginning of agriculture.

Last ice age begins to retreat.

-12,000 to -10,000 Glaciers recede.

Reindeer, horses, cattle and dogs are domesticated.

-10,000 to present Holocene, the current geologic era; civilized humanity.

-10,000 to -9000 Houses of sun-dried brick without mortar constructed in Jericho.

-9000 to -8000 First boats.

-5000 to -4000 Sumerian civilization begins in Mesopotamia.

-4000 to -3500 Ur and Babylon founded in Mesopotamia.

-3500 to -3000 Minoan civilization begins in Crete.

Menes becomes first Pharaoh by uniting the upper and lower kingdoms in Egypt.

Wheel invented.

-3000 to -2500 Sumerians write religious poetry, first Gilgamesh epics.

-2980 to -2950 Career of Imhotep, Egyptian physician and architect (later deified), regarded as the first known scientist.

-2800 First version of Stonehenge built.

-2780 First Egyptian pyramid built.

C.-2750 Historical Gilgamesh lives.

-2700 to -2625 Cheops, builder of the great pyramid.

-2350 to -2100 Sargon creates Mesopotamian empire.

-2200 Egyptian Old Kingdom ends in turmoil.

-2100 Stonehenge in present form.

-2050 to -1800 Middle Kingdom in Egypt.

-2000 to -1500 Hittites in Asia Minor attack and plunder Babylon.

-1800 Hyskos invade Egypt, ending the Middle Kingdom and introducing the chariot.

-1750 to -550 Persian Empire.

-1701 Code of Hammurabi defines earliest known formal legal system.

-1550 Egyptian Middle Kingdom ends, New Kingdom begins.

-1500 to -1000 Exodus – Moses leads Israelites out of Egypt, receives Ten Commandments on Sinai. Sun Pyramid erected in Mexico; Olmec culture begins.

-1385 Ikhnaton (Amenhotep IV) of Egypt destroys old gods and establishes monotheistic worship of Aton, the sun god; moves capital from Thebes to Memphis. His successor, Tutankhamen (King Tut) restores the old religion.

-1184 Trojan War fought in Anatolia (Turkey).

-1100 End of Egyptian New Kingdom.

-1028 Barbarians from Chou conquer China.

-1002 to -925 Unified kingdom of Israel; Saul (-1,002 to -1,000), David (-1,000 to -960) and Solomon (-960 to -925). Solomon builds first temple in Jerusalem. Upon Solomon's death, kingdom is divided into Israel and Judah in -936.

-1000 to -901 Asian Phoenicians contact European Greeks.

-900 to -801 *Iliad* and *Odyssey* written.

-813 Carthage founded.

-800 to -701 Highly-civilized Etruscans move into Italy, introduce horse-drawn chariots.

Celts move into England.

-753 Traditional date of the founding of the city of Rome.

-705 to -681 Sennacherib is king of Assyria; under his reign Nineveh comes to be regarded as a symbol of tyranny and bloody suppression.

-700 to -601 Assyrians destroy Babylon and divert waters of the Euphrates to cover the city; however, by the end of the century, Babylon becomes largest city on earth, under Nebuchadnezzar II, covering 25,000 acres.

-600 to -501 In Confucius, Buddha, Zoroaster, Lao-tse, the Jewish prophets and the Greek philosophers, poets, artists, scientists and statesmen, the sixth century B.C. reaches a zenith of human wisdom and achievement.

Mayan civilization underway in Mexico.

Rome declared a republic after expulsion of last king, Tarquin the Proud.

-586 Nebuchadnezzar makes Judah a tributary, beginning the Babylonian captivity of the Jews; many books of the Old Testament are first written down in Hebrew during the Captivity.

-553 to -529 Cyrus II, the Great, of Persia conquers Lydia, the Medes and Babylonia (in -538) transforming Persia into a vast empire; in -536 he frees the Jews from Babylonian captivity and aids their return to Israel.

-551 to -479 Confucius (Kung Fu-tse), Chinese philosopher.

-550 to -480 Siddhartha (Gautama Buddha, called Sakyamuni), founder of Buddhism. Buddha preaches first sermon in Benares, -521.

-529 to -485 Cambyses II, son of Cyrus, conquers Egypt and has himself declared Pharaoh.

-500 to -429 Pericles, ruler of Athens.

-490 to -449 Persian wars. Persians demand tribute from Greeks, leading to the eventual fall of their empire. Most important dates, September 12, -490, Greeks defeat Darius at Marathon; -480; 2,300 Greeks fight 1,700,000 Persians, Greeks refuse to retreat and fight to the last man. Persians burn Athens and destroy Acropolis, but Greeks destroy Persian fleet at Battle of Salamis.

-478 Greek city-states form Delian League, dominated by Athens.

-470 to -399 Socrates, Greek philosopher.

-454 Chou rulers of China obliterated by an alliance of their enemies.

-431 to -404 Peloponnesian War between Athens and Sparta. Greek historian Thucydides, in his account of this war, describes the plague of Athens in great detail; scientists still haven't identified this mysterious, fatal disease.

-407 to -399 Plato becomes the pupil of Socrates.

-390 to -381 Plato founds the Academy in Athens, which continues as a seat of learning until A.D. 529.

-390 Gauls from northern Italy, under Brennus, capture Rome, sack it, and withdraw.

-384 to -322 Aristotle, Greek philosopher.

-382 to -336 Philip II of Macedon, conqueror.

-380 to -343 30th dynasty in Egypt; last native house to rule the country.

-356 to -323 Alexander the Great, son of Philip, conqueror.

-343 Aristotle becomes tutor of Alexander the Great.

-332 Alexander founds Alexandria, Egypt.

-323 Ptolemy Soter, one of Alexander's generals, founds new Egyptian dynasty that will endure until the death of Cleopatra in -30.

-321 to -311 War among Alexander's successors.

-319 Chandragupta Maurya reconquers northern India from the Macedonians and founds the Mauryan dynasty.

-275 Babylon abandoned for the new city of Seleucia.

-264 to -241 First Punic War between Rome and Carthage.

-230 to -221 Chinese state of Qi develops the federal bureaucratic system that will run China for the next 2,000 years.

-222 Rome conquers northern Italy, including Mediolanum (Milan).

-221 All China united under the first true emperor, Shih-Huang-Ti.

-219 to -201 Second Punic War; Hannibal crosses the Alps, defeats Scipio -218; defeats Romans at Lake Trasimene -217; reaches gates of Rome -211, withdraws -207; Scipio Africanus decisively beats Hannibal -202.

-215 Great Wall of China built to keep out invaders.

-206 Emperor Kao-tsu, who began his career as a minor officer and led a revolt of escaped convicts, begins the Han Empire.

-200 Creation of the Rosetta Stone.

-172 to -168 War between Rome and Macedon; Roman victory begins Roman world domination.

-168 to -165 Maccabean revolt against Antiochus IV, spurred by desecration of temple at Jerusalem in 168; temple rededicated by Judas Maccabaeus in 165.

-100 to -91 The Old Silk Road, a route on which Chinese and European goods are exchanged, is established.

The Great Wall of China is completed.

-100 First Chinese ships reach the east coast of India.

-71 Revolt of slaves and gladiators under Spartacus, crushed by consuls Pompey and Crassus.

-61 Gaius Julius Caesar wins his first victories in Spain.

-60 Caesar returns to Rome, is elected consul, and forms with Pompey and Crassus the first triumvirate.

-58 to -50 Caesar conquers Gaul.

-54 Caesar invades Britain.

-51 Cleopatra VII gains the throne of Egypt through her husband Ptolemy XIII; she quarrels with him and allies herself with Julius Caesar; battle breaks out and Ptolemy is killed.

-49 Caesar crosses Rubicon to start civil war against Pompey.

-47 Pompey murdered in Egypt by order of Cleopatra; Cleopatra marries Ptolemy XIV, the young brother of Ptolemy XIII.

-44 Caesar murdered by conspirators led by Brutus and Cassius Longinus.

Cleopatra poisons Ptolemy XIV to make room for her son by Julius Caesar, Caesarion.

-42 Brutus and Cassius commit suicide after defeat by second triumvirate - Mark Antony, Marcus Aemilius Lepidus, and Gaius Julius Caesar Octavianus (Octavian).

-40 Herod appointed King of Judaea at Rome.

Mark Antony gives the 200,000 scrolls from the library at Pergamon to Cleopatra, who adds them to the library at Alexandria, making it by far the greatest library on earth.

-31 Mark Antony and Cleopatra defeated by Octavian at Battle of Actium, and commit suicide; Egypt becomes a Roman province.

-30 to A.D. 14 Octavian retitled Augustus and becomes virtual emperor.

-4 Probable date of birth of Jesus Christ in Bethlehem.

A.D.

14 to 37 Tiberius succeeds Augustus.

18 The Red Eyebrows secret society in China leads a rebellion during a time of rampant poverty and debt; the rebellion is suppressed by Baron Liu Hsiu of Nanyang, who becomes emperor.

30 Probable date of crucifixion of Jesus Christ.

37 to 42 Caligula succeeds Tiberius, is assassinated by Praetorian Guard.

42 to 54 Claudius succeeds Caligula.

45 St. Paul begins his missionary travels.

54 to 68 Nero becomes emperor after his mother Agrippina poisons her husband Claudius.

59 Nero has Agrippina killed.

67 St. Peter executed.

70 Jewish revolt against Rome; Jerusalem captured and destroyed.

98 to 116 Trajan emperor; under him the Roman Empire reaches its greatest geographical extent, with the conquest of the Parthian empire in northeastern Iran.

184 War in China between the imperial eunuchs and the Yellow Turbans secret society.

190 General Tsao Tsao restores the young emperor to power in China, defeating the Yellow Turbans and breaking the power of the eunuchs.

200 to 540 Afghanistan invaded by the Huns.

260 to 269 Mount Ilopango in what is now El Salvador erupts, driving the incipient Maya civilization hundreds of miles away.

265 Mongol and Hsiung-nu barbarians invade China during a time of internal chaos.

269 The Library at Alexandria is partly burned when Septima Zenobia, queen of Palmyra, captures Egypt.

285 Roman Empire partitioned into western and eastern halves.

306 to 337 Following death of Emperor Constantius Chlorus (in York, Britain) his son Constantine the Great succeeds and reunites the two empires under his sole rulership.

313 Edict of Milan; Constantine establishes tolerance for Christianity.

330 Constantinople founded as new capital on site of old Greek Colony of Byzantium.

340 Constantine II killed in battle of Aquileia, fighting his brother Constans. Rome again splits into two empires, with Constans reigning in the West and Constantius II in the East.

Huns invade Europe.

361 Emperor Julian the Apostate attempts to restore paganism in the Roman Empire.

389 Library of Alexandria destroyed during a riot of Christians against pagans.

392 to 395 Theodosius the Great becomes Emperor of both East and West. He closes the pagan temples, effectively making Rome a Christian empire. He is the last to rule a united empire; on his death Honorius and Arcadius redivide the Roman Empire.

396 Alaric, king of the Visigoths, invades Greece and plunders Athens.

401 to 403 The Visigoths invade Italy.

410 Alaric captures and sacks Rome. Roman legions withdraw from Britain to protect Italy.

425 Barbarians settled in Roman provinces: Vandals in southern Spain, Huns in Pannonia, Ostrogoths in Dalmatia, Visigoths and Suevi in Portugal and northern Spain.

429 Saxons, Jutes and Angles expel Picts and Scots from southern England.

433 to 453 Attila rules the Huns.

455 Vandals sack Rome.

457 Battle of Crayford; Britains defeated by Hengest, abandon Kent to Jutes.

469 British war-chief Riothamus, considered by some to be the historical King Arthur, leads an army into Gaul at the request of the emperor Anthemius; it is destroyed the next year by Visigoths.

470 The Huns withdraw from Europe.

476 End of the Western Roman Empire; the German Odoacer (433 to 493) deposes the last emperor, the derisively-titled Romulus Augustulus, and is proclaimed king of Italy.

486 Clovis, King of the Franks, defeats Syagrius, the last Roman governor of Gaul, near Soissons.

500 British victory over the Saxons at Mt. Badon, Dorset.

537 Battle of Camlann: traditional death of King Arthur.

542 The plague in Constantinople (killing, at its peak, 10,000 persons a day in that city), imported by rats from Egypt and Syria, soon spreads all over Europe.

543 Disastrous earthquakes shake the entire world.

553 Narses, the eunuch general, annexes Rome and Naples for Byzantium.

559 Belisarius repels an army of the Huns near Constantinople.

570 to 632 Mohammed, founder of Islam.

594 End of plague which began in 542; population of Europe has been halved.

597 St. Augustine of Canterbury lands in Thanet, baptizes Ethelbert of Kent, and founds a Benedictine monastery in Canterbury. He founds probably the first English school, at Canterbury, the next year.

600 Barbarian invasions halt in western Europe.

610 Mohammed's vision on Mount Hira.

614 The Persians conquer Damascus and Jerusalem, and take as booty the putative Cross of Christ.

615 Turks invade China but are turned back through intrigue.

620 Northmen invade Ireland.

622 The Hegira, Mohammed's flight from Mecca to Medina. Year one in the Moslem calendar.

Mohammed begins to dictate the Koran.

627 The Persians decisively defeated by the Byzantines at Nineveh.

Mohammed's enemies from Mecca besiege Medina and slaughter 700 Jews.

628 The Cross of Christ recovered by the Byzantines.

Mohammed captures Mecca and writes letters to all the rulers of the world, explaining the principles of the Moslem faith.

633 The Arabs attack Persia.

634 to 644 Omar I, advisor to Mohammed, conquers Syria, Persia and Egypt, and defeats Byzantines.

636 Rise of feudal nobility in Japan.

641 to 1258 Arabs under Omar conquer Persian Empire, Islam replaces religion of Zoroaster.

Arabs destroy book-copying industry at Alexandria, end Alexandrian school. The Library at Alexandria destroyed yet again.

650 to 659 Callincus invents Greek fire, a substance that will burn in water and set fire to wooden ships.

660 China begins a campaign to conquer Korea.

687 Victory of Pepin the Younger at Testry unites the Frankish kingdom.

697 The Arabs destroy Carthage.

700 Arabs conquer Algiers – Christianity in N. Africa almost exterminated.

701 to 1192 Codification of Japanese political law. The Mikado (emperor) becomes the sole proprietor of all land.

718 Leo III defends Constantinople for 13 months against the Arabs and destroys their fleet.

720 The Moslems settle in Sardinia; their army crosses the Pyrenees into France, seizing Narbonne.

732 Charles Martel's victory over the Arabs in the Battle of Tours and Poitiers stems the tide of westward Arab advance.

742 to 814 Charlemagne, grandson of Charles Martel.

745 Emperor Constantine V defeats the Arabs.

751 In the battle of Samarkand, China loses western Asian domination to the Arabs.

755 Turkish general An Lu-shan usurps the throne of China.

771 to 814 Death of Carloman. Charlemagne becomes sole ruler of Frankish kingdom.

778 Charlemagne defeated by the Basques at Roncesvalles in the Pyrenees; this battle later becomes the subject of the "Song of Roland."

779 Offa of Mercia becomes king of all England.

780 to 802 Empress Irene becomes the virtual ruler of the Byzantine Empire.

782 Charlemagne executes 4,500 Saxon hostages at Verden.

Construction of Offa's Dyke against Welsh attacks on Mercia.

787 First Danish invasion of Britain.

792 to 1193

792 Beginning of Viking era in Britain: Vikings raid the English island monastery of Lindisfarne.

797 Empress Irene overthrows her son Constantine, blinds him, assumes sole power and reportedly proposes to marry Charlemagne.

800 Charlemagne crowned first Holy Roman Emperor by Pope Leo III at Rome, Dec. 25.

802 Irene dethroned by Nicephorus I.

806 Monastery of Iona sacked by Northmen.

833 King Louis the Pious, son of Charlemagne, defeated by his three sons at Colmar and deposed.

834 King Louis restored to the throne.

838 Arabs sack Marseilles and settle in southern Italy. At Amorion, Asia Minor, they defeat the Byzantine army.

841 King Lothar I defeated by his two brothers Louis and Charles in the battle of Fontenoy.

843 Treaty of Verdun, division of the Frankish empire. Lothar receives Italy and Lorraine and remains emperor. France goes to Charles II, the Bald; Germany, to Louis I, the German.

844 to 860 Kenneth MacAlpin, king of the Scots, defeats the Picts and becomes sole monarch.

846 The Arabs sack Rome and damage the Vatican.

The *Edda,* Norse mythological epic, composed.

In China, a primitive form of gunpowder is described in a scholarly text.

851 Danish forces enter Thames estuary, land and march on Canterbury. They sack the cathedral but are defeated by Ethelwulf at Oakley.

858 The two sons of the Emperor Butoku wrestle for their father's throne. The victor, Koreshito, becomes ruler of Japan.

859 Vikings enter the Mediterranean and sack the coast up to Asia Minor.

861 Iceland discovered by the Northmen.

875 Revolt in China under the merchant Huang Ch'ao. Order only restored with Turkish assistance.

878 to 1327878 The Arabs conquer Sicily and make Palermo the capital.

880 Emperor Basil reconquers Italy from the Arabs.

884 to 887 Emperor Charles III (youngest son of Louis the Pious) becomes king of France and once more unites the empire of Charlemagne.

894 Gradual ending of the close political and cultural ties between Japan and China.

900 Alfonso II, the Great, of Castile begins the Christian reconquest of Spain.

The Mayas leave their settlements in the lowlands of Mexico and emigrate to the Yucatan peninsula.

Vikings discover Greenland.

904 Salonika sacked by Moslem pirates.

911 With the descendants of Charlemagne dying out, the empire becomes elective, with Conrad I as king.

934 Cruelty of King Eric Blodöxe of Norway leads to revolts.

939 to 1185 Revolts against imperial rule set off a period of civil war in Japan.

950 Europe in the "Dark Ages."

960 Tai Tsoo, founder of the Sung dynasty, defeats Tatars.

961 The Byzantines reconquer Crete from the Arabs.

General Chao Kuang-yin forced by his officers to take the imperial throne of China and founds the Sung dynasty.

964 to c. 1191 New Mayan empire.

979 King Edward of England murdered at Corfe Castle, succeeded by Ethelred II, the Unready.

Northmen in Ireland defeated by Malachi at Tara.

980 Danes renew raids on England, attacking Chester, Southampton and Thanet.

982 Eric the Red establishes Viking colonies in Greenland.

991 The Battle of Maldon; Byrhthoth of Essex is defeated by the Danes.

1000 Widespread fear of the End of the World and the Last Judgment.

Chinese perfect their invention of gunpowder.

Leif Ericson, son of Eric the Red, discovers America (Nova Scotia).

1003 War between Germany and Poland.

Sweyn, king of Denmark, lands with his army in England.

1007 Ethelred II pays 30,000 pounds to the Danes to gain two years' freedom from attacks.

1009 Moslems sack the church of the Holy Sepulcher in Jerusalem.

1013 Ethelred flees to Normandy, leaving Danes masters of England.

1016 On death of Ethelred, Canute ascends to English throne.

1028 Canute conquers Norway.

1035 Canute dies, and his kingdom divided between his three sons; Harold is given England, Sweyn Norway and Hardicanute Denmark.

1040 to 1057 Macbeth murders Duncan of Scotland and becomes king.

1040 Lady Godiva of Mercia rides naked through the city of Coventry to protest her husband, Duke Leofric's, repressive taxation of the peasants.

1041 to 1108 Minamoto Yoshiie, great Japanese general and ancestor of shoguns.

1041 to 1048 Sometime in this period Pi Sheng, an obscure commoner, invents movable type in China.

1045 to 1099 The Cid (Rodrigo Diaz), Spanish national hero.

1054 Macbeth defeated by Malcolm and Siward of Northumbria, at Dunsinane.

1057 Macbeth murdered by Malcolm and succeeded by his stepson Lulach. Lulach is in turn killed by Malcolm the next year, and Malcolm becomes king of Scotland.

1066 Harold II of England crowned June 1, and defeats Norman invaders at Stamford Bridge Sept. 25. William of Normandy lands at Pevensey Sept. 28; Harold killed in Battle of Hastings Oct. 14; William I, the Conqueror, crowned Dec. 25.

1090 Hasan ibn al-Sabbah, the first "Old Man of the Mountain," founds the Assassin sect. The Assassins will eventually bring about the fall of the Seljuk Empire.

1094 The Cid takes Valencia from the Moors.

1095 Council of Clermont; Pope Urban II proclaims the first Crusade (1096 to 1099), led by Godfrey of Bouillon, Duke of Lorraine, and Tancred.

1099 Crusaders take Jerusalem.

1113 Order of Knights Hospitalers of St. John, Jerusalem, founded.

1145 Pope Eugene III proclaims Second Crusade.

1147 Crusaders perish in Asia Minor – failure of the Second Crusade.

1150 to 1159 Chinese develop the first rockets.

1151 End of the Toltec Empire in Mexico.

Chinese use explosives in warfare.

1154 to 1485 The house of Plantagenet rules England, beginning with Henry II.

1155 to 1227 Genghis Khan, founder of the Mongol empire.

1167 Oxford University founded.

1176 Saladin conquers Syria.

1182 to 1226 St. Francis of Assisi.

1183 Saladin takes Aleppo.

1187 Saladin defeats Christians at Hittin and takes Jerusalem.

Japanese Buddhist Eisai returns from China with the philosophy that will become Zen Buddhism.

1189 to 1199 Richard Coeur-de-Lion, King of England.

1189 to 1193 Third Crusade.

1192 Richard I returns from the Crusade and is captured by Leopold, Duke of Austria.

1193 Richard is handed over to Henry VI and imprisoned.

Saladin dies.

1194 Richard released and crowned for the second time.

1199 Richard killed at a siege in France.

1202 to 1204 Fourth Crusade; the crusaders, unable to pay the Venetians for shipping, agree to conquer in Venice's behalf.

1204 Crusaders take Constantinople and establish Latin Empire.

1206 to 1227 Genghis Khan chief prince of the Mongols.

1211 to 1215 Genghis Khan invades China.

1212 Children's Crusade; 30,000 to 50,000 French and German children set off for the Holy Land. The German contingent is turned back, but the French are sold into slavery at Marseilles.

1214 Peking captured by Genghis Khan.

1215 King John seals Magna Carta at Runnymede.

Crusade against sultanate of Egypt fails.

1218 Genghis Khan conquers Persia.

1221 Chinese use bombs with shrapnel that cause considerable damage (earlier efforts relied mostly on the frightening effect of the loud explosions).

1223 Mongols invade Russia, battle at Kalka River.

1225 to 1274 Thomas Aquinas, philosopher and theologian.

1228 Sixth Crusade, led by Emperor Frederick II.

1229 Frederick II, crowned King of Jerusalem, signs treaty with the Sultan of Egypt.

1237 to 1240 Mongols conquer Russia, take Moscow.

1240 Crusade of Richard of Cornwall and Simon de Montfort to Jaffa.

1244 Egyptian Khwarazmi takes Jerusalem.

1248 Seventh Crusade, led by Louis IX.

1250 The Saracens capture Louis IX.

1254 to 1324 Marco Polo, Venetian traveler.

1258 Mongols take Baghdad and overthrow Caliphate.

1271 to 1295 Marco Polo journeys to China.

1271 Last major crusade, the eighth.

1274 Kublai Khan fails to conquer Japan – his forces land, but his fleet is destroyed by unseasonal typhoon winds.

1275 to 1292 Marco Polo in service of Kublai Khan.

1281 The Mongols again fail to invade Japan (see 1274) due to unseasonal typhoons destroying their ships; the Japanese call these *kamikaze* or divine winds, and several Buddhist sects take credit, demanding tribute from the emperor.

1288 First known gun, a small cannon, made in China.

1313 The German Grey Friar Berthold Schwarz invents gunpowder.

1314 Battle of Bannockburn; Robert Bruce's Scots rout the English under Edward II.

Jacques de Molay, Grand Master of the Templars, burned at the stake in Paris for alleged heresy.

1326 Isabella, wife of Edward II, and her lover Roger Mortimer, invade England and capture King Edward II.

1327 Edward II deposed by Parliament and murdered at Berkeley Castle.

Aztecs establish Mexico City.

1332 Bubonic plague originates in India.

1333 Emperor Go-Daigo of Japan rebels against the Shogunate.

1337 Hundred Years' War between England and France begins.

1347 to 1350 Black Death devastates Europe; 75 million people – a third of the population – die. The plague will appear over and over during the next 80 years, reducing the population of Europe by 75%.

1347 Calais surrenders to Edward III.

The first evidence of a gun in Europe, a drawing of a small cannon that shoots arrows.

1363 Timur the Lame (Tamerlaine) begins conquest of Asia.

1364 Aztecs build their capital, Tenochtitlan.

1368 Mongol Yuan dynasty in China overthrown by national Ming dynasty, under the leadership of former peasant Chu Yuan-chang, who becomes Emperor Hung-Wu.

Restoration of the Great Wall of China.

Timur ascends throne of Samarkand.

1380 Timur begins his 35 successful campaigns to Persia, Georgia, Russia, Egypt, etc.

1387 to 1400 Chaucer writes *Canterbury Tales.*

1400 Early Renaissance Period. Ascent of the Medici in Florence.

1412 to 1431 Joan of Arc.

1413 Great revivals of the Rosicrucians throughout Europe; the Ancient Mystic Order of Rosae Crucis may have come into existence 300 years or more before this date.

1415 Henry V takes Harfleur and defeats the French at Agincourt.

1420 to 1498 Torquemada, Spanish Grand Inquisitor.

1427 Itzcoatl, King of the Aztecs, enlarges his empire.

1428 Joan of Arc leads French armies against England.

1430 Modern English develops from Middle English.

1431 Joan of Arc burned at the stake at Rouen.

1438 Pachacutec founds Inca rule in Peru.

1441 Portuguese navigators find the first black Africans near Cape Blanc, western Africa, and renew slave trade.

1453 Turks capture Constantinople and kill Emperor Constantine XI, end of the East Roman Empire.

End of Hundred Years' War between England and France. England gives up all possessions except Calais.

Gutenberg prints his Bible at Mainz.

1455 to 1462 Reign of Vlad IV, Voivode of Wallachia, called Tepes – "The Impaler," and Dracula – "Son of the Dragon." Known for his astonishing cruelty to his enemies, Vlad became the inspiration for the literary vampire Count Dracula.

1455 Beginning of the Wars of the Roses.

1456-1568 Ashikaga wars of succession in Japan.

1471 Edward IV, King of England, defeats and kills Richard, Earl of Warwick at Barnet, defeats Queen Margaret and kills Prince Edward at Tewkesbury and enters London; Henry VI murdered in the Tower.

1476 Vlad the Impaler briefly returns to power in Wallachia.

1483 Edward IV of England dies, succeeded by his young son Edward V. Edward and his brother disappear, probably murdered by their uncle, Richard of Gloucester, who claims the throne as Richard III.

1485 Henry Tudor, Earl of Richmond, defeats and kills Richard III at Bosworth. He succeeds as Henry VII, beginning Tudor dynasty.

1491 to 1556 Ignatius Loyola, founder of the Jesuit order.

1492 The Spanish conquer Granada.

Columbus, financed by Ferdinand and Isabella, sails from Palos, Spain, Aug. 3, with three ships. He discovers Watling Island, Bahamas, Oct. 12; Cuba Oct. 18; Haiti Dec. 6; *Santa Maria* wrecked off Haiti Dec. 25.

By order of Torquemada, Spanish Jews are given three months to accept Christianity or leave the country.

1495 Da Vinci begins work on *The Last Supper* (until 1498).

Syphilis epidemic spreads from Naples all over Europe through invading French soldiers.

1497 Vasco da Gama rounds Cape of Good Hope Nov. 22, having left Lisbon on a voyage to India.

1500 Leonardo da Vinci draws a wheellock musket, the first known appearance of a handgun in the West.

1501 Turks take Durazzo from Venice; Henry VII of England declines pope's request to lead a crusade against the Turks.

Michelangelo sculpts *David.*

1503 to 1566 Nostradamus, French astrologer.

1508 to 1512 Michelangelo paints the ceiling of the Sistine Chapel.

1513 Vasco Nuñez de Balboa crosses Isth mus of Panama and discovers Pacific Ocean, Sept. 26.

Machiavelli writes *The Prince.*

1514 First European (Portuguese) vessels in Chinese waters.

1517 Martin Luther, in protest against sale of indulgences, posts his 95 theses on the door of Palast Church in Wittenberg (Oct. 31), beginning the Reformation in Germany.

1519 Ferdinand Magellan, Portuguese navigator in the service of Spain, leaves Europe on Sept. 20 to circumnavigate the globe.

1521 Hernando Cortes destroys Aztec state – demoralized by smallpox epidemic from Europe – and assumes control of Mexico.

1527 Sack of Rome; troops of the German Empire pillage the city, killing 4,000 inhabitants and looting art treasures; Pope imprisoned; called "End of the Renaissance."

1534 Ignatius Loyola founds Jesuit Order.

1541 Henry VIII assumes titles King of Ireland and Head of the Irish Church.

Coronado explores New Mexico, Texas, Oklahoma and eastern Kansas.

Hernando de Soto discovers the Mississippi River.

Francisco de Orellana descends the Amazon River.

1542 Antonia da Mota first European to enter Japan.

1543 Spanish inquisition burns first Protestants at the stake.

Portuguese land in Japan, bringing firearms.

1553 Edward VI dies at age 16. Lady Jane Grey proclaimed Queen of England; deposed nine days later. Mary I, daughter of Henry VIII and Catherine of Aragon, becomes Queen of England.

1554 Lady Jane Grey executed. Princess Elizabeth sent to the Tower for suspected participation in rebellion against Mary I.

1560 Turkish galleys rout Spanish fleet off Tripoli.

Beginning of Puritanism in England.

1567 In Japan, Nobunaga deposes shogunate and centralizes government.

1570 Japan opens port of Nagasaki to overseas trade.

1580 Ivan IV, the Terrible, kills his son and heir with his own hands.

1582 Nobunaga of Japan commits suicide; Toyotomi Hideyoshi – a commoner who could not become Shogun – takes power.

Pope Gregory reforms the calendar, dropping 11 days between Oct. 4 and Oct. 16, making 1582 the shortest year on record.

1584 Sir Walter Raleigh discovers and annexes Virginia.

1585 Sir Francis Drake attacks Vigo and Santo Domingo on Elizabeth's orders.

Hideyoshi sets up dictatorship in Japan.

First English colony in the New World established at Roanoke Island, Virginia.

1587 Mary, Queen of Scots, executed at Fotheringay.

1588 Spanish Armada defeated by English navy.

1590 Roanoke Island colony discovered completely abandoned; the only clue is the word "CROATOAN" carved on a doorpost. This was a nearby island inhabited by Indians, but White was unable to travel to that island, and the colonists were never found.

1592 Hideyoshi of Japan fails in invasion of Korea.

Plague kills 16,000 people in London.

1595 Spanish land in Cornwall, burning Penzance and Mousehole.

English army abandons bow as weapon of war.

1597 Second Spanish Armada scattered by storms.

Hideyoshi of Japan resumes Korean campaign.

English Act of Parliament prescribes sentences of transportation to colonies for convicted criminals.

1599 to 1658 Oliver Cromwell, English general and statesman.

1600 Ieyasu sets himself up as unquestioned ruler in Japan at battle of Sekigahara; moves capital from Kyoto to Yedo (Tokyo). English navigator William Adams, first Englishman to visit Japan, becomes his advisor on shipbuilding.

Italian philosopher Giordano Bruno burned at stake for heresy for asserting that Earth revolves around the sun.

Shakespeare writes *Hamlet.*

1603 Queen Elizabeth dies; Sir Walter Raleigh, suspected of plotting to dethrone King James I, is tried for high treason and sentenced to imprisonment.

1605 Guy Fawkes arrested in cellars of Parliament, accused of trying to blow up House of Lords during James I's state opening of Parliament – the "Gunpowder Plot."

1610 Henry Hudson sails through Hudson's Straits and discovers Hudson's Bay.

1616 to 1620 Tartars of Manchu invade China.

1619 to 1655 Savinien Cyrano de Bergerac, French poet and swordsman.

1620 "Mayflower" leaves England, lands in Massachusetts to found Plymouth Colony.

1622 Richelieu created Cardinal.

1626 Richelieu suppresses Chalais conspiracy, concentrating all political power in France in his own hands.

Dutch colony of New Amsterdam (New York) founded, after Dutch West India Company buys Island of Manhattan from Indians for merchandise valued at $24.

1631 Buccaneers settle in Tortuga, off northwest coast of Hispaniola.

1646 English Civil War ends with Cromwell in power; Charles I tries to escape, but his plan fails.

1649 Charles I brought to trial Jan. 19, beheaded Jan. 30.

1660 Parliament invites Charles II to return to England, after Richard Cromwell, Oliver Cromwell's son, resigns office of Lord Protector.

1680 Dodo extinct.

1681 Manchu barbarians overthrow the native rulers of China.

1682 La Salle claims Louisiana territory for France and takes possession of the Mississippi Valley.

1689 Parliament confirms abdication of James II. William and Mary proclaimed King and Queen of England and Scotland.

Louis XIV declares war on Great Britain.

Iroquois Indians massacre French settlers near Montreal in July.

1697 Peter the Great, calling himself Peter Michailoff, travels in Europe for a year and a half.

Spanish destroy last remnants of Mayan civilization in the Yucatan.

1701 War of Spanish Succession begins.

William Kidd hanged for piracy.

1725 to 1798 Casanova, Italian adventurer and author.

1725 Peter the Great dies, succeeded by his wife, Catherine.

1732 First publication of Benjamin Franklin's *Poor Richard's Almanack.*

1740 to 1814 The Marquis de Sade, French author, philosopher and sexual deviant, who gave his name to the condition of sadism.

1741 Victor Bering, after discovering Alaska and Aleutian Islands, dies of hunger and cold.

1753 French troops from Canada seize Ohio Valley.

1754 Anglo-French war in America; discussion on boundaries.

1755 British army defeated by French near Fort Duquesne (modern Pittsburgh).

1756 Britain declares war on France.

120 British soldiers imprisoned and die in India ("Black Hole of Calcutta").

Outbreak of Seven Years War.

1762 British capture Martinique, Grenada, Havana and Manila.

Mozart, age 6, tours Europe as a musical prodigy.

1763 Indian uprising begins near Detroit and spreads west.

1765 British Parliament passes the Stamp Act for taxing America, prompting Stamp Act Congress in New York to draw up a declaration of rights and liberties in protest.

1761 to 1821 Napoleon I, emperor of France.

1770 "Boston Massacre," a brawl between civilians and troops.

James Cook discovers Botany Bay, Australia.

Birth of the industrial revolution in England.

1773 Boston Tea Party – protest against tea duty.

1774 Virginia House of Burgesses calls first Continental Congress in Philadelphia.

1775 American Revolution; Paul Revere's ride (April 18), defeat of British at Lexington. Second Continental Congress assembles in Philadelphia; George Washington made commander-in-chief of American forces. British victory at Bunker Hill, Benedict Arnold's attack on Quebec fails.

White Lotus secret society revolts in China; Manchu rulers finally suppress rebellion by executing 20,000 suspected conspirators.

James Watt perfects the steam engine.

1776 Washington forces British to abandon Boston; American troops forced out of Canada.

Declaration of Independence.

1777 American Revolution; British defeated at Princeton and Bennington. Lafayette's French volunteers arrive in America. American forces defeated at the Brandywine and Germantown; British secure control of Delaware. General Burgoyne loses two battles at Bemis Heights, NY, and capitulates to Americans at Saratoga. The German general Von Steuben arrives to become inspector general of American forces.

1778 Washington defeats British at Monmouth; British capture Savannah, GA.

1780 American Revolution; Charleston surrenders to British; French troops arrive at Newport. Americans defeated at Camden; British army defeated at King's Mountain. Benedict Arnold's plot to surrender West Point is revealed.

1781 American Revolution; British defeated at Cowpens and Eutaw, NC; Americans defeated at Guilford, CN; end of all land operations with the British capitulation at Yorktown and evacuation of Charleston and Savannah.

1782 Montgolfier brothers construct air balloon.

1783 Great Britain recognizes independence of the U.S.

1787 Constitution of U.S. framed and signed.

Mozart's *Don Giovanni* produced in Prague.

1789 George Washington inaugurated as President of the U.S.

French Revolution; Paris mob storms the Bastille; abolishment of the French feudal system. Declaration of the Rights of Man.

1790 Louis XVI accepts the French constitution.

First ten amendments to the U.S. Constitution (the Bill of Rights) adopted.

1793 French Revolution; Louis XVI executed; Reign of Terror begins. Queen Marie Antoinette executed; Napoleon takes Toulon.

1794 Mass executions in France.

1796 Napoleon marries Josephine de Beauharnais; assumes command in Italy; defeats Austrians at Lodi; enters Milan.

1797 Napoleon defeats Austrians at Rivoli; seizes Mantua and advances through the Tirol to Vienna.

1798 French capture Rome, proclaim Roman republic; Pope Pius VI leaves the city for Valence. Battle of the Pyramids makes Napoleon master of Egypt. Horatio Nelson destroys French fleet in Abukir Bay. French force lands in Ireland but fails to invade the country. King Ferdinand IV of Naples declares war on France and enters Rome.

1799 Napoleon advances into Syria; organizes Parthenopean Republic in Piedmont; begins siege of Acre, which he abandons two months later. Defeats the Turks at Abukir; leaves Egypt, becomes Consul of France. 1800 Napoleon's army crosses the Great St. Bernard pass, defeats Austrians at Marengo, and conquers Italy.

Marquis de Sade imprisoned in an institution for the insane for the final time.

1801 Admiral Nelson defeats the Danes off Copenhagen.

Robert Fulton builds the first submarine, the *Nautilus.*

1802 France suppresses slave rebellion in Santo Domingo led by Toussaint-L'Ouverture.

1803 The Louisiana Purchase. U.S. acquires vast territory stretching from New Orleans to modern Canadian border.

Robert Fulton propels a boat by steam power.

1804 Napoleon crowned Emperor in Paris.

Alexander Hamilton killed in a duel with Aaron Burr.

1806 England blockades French coast; Prussia declares war on France. Napoleon enters Berlin after victories at Jena and Auerstädt – official end of Holy Roman Empire. French army under Murat enters Warsaw.

1808 U.S. prohibits importation of slaves from Africa.

French army occupies Rome, invades Spain, and takes Barcelona and Madrid; rebellion in Madrid; King Joseph Bonaparte flees; Napoleon retakes city.

1809 War between France and Austria; French army takes Vienna, is defeated at Aspern and defeats Austrians at Wagram. Napoleon divorces Josephine.

1810 Napoleon, at the zenith of his power, marries Archduchess Marie Louise of Austria.

1812 Napoleon enters Russia June 24; defeats Russians at Smolensk and Borodino and enters Moscow. Begins to retreat from Moscow Oct. 19; returns to Paris Dec. 18. Out of his army of 550,000, only 20,000 survive the Russian campaign.

U.S. declares war on Britain.

1813 Prussia declares war on France; combined Russo-Prussian forces enter Dresden. Napoleon's victory at Lützen. Austria declares war on France; the French defeated by Blücher at Wahlstatt on the Katzbach. Defeat of the allied army at Dresden; the "Battle of the Nations" at Leipzig. Napoleon defeated.

Wellington defeats French at Vitoria, seizes San Sebastian, and enters France.

Mexico declares itself independent.

1814 Murat deserts Napoleon and joins Allies; allied armies defeat French at La Rothière, Bar-sur-Aube, and Laon, and enter Paris Mar. 30. Napoleon abdicates and is banished to Elba April 11.

Louis XVIII enters Paris and takes up the throne as his hereditary right.

U.S. forces defeat British at Chippewa; British force burns Washington. British flotilla captured on Lake Champlain.

1815 Americans defeat British at Battle of New Orleans; although peace had been made the previous year, word did not arrive until after the battle.

Napoleon returns to France; Louis XVIII flees. Wellington and Blücher defeat Napoleon at Waterloo, June 18. Napoleon abdicates for the second time. Louis XVIII returns to Paris, Napoleon banished to St. Helena.

1821 Simón Bolívar defeats the Spanish army at Carabobo, ensuring Venezuela's independence.

1831 to 1836 Charles Darwin sails as naturalist on a surveying expedition in H.M.S. *Beagle* to South America, New Zealand and Australia.

1836 Battle of the Alamo.

Texas wins independence from Mexico and becomes a republic with General Sam Houston its first president.

1837 Queen Victoria begins to reign.

1839 China suppresses the opium trade, a move which will lead to European military intervention the next year to restore the trade.

1846 to 1933

1846 East India Company troops defeat Sikhs at Aliwal and Sobraon.

U.S. moves troops into New Mexico, declares war on Mexico, annexes New Mexico in August.

Brigham Young leads the Mormons from Illinois to the Great Salt Lake, Utah.

Potato famine in Ireland.

1847 U.S. forces capture Mexico City.

First gold rush in California.

1848 Revolt in Paris; Louis Napoleon elected President of French republic.

Marx and Engels issue their *Communist Manifesto.*

1852 Louis Napoleon proclaims himself Emperor Napoleon III.

1859 Darwin writes *On the Origin of Species by Means of Natural Selection.*

1861 Confederate states secede; Civil War begins April 12, when Confederates take Ft. Sumter, Charleston.

1862 Union forces capture Fort Henry, Roanoke Island, Fort Donelson, Jacksonville and New Orleans; they are defeated at second Battle of Bull Run and Fredericksburg. On Sept. 22, Lincoln issues "Emancipation Proclamation," freeing all slaves held in Confederate territory effective Jan. 1.

1863 Confederates win at Chancellorsville, lose at Gettysburg and Vicksburg; surrender at Fort Hudson. Lincoln's "Gettysburg Address" at the dedication of a military cemetery.

1864 Ulysses S. Grant becomes Commander-in-Chief of Union armies. Gen. Sherman marches his army from Chattanooga, TN, through Georgia; defeats Confederate army at Atlanta and occupies Savannah.

1865 Union fleet takes Charleston; Richmond surrenders to Grant; Robert E. Lee appointed General-in-Chief of the Confederate army; Confederacy formally surrenders April 9.

Abraham Lincoln assassinated April 14.

Jefferson Davis, President of the Confederacy, captured and imprisoned. Last Confederate Army surrenders at Shreveport, LA, May 26.

1866 to 1880 The "wild west." Such legendary outlaws as Billy the Kid, Jesse James, the Dalton Gang and John Wesley Hardin, together with the legendary lawmen who pursued them, flourish during these years.

1871 P.T. Barnum opens his Circus.

The great fire in Chicago.

Stanley meets Livingston at Ujiji.

1872 Civil war in Spain.

1876 Alexander Graham Bell invents the telephone.

1878 Billy the Kid gains notoriety in Kansas during the Lincoln County War.

1879 British Zulu war; Zulus massacre British soldiers in Isandhiwana, British capture Zulu leader Cetewayo.

1880 Billy the Kid surrenders to Pat Garrett and is sentenced to hang.

1881 U.S. president James A. Garfield assassinated.

The gunfight at the O.K. Corral, Kansas.

1884 Mark Twain writes *Huckleberry Finn.*

1888 "Jack the Ripper" murders in London.

1896 Klondike gold rush begins at Bonanza Creek, Canada.

1900 Boxer rebellion in China against Europeans.

Count Zeppelin launches 420-foot airship.

1901 President McKinley assassinated.

1903 Orville and Wilbur Wright first fly a powered airplane.

1904 Japanese win war against Russia.

Work begins on the Panama Canal.

1905 Einstein formulates Special Theory of Relativity.

1909 Robert E. Peary reaches the North Pole.

1911 First offensive use of aircraft in warfare during the Turkish-Italian war; Italians win decisively.

Revolution in Central China; republic proclaimed; end of Manchu dynasty (in power since 1644).

1912 S.S. *Titanic* strikes iceberg and sinks on her maiden voyage; 1,513 drowned.

1914 Archduke Francis Ferdinand, heir to the Austrian throne, and his wife assassinated in Sarajevo June 28, beginning World War 1.

1915 WWI; Germans sink *Lusitania;* first Zeppelin attack on London.

Einstein postulates his General Theory of Relativity.

1916 WWI; British first use tanks on Western Front; gas masks and steel helmets first used by German army.

Francisco "Pancho" Villa crosses border for guerrilla raid on Columbus, NM, killing 17 Americans. General John J. Pershing pursues Villa with 6,000 troops but cannot find him.

1918 Armistice signed Nov. 11.

Ex-Czar Nicholas II and family executed.

1919 Prohibition amendment (18th) to U.S. Constitution passed.

1920 U.S. Senate votes against joining League of Nations.

Gandhi emerges as India's leader in its struggle for independence.

1923 Centers of Tokyo and Yokohama destroyed by earthquake; 120,000 dead.

Beer Hall Putsch – Hitler's attempted coup – fails in Munich.

1924 Hitler serves 8 months of five-year sentence.

J. Edgar Hoover appointed director of the FBI, a post he will hold until 1972.

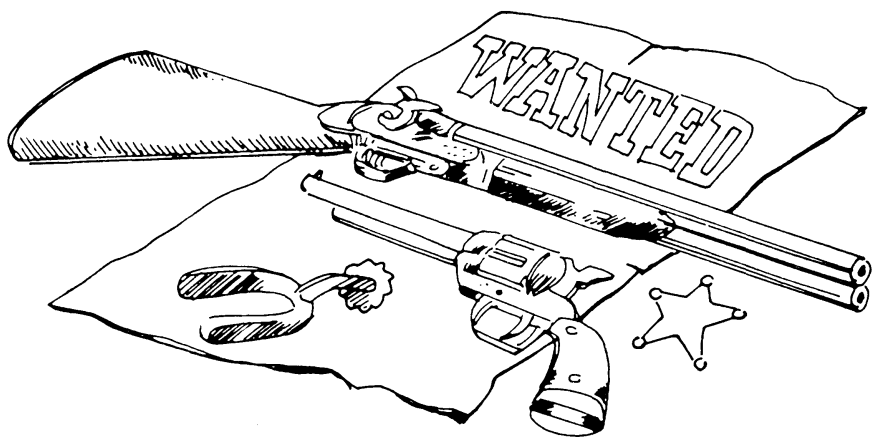
1925 Hitler reorganizes the Nazi party and publishes volume 1 of *Mein Kampf.*

1927 Charles A. Lindbergh becomes first man to fly solo across the Atlantic.

1929 Great depression begins on Oct. 29, "Black Thursday." St. Valentine's Day Massacre; six notorious Chicago mobsters gunned to death by members of a rival gang.

1931 Al Capone jailed for income tax evasion. Empire State Building completed in New York.

1933 Hitler becomes Chancellor of Germany. Prohibition repealed in the U.S.



1934 to 1991

1934 F.B.I. shoots John Dillinger.

1937 Amelia Earhart lost on Pacific flight.

Dirigible *Hindenburg* burns.

1938 Beginning of Nazi expansionism.

Orson Welles' radio production of *The War of the Worlds.*

1939 Beginning of World War II; Germany invades Poland Sept. 1; Britain and France declare war on Germany Sept. 3.

1940 World War II; Germany invades Norway and Denmark, Holland, Belgium and Luxembourg. Churchill's "blood, toil, tears and sweat" speech; Germans enter Paris June 14. RAF begins night bombing of Germany; the Battle of Britain in August, followed by the London "Blitz."

1941 WWII; *Bismark* sunk. Germans invade Russia. Japanese bomb Pearl Harbor Dec. 7; U.S. and Britain declare war on Japan the next day.

1942 WWII; Japanese invade Dutch East Indies. Japanese/Americans on the West Coast interned in inland camps. Japanese occupy Bataan, many American and Philippine prisoners die on forced "Death March." Americans defeat Japanese at Midway; Rommel takes Tobruk. FBI captures eight German saboteurs who landed in Florida and New York. 400,000 U.S. troops land in French North Africa; Rommel retreats, loses Tobruk. Germans work on V2 rocket; Millions of Jews murdered in Nazi gas chambers.

1943 WWII; Russians destroy German army southwest of Stalingrad. Massacre in Warsaw ghetto. German army surrenders in Tunisia. Allies land in Sicily July 10; Mussolini dismissed; Allies land in Salerno Bay and invade Italy. Italy's unconditional surrender announced Sept. 8; Italy declares war on Germany.

1944 WWII; Heavy air raids on London. 800 Flying Fortresses drop 2,000 tons of bombs on Berlin. D-Day, June 6, landing at Normandy. German officers attempt to assassinate Hitler. Americans capture Guam. First V-2 rockets on Britain; U.S. troops land in Philippines. Battle of the Bulge begins; Rommel commits suicide.

1945 WWII; Americans enter Manila; Budapest falls; Okinawa captured. Russians reach Berlin; Mussolini killed by Italian partisans. Hitler commits suicide April 30; "V.E. Day" ends war in Europe May 8. United Nations Charter signed June 26 to take effect Oct. 24. U.S. drops atomic bombs on Hiroshima Aug. 6 and Nagasaki Aug. 9; Japan surrenders. World War II ends August 14. Nuremberg trials of Nazi war criminals begin.

1948 Gandhi assassinated.

The state of Israel comes into existence.

1949 China becomes a communist republic under Mao Tse-tung.

1950 Riots in Johannesburg against apartheid.

North Korean forces invade South Korea June 26 and capture Seoul;

1951 North Korean forces retake, then lose Seoul.

1953 Queen Elizabeth II crowned.

Korean Armistice signed July 27.

1957 USSR launches Sputnik I and II, first artificial satellites.

1959 Castro takes power in Cuba.

1961 Bay of Pigs invasion of Cuba fails.

Berlin Wall erected. Yuri Gagarin becomes the first human being in space.

1962 John Glenn orbits the Earth.

1963 Civil rights demonstrations in Birmingham, AL, lead to riots.

President John F. Kennedy assassinated by Lee Harvey Oswald in Dallas, Nov. 22; Oswald shot and killed by Jack Ruby on national TV.

1965 Black Muslim leader Malcolm X shot in New York.

Martin Luther King heads procession of 4,000 civil rights demonstrators from Selma to Montgomery, AL; Ku Klux Klan shootings in Selma.

Violent race riots in Watts district of Los Angeles.

1967 Hanoi attacked by U.S. bombers.

Six-Day War between Israel and Arab nations.

1968 U.S. Navy Intelligence ship *Pueblo* captured by North Korea after allegedly violating North Korean waters; the crew is held prisoner until December.

Rev. Martin Luther King, Jr. assassinated in a Memphis motel. Scotland Yard arrests James Earl Ray in London; he is extradited to U.S. to stand trial.

Senator Robert F. Kennedy assassinated in Los Angeles immediately after winning California presidential primary, by Sirhan Sirhan, a Jordanian.

1969 Apollo 11 lands men on the moon July 21. More than 300,000 attend Woodstock Music and Arts Fair in Bethel, NY.

Charles Manson and followers kill actress Sharon Tate and four others at Tate's home near Los Angeles.

1971 Fighting in Indochina expands into Laos and Cambodia.

Idi Amin comes to power in Uganda.

1972 The five "Watergate" burglars arrested inside Democratic National Headquarters in Washington, DC.

Arab terrorists kill two Israeli athletes at Munich Olympics.

1973 Spiro Agnew, vice president of the U.S., resigns. Fighting between Arabs and Israelis. Arabs embargo oil sales to U.S., due to U.S. support of Israel, provoking an energy crisis.

1974 Irish terrorists bomb Tower of London and Houses of Parliament.

Nixon resigns Aug. 9.

1975 Communists take over Vietnam after Americans withdraw. Christians and Moslems clash in Beirut, Lebanon.

1976 Rioting and violence against apartheid in South Africa.

Chinese coup attempt by the "Gang of Four" (led by Mao Tse-tung's widow) is crushed.

1978 Bizarre mass suicide in religious community of Jonestown, Guyana.

1979 Iranian revolution deposes the Shah and brings the Ayatollah Khomeini to power. U.S. embassy in Teheran, Iran, seized by militant Iranian "students"; staff taken hostage. Soviets invade Afghanistan.

1980 Helicopter rescue of American hostages in Iran fails. The Shah of Iran dies of cancer. Iraq invades Iran.

1981 Iranian hostages freed.

1982 British defeat Argentina in Falklands conflict. Israel invades Lebanon.

1983 South Korean 747 shot down by Soviet fighter plane. 287 U.S. Marines killed in terrorist attack in Beirut, Lebanon.

U.S. forces invade Grenada.

1984 Toxic gas leak in Union Carbide plant in Bhopal, India kills 2,000 and injures 150,000.

U.S. withdraws from Beirut.

1985 Mikhail Gorbachev takes power in the USSR.

1986 Space Shuttle *Challenger* explodes on liftoff, killing all aboard.

Nuclear accident in Chernobyl, USSR.

Secret plan by executive branch of U.S. government to sell arms to Iran and divert the profits to the Nicaraguan Contra rebels is discovered.

1988 Palestinian uprisings in Israel.

U.S. Navy ship in the Persian Gulf shoots down an Iranian airliner, killing 290.

Pan-Am 747 explodes due to terrorist sabotage over Lockerbie, Scotland, killing 269 aboard, 11 on ground.

1989 Sweeping and dramatic democratic reforms in many former Soviet Bloc countries. Chinese students protest for democratic reform by occupying Tiananmen Square; government retaliates violently on June 9, killing many. Berlin Wall torn down. U.S. invades Panama over the Christmas holidays.

1990 Panamanian dictator Manuel Noriega surrenders to U.S. forces. Many Soviet republics move toward independence from the USSR.

Iraq invades and annexes Kuwait Aug. 2; U.S. troops deploy to Saudi Arabia to prepare for counter-invasion.

East and West Germany reunified, Oct. 3.

1991 Multinational force led by U.S. liberates Kuwait and invades Iraq, but withdraws leaving Saddam Hussein still in power.

BIBLIOGRAPHY

Time Travel

Out of the thousands of time-travel stories in print, these books, movies and TV shows have been selected for two reasons. All of them either offer ideas for interesting situations, or give distinct views of paradox, causality and time-tampering. A star (★) indicates a must-read.

Television

Dr. Who. An eccentric cosmic do-gooder wanders through time and space.

Quantum Leap. Psychic time travel.

Red Dwarf. British, a lost spaceship encounters time and dimension travel.

Star Trek, as well as almost every other science fiction series, has done an occasional time-travel show.

The Time Tunnel. Travelers jump through time uncontrollably, hoping that Mission Control can get them home.

The Twilight Zone had several excellent time-travel stories.

Movies

Back To The Future and its two sequels (1985, 1989, 1990). A mad scientist and his young assistant travel to the past and the future. Lots of action, rubber science.

Bill and Ted's Excellent Adventure (1988) and *Bill and Ted's Bogus Journey* (1991). Two high-school kids get a time machine and go wild.

Final Countdown. (1980) An attempt to avert the attack on Pearl Harbor.

Somewhere in Time. (1980) A time travel romance.

Terminator (1984) and *Terminator 2* (1991). A robot assassin from the future visits the present.

The Time Machine (1960). Good treatment of H.G. Wells' classic.

Time After Time (1979). H.G. Wells is the *inventor* of the Time Machine in this movie; he accidentally looses Jack the Ripper on the late 20th century.

Time Bandits (1981). Inept thieves steal a map showing time-gates and try to loot history.

Books and Short Fiction

Adams, Robert. *Castaways in Time* and sequels. A band of people travel back to medieval England.

Anthony, Piers. *Bearing an Hourglass.* Interesting ideas about causation.

Anderson, Poul. *The Corridors of Time.* Interesting method of time travel, used by two warring future empires.

★ Anderson, Poul. *The Guardians of Time* and sequels ("Time Patrol" series). Time-travelers seek to maintain history against renegades, in service of masters from the far future.

Anderson, Poul. *There Will Be Time.* Mental time-travel.

Asimov, Isaac. *The End of Eternity.* The "Eternals" use time travel to shape history toward their idea of perfection, while living *outside* of Time.

Bayley, Barrington J. *The Fall of Chronopolis.*

Benford, Gregory. *Timescape.* Communications from the future and paradoxes.

Bester, Alfred. *Of Time and Third Avenue.*

Bester, Alfred. *Hobson's Choice.* Short story; a cure for anyone who is romantic about the past.

★ Bradbury, Ray. "A Sound of Thunder" in the collection *R is for Rocket.* Trophy hunters visit the past, which turns out to be far easier to change than they suspected.

Bradley, Marion Zimmer. *House Betwwen the Worlds.*

Chalker, Jack. *Downtiming the Night Side.* Good time patrol book.

★ Cook, Glen. *A Matter of Time.* Multiple futures co-exist; the past *can* be changed without destroying the future.

DeChancie, John. *StarRigger, Red Limit Freeway, Paradox Alley.* An interstellar truck driver travels through time and space using ancient gates.

Dick, Philip K. Now Wait for Last Year. Time travel through drugs.

Dick, Philip K. Martian Time-Slip. Time travel through schizophrenia.

Dickson, Gordon. *Time Storm.* A disaster has divided the Earth into zones, each congruent with a different time. This is only peripherally time travel, but remains a great adventure setting.

Farmer, Philip José. *Riverworld* series. *Not* a time-travel book, but worth reading anyway because it features the adventures of people from many different time periods, all working together.

Farmer, Philip José. *Time's Last Gift.*

Finney, Jack. *Time and Again.* Time travel romance.

★ Frankowski, Leo. *The Cross-Time Engineer* and sequels (four so far). Conrad Schwartz is thrown back in time, but his innovations create an alternate history in which Poland holds out against the Mongol horde.

Gerrold, David. *The Man who Folded Himself.* Classic story of "messages to yourself."

Goldstein, Lisa. *The Dream Years.* Mental time travel.

Grimwood, Ken. *Replay.* The hero has not one, but several chances to relive his own life.

Haldeman, Joe. *The Forever War.*

★ Harrison, Harry. *The Technicolor Time Machine.* Nobody will take the time machine's inventor seriously except a dying

Hollywood studio — and all they want to do is use it for cheap location work . . .

★ Hawke, Simon. *Time Wars* series (10 books so far). Time Commandos travel back to protect their world against time renegades, then against their doubles from a parallel timeline. This series avoids staleness because an overarcing plot continues to develop — the stories are very different. But the science changes and develops too, making the limits of the possible change from book to book, and "Nobody Understands Zen Physics" is used to explain away paradoxes.

★ Heinlein, Robert. "All You Zombies" and "By His Bootstraps." Classic short stories about causation and paradox.

Heinlein, Robert. *The Door Into Summer.* This time machine works only into the past . . . but the hero finds a way around that.

Heinlein, Robert. *Time Enough for Love.* A traveler visits the past and becomes involved with his own family.

★ Hogan, James. *Minds, Machines, and Evolution.* An anthology containing several stories concerning time travel.

★ Hogan, James. *The Proteus Operation.* Time travel to change the past, which ends up creating alternate timelines which can still communicate.

Hogan, James. *Thrice Upon a Time.* Messages to the past allow the routine changing of the future.

Hoyle, Fred. *October the First is Too Late.*

Jeter, K.W. *Morlock Night.*

Koontz, Dean. *Lightning.* Good ideas on practical uses for time travel.

Lafferty, R.A. *Past Master.*

Laumer, Keith. *Dinosaur Beach.*

★ Leiber, Fritz. *The Big Time* and sequels. Two massive time-traveling groups struggle to change history to suit themselves. Trite now, but Leiber thought of it first. This is also the first appearance of the "rescue" idea as a way to recruit time agents.

Leiber, Fritz. *You're All Alone.*

★ L'Engle, Madeline. *A Wrinkle in Time.* Newberry-award winner; a must for juvenilles.

Lord, Jeffrey. The *Blade* series.

Lovecraft, H.P. "The Shadow out of Time." Good example of time-travel horror.

May, Julian. *The Many-Colored Land* and sequels. One-way time travel into the very distant past, creating a colony.

McCaffrey, Anne. *Dragonriders of Pern* series. The Dragonriders are an elite paramilitary corps, riding intelligent teleporting dragons. Every dragon can also travel in time, but only rarely is the ability used, usually to avert planetary disaster.

McQuay, Mike. *Memories.*

Miller, P. Schuyler. *As Never Was.* Short story. Archaeologists discover an artifact which they eventually send back in time to be discovered.

Moorcock, Michael. *Behold the Man.* Tourists attempt to watch the crucifixion.

★ Powers, Tim. *The Anubis Gates.* Travel through intangible "gates" to a time where magic worked.

Meredith, Charles. *Run, Come See Jerusalem.* The protagonist tries to change time in order to deal with a fascist government, and discovers how easy it is to destroy a whole timeline.

Niven, Larry. *Wrong Way Street.*

Norton, Andre. *Time Traders* and sequels.

Piper, H. Beam. *Paratime.*

Reynolds, Mack. *Compounded Interest.* An inventor uses a time machine to invest money that eventually accumulates to the point that he can afford to build the time machine.

Saberhagen, Fred. *Pyramids* and sequels (the "Pilgrim" series). Historical time travel.

Silverberg, Robert. *Hawksbill Station.* Political criminals are marooned in the prehistoric past.

Silverberg, Robert. *Project Pendulum.*

Simak, Clifford. *Mastodonia.* A time-gate opens into prehistoric days.

Simmons, Dan. *Hyperion* and *The Fall of Hyperion.* A complex story involving "time tombs" whose contents move *backwards* in time.

Smith, Clark Ashton. Lots of excellent short stories. "The Plutonian Drug," "The Holiness of Azedarac," "The City of the Singing Flame," "Ubbo-Sathla."

Taine, John. *The Time Stream.* Mental time travel.

★ Twain, Mark. *A Connecticut Yankee in King Arthur's Court.* A good reference for dimension travel, too; the hero makes a mighty effort to organize and modernize the medieval world he visits.

Varley, John. *Air Raid.* This short story about rescues in the past became the novel *Millennium,* which in turn became a film.

Vinge, Vernor. *Marooned in Realtime.* One-way travel into an unexpected future.

★ Wells, H.G. *The Time Machine.* An inventor travels into the far future.

Williamson, Jack. *The Legion of Time.*

Dimension Travel

Dimension travel allows far more freedom for the visitors; they don't have to worry about accidentally canceling themselves out. Of course, a time-traveler who erases his own history has effectively moved into a parallel world instead, as happens in some of these stories.

This list gives a huge variety of Places to Go, People to Meet, and Things to Do . . . a lifetime's worth of ideas. There are literally *hundreds* of books (some classified as science fiction, some as fantasy) that start by carrying the hero to an alternate world, and make no attempt to explain it. Many of these would work just as well if the "alternate world" were another continent, another planet, or Fairy Land. Such books have been omitted from this list, except for a few in which the parallel world was especially gameable.

Books and Short Fiction

Amis, Kingsley. *The Alteration.*

Anderson, Poul. *Three Hearts & Three Lions.* A hero visits another plane, where magic works. (This book was also a major influence on ***Dungeons & Dragons!***)

Anthony, Piers. *Ox.* Highly-trained agents from *thousands* of close parallel worlds battle for control.

Asimov, Isaac. *The Gods Themselves.*

Bear, Greg. *Eon.* Paradiminesional weirdness.

★ Benford, Gregory and Greenberg, Martin (editors). *Hitler Victorious.* A whole anthology of what-if-the-Nazis-won? stories.

Boyd, John. *The Last Starship from Earth.*

★ Brunner, John. *The Infinitive of Go.* An experiment in teleportation proves to send people on a one-way trip to any of an infinity of alternate worlds.

Busby, F.M. *All These Earths.* FTL travel becomes an uncontrollable trip between parallel universes.

Chalker, Jack. *And The Devil Will Drag You Under.* Superpowerful aliens draft humans to steal parallel-world artifacts.

Cherryh, C.J. *Gate of Ivre, Well of Shiuan,* and *Fires of Azeroth.*

★ DeCamp, L. Sprague. *Lest Darkness Fall.* One man is accidentally thrown backwards to ancient Rome, with nothing but his knowledge of history and science. Look out, Rome . . .

DeCamp, L. Sprague, and Pratt, Fletcher. *The Compleat Enchanter.* Mental travel between dimensions, to places where magic works.

DeChancie, John. *Castle Perilous* and sequels *Castle For Rent, Castle Kidnapped.* Travel between the dimensions through a central castle whose windows and doors open out onto 144,000 different realities.

Dick, Philip K. *The Man in the High Castle.* An alternate world in which the Nazis won the war.

Drake, David. *Time Safari.*

Farmer, Philip José. *The World of Tiers* and sequels. Portable Gates lead between universes created as playthings of a race of bored immortals.

Heinlein, Robert A. *The Number of The Beast, The Cat Who Could Walk Through Walls.* Travel between alternate realities, including fictional ones like the land of Oz. Not Heinlein's best, but has some good ideas.

Hodgson, William Hope. *The Ghost Pirates.*

Jones, Dyanne Wayne. *Homeward Bounders.* Secret masters control a maze of parallel worlds.

Kilian, Crawford. *The Empire of Time* and sequels ("Chronoplane Wars" series). Parallel universes duplicate our history.

Kube-McDowell, Michael P. *Alternities.* A small number of parallel worlds are linked to ours by mysterious gates; only one of the worlds (not ours!) knows about the connections, and explores the others.

Kurland, Michael. *Perchance.* Travel to parallel universes by both mental and physical means; different travelers use different methods.

Laumer, Keith. *The Time Bender* and sequels *The World Shuffler, The Shape Changer, The Galaxy Builder.* Mental cross-dimension travel.

Laumer, Keith. *Worlds of the Imperium* and *The Other Side of Time.* A diplomat is kidnapped by dimension-hoppers and becomes their agent.

Leiber, Fritz. *Destiny Times Three.*

McCollum, Micheal. *Worlds of the Imperium.* Parallel worlds with some great ideas.

Moorcock, Michael. *The Eternal Champion* series. Dozens of parallel worlds, linked by a mysterious tower.

Moorcock, Michael. *The Warlord of the Air, The Land Leviathan, The Steel Tsar.* Alternate-world war stories; there is a shadowy League of Temporal Adventurers with at least a limited power to cross between worlds on purpose.

Moore, Ward. *Bring the Jubilee.* A time-traveler visits the Civil War and changes history.

Mullaly, Frederick. *Hitler Has Won.*

Niven, Larry. *The Flight of the Horse.* Short story collection about "time" travel which turns out to be to alternate worlds.

★ Piper, H. Beam. *Lord Kalvan of Otherwhen.* Classic treatment of two dimensional-travel themes. the Paratime Police and the resourceful castaway who modernizes a primitive world. After Piper's death, Roland Green and John F. Carr wrote a sequel, *Great Kings' War,* and another is in progress.

Roberts, Keith. *Pavane.*

Shaw, Bob. *A Wreath of Stars.*

Smith, L. Neil. *The Probability Broach* and sequels. A parallel universe developed from a single very small change. The first book is excellent; its sequels are primarily libertarian tracts.

Sterling, Bruce and Shiner, Lewis. "Mozart in Mirrorshades," in *Mirrorshades.* anthology. Brutally practical exploitation of alternate timelines.

Sucharitkul, Somtow. *The Aquiliad.* A parallel world in which Rome survived to colonize the New World.

Turtledove, Harry. *The Misplaced Legion* and sequels ("The Videssos Cycle"). A Roman legion finds itself in an alternate world, very like historical Byzantium . . . which still needs good soldiers.

Williamson, Jack. *The Legion of Time.*

Zelazny, Roger. *Nine Princes in Amber* and many sequels. A few people, those descended from the Courts of Chaos, can travel between the infinite worlds. They use their ability mainly for self-indulgence and family infighting.

Zelazny, Roger. *Roadmarks.* Traveling the interdimensional highway.

Comics

Aztec Ace. 1984 comic by Doug Moench. Dimension travel into parallel worlds.

Badger. First Comics. A schizophrenic martial artist and a powerful Druid adventure across time and dimensions.

Grimjack. First Comics. Takes place in Cynosure, a nexus point for *all* the dimensions.

Rip Hunter, Time Master. Classic 1959 comic series.

Those Annoying Post Brothers. Vortex Comics. Crazed brothers with the ability to dimension hop.

Other Sources

Blumenthal, Howard J.; Curley, Dorthy F.; Williams, Brad. *The Complete Time Traveler.* A tourist's guide.

Hawkings, Stephen. *A Brief History of Time.* A good attempt at explaining time, space and the universe to the non-physicist.

Macvey, John W. *Time Travel — A Guide to Journeys In The Fourth Dimension.* Informed speculation about time travel using black holes, tachyons, time dilation and hyperspace in this and other universes.

Niven, Larry. "The Theory and Practice of Time Travel," in *All the Myriad Ways.* Short, witty, comprehensive discussion of physics, paradox, and why none of this can possibly work.

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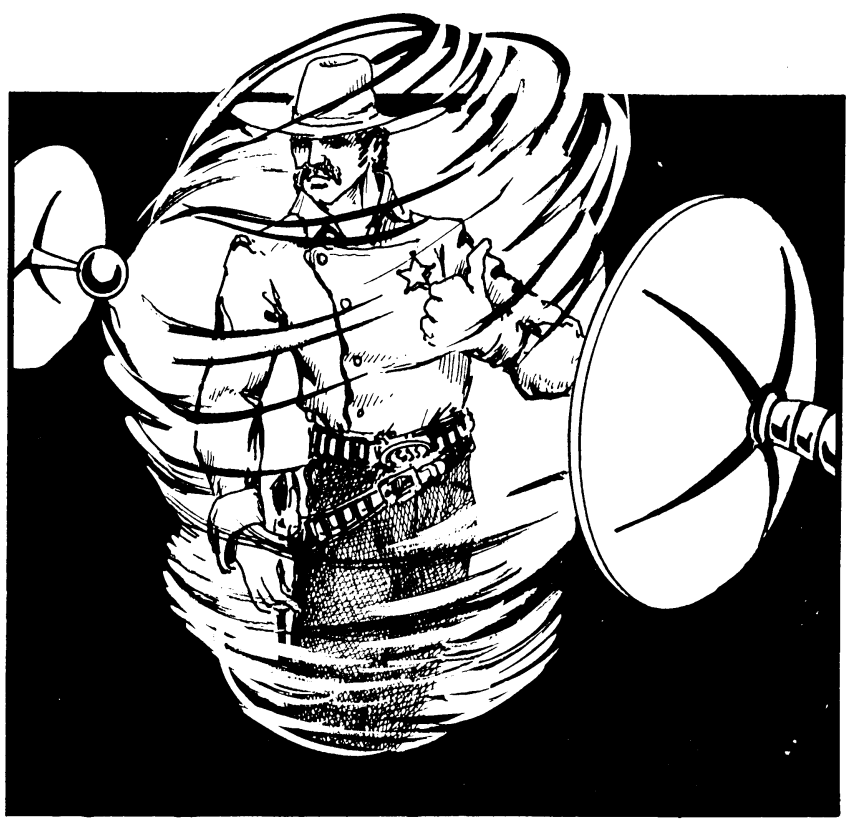

TIME TRAVEL CAMPAIGN PLAN GM: _____ Date: _____

Campaign name: _____ Campaign's starting year: _____ Rate game time passes: _____

Campaign base type: _____Science/exploration _____Trade/rescue _____Theft/pillage

_____ Protect history from interference _____General adventure _____ Other (specify) _____

World Background:

Describe the general background world from which the PCs originate:_____

_____

Does the campaign visit many times, or is it based in one past era? If it is based in one past era, which one?_____

Will the PCs meet time travelers from outside their agency/group/world? If so, describe:_____

_____

Can the PCs meet travelers from their future? _____

Attitude of the general public toward time travel (if they know): _____

Who controls time travel? Are there laws regulating who can travel, what times they can visit, what they can bring back, etc.?

Describe: _____

_____

_____

Technology:

Base TL:_____ Are there any TL anomalies?_____

General physical type of time travel: _____Projector _____Conveyor _____ Gate _____ Combination (specify)

*Do other means of time travel or time viewing exist? Describe: _____

_____

Physics:

_____ Does linearity apply? _____Does the Recency Effect apply? _____Does the Observer Effect apply?

Can the past be changed? _____Time is plastic _____Plastic with high resistance _____ Chaotic

_____ Fixed _____ Fixed, paradox-proof _____New timelines

Can you meet yourself? _____Certainly! _____Temporal Exclusion applies _____ Temporal Snarls apply

Can the present communicate with the past? _____No _____Limited forward communication

_____ Limited reverse communication _____ Full forward communication _____ Full two-way communication

PC Data:

Base Wealth: _____Maximum Starting Status: _____ Starting Point Total:_____

Suitable Character Types: _____

Unsuitable Character Types: _____

Possible Patrons: _____

Possible Enemies: _____

Magic and Psionics:

Can PCs start with magic?_____Mana level of home time:_____

Are there areas of other mana levels? _____How large, how common? _____

Is magery legally regulated? _____ How common are mages? _____

Is psionics legally regulated?_____ How common are psis? _____

Attitude of the general public towards magic and/or psionics:_____

Attitude of the ruling class towards magic and/or psionics: _____

*Does magic exist in the *past?* _____

**GM note:* PCs would probably not know the answers to questions marked with an asterisk. Don't tell the players anything you don't want PCs to know.

ALTERNATE WORLDS CAMPAIGN PLAN GM: _____ Date: _____

Campaign name: _____ Campaign's starting year: _____ Rate game time passes: _____

Campaign base type: _____Science/exploration _____Trade/rescue _____Theft/pillage

_____ Protect alternate timelines _____General adventure _____ Other: _____

World Background:

Describe the general background world from which the PCs originate: _____

_____

Does the campaign visit many worlds, or is it based in one alternate? If it is based in one alternate world, what is it like?

_____

_____

Will the PCs meet crosstime travelers from outside their agency/group/world? If so, describe: _____

Attitude of the general public toward crossworld travel (if they know): _____

Who controls crossworld travel? Are there laws regulating who can travel, where they can visit, what they can bring back, etc.?

In particular, is it legal to exploit, or even pillage, alternate timelines? Describe: _____

_____

_____

_____

_____

*Describe some of the alternate worlds that can be visited: _____

_____

_____

_____

Technology:

Base TL:_____ Are there any TL anomalies?_____

General physical type of crossworld travel: _____Projector _____Conveyor _____ Gate _____ Combination (specify)

*Do other means of crossworld travel or viewing exist? Describe: _____

*Are all the alternate worlds known, or can PCs find new ones: _____

PC Data:

Base Wealth: _____Maximum Starting Status: _____ Starting Point Total:_____

Suitable Character Types: _____

Unsuitable Character Types: _____

Possible Patrons: _____

Possible Enemies: _____

Magic and Psionics:

Can PCs start with magic?_____Mana level of home world: _____

Are there areas of other mana levels? _____How large, how common? _____

Is magery legally regulated? _____ How common are mages? _____

Is psionics legally regulated?_____ How common are psis? _____

Attitude of the general public towards magic and/or psionics:_____

Attitude of the ruling class towards magic and/or psionics: _____

*Does magic exist in other worlds?_____

*Does psionics exist in other worlds? _____

*Do super-powers exist in other worlds? _____

**GM note:* PCs would probably not know the answers to questions marked with an asterisk. Don't tell the players anything you don't want PCs to know.

CROSS TIME AND DIMENSION!

GURPS Time Travel is the complete guide to dimension-hopping adventure. Anything can happen — Space Patrolmen and French musketeers can work together to save Abe Lincoln . . . or make sure he's assassinated, to preserve history as we know it. Now *GURPS* players can tie *all* their campaigns together . . . adventuring across time, or in parallel universes, to visit every *GURPS* worldbook ever published.

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∞ A survey of time and dimension travel as presented in fiction — and current scientific thought. Travel by time machine, by dimension-gate, even by the powers of the mind!

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∞ A detailed discussion of the paradoxes you should consider in creating your own time-travel campaign. Is meddling with history easy? Impossible? Or just a Very Bad Idea?

∞ Parallel worlds . . . "what if" dimensions where something, or *everything*, is different. What if the South won the Civil War? What if the dinosaurs survived? What if *you* could visit those worlds, and return?

∞ A timeline of interesting points in our own world's history . . . as places for time travelers to visit, or as "branch points" for a parallel-world campaign.

With this book, the *GURPS* system reaches its full potential for *universal* adventure. Any time, any place, any universe, any genre. *Anything can happen!*

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