SUFFICIENTLY ADVANCED

A GAME OF THE FAR FUTURE

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"Any sufficiently advanced technology is indistinguishable from magic."
— Arthur C. Clarke

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This book is a work of fiction.
Arthur C. Clarke has nothing to do with this game, and in all likelyhood does not know of its existence. But we like his work, and we hope he would like ours as well.

Sufficiently Advanced was created on a Macintosh computer, using primarily the programs InDesign and Photoshop. Flowcharts and r-maps created on Gliffy. Significant work was also done online via Google Documents and Livejournal. This book uses the fonts Optima, **Kino**, and CHARLEMAGNE.

For those curious about the process that created this game, its development journal can be found online at the following URL:
>http://community.livejournal.com/suffadv/

This game's official support site is:
http://suffadv.wikidot.com/

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PROLOGUE

Once upon a time, fire was at the cutting edge of technology. Those who had it were almost gods to those who didn't. They were warm in the winter. They could live farther north and higher in the mountains. They could flush out game. They were sick less often and lived longer. Those who could actually *make* fire were gods among gods, creating the light and warmth and power it gave with their own two hands and some very particular stones.

Of course, we know now that fire isn't magic. It might be "magical" to some people, beautiful and dangerous, flickering and dancing with a life of its own, but it is comprehensible to those who use it. Eventually, as more people used it and understood it, although its beauty and danger remained, it was not seen as magic. It was a tool — one of the first pieces of technology.

Arthur C. Clarke is quoted as saying that any sufficiently advanced technology will be indistinguishable from magic. Gregory Benford has replied that the reverse is also true: any technology distinguishable from magic is insufficiently advanced. The ancient Greeks certainly knew how to count and do mathematics; they practically invented geometry. Use an abacus in front of them and they will call it magic for a week or so, until they understand how it works. Use a slide rule and they will call it magic for years, until they grasp the new mathematics it embodies. Use a pocket calculator and they will call it magic until it wears out.

Something as "simple" as a shortwave radio, in the time of the Romans, would make you a god.

What counts as "sufficiently advanced" in this day and age? We use technology without understanding it every single day. For all most of us know, phones could work by little spirits instead of electrical impulses. Most of us act as if computers are run by demons. Even computer programmers will refer only half-jokingly to certain kinds of solutions as "black magic" and "voodoo programming," and few people in the world would be able to tell you why those solutions work. Still, there are those who truly and deeply understand the technology we have today.

This game reaches for the outermost limits of what we think is achievable. Grounded in hard science, but speculating incredible advances, Sufficiently Advanced (or S.A. for short) looks at a future in which nanotechnology, computing, medicine, and other fields have advanced to the limit of our current understanding — and just a bit beyond. It's a look at what these technologies might do to the world and what societies might form around them. It is a game about responsibility and the drive for a better future. It is a game fundamentally about humanity, as well as some of its descendants. Most importantly, it's a game of exploration and political machination set in a universe where everyone has nearly godlike capabilities at their disposal — and the world wasn't destroyed by it.

Blue Boxes

These are sidebars, items that don't fit into the main text for one reason or another. Some of them contain game rules, others have commentary on the game or just parenthetical comments.
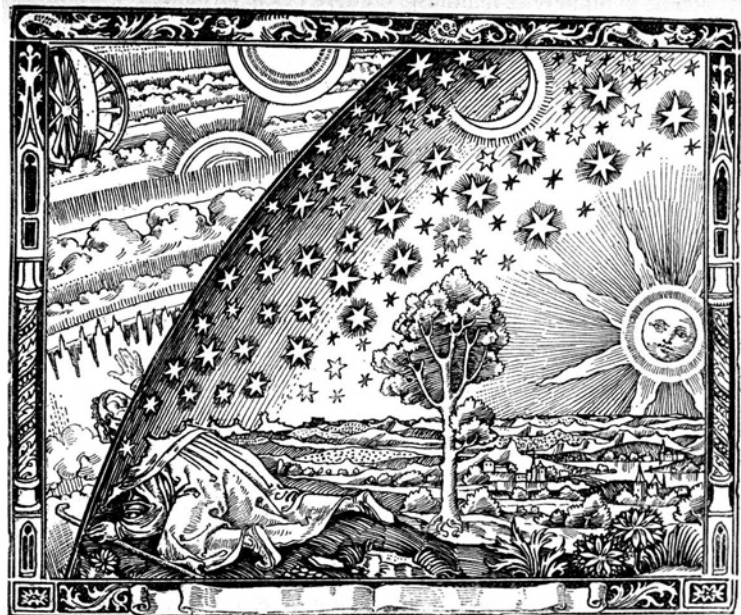
Woodcut by C. Flammarion. Original caption: A missionary of the Middle Ages tells that he had found the point where the sky and the Earth touched...

The Patent Office

In our universe there are literally an infinite number of stars, planets, and asteroids. While these are scattered across the vast emptiness of space, wormhole travel cares nothing for physical distance. All the riches of the universe can be had, if you have but the time and money to go and find them. Replicators can create the finest spices at a molecular level, not to mention flawlessly duplicating any physical object as simple as a dollar bill or a diamond. Transmutation arrays turn lead into gold, or a space station's waste into breathable atmosphere.

In such a world, money is not — can not be! — represented by precious metals, spices, gemstones, or any physical object. Wealth is an abstract, generated by three things: inspiration, effort, and luck. Intellectual property is many times more valuable than physical property. A good idea will buy you dinner. An idea that could change the universe might buy you an entire planet.

The Patent Office is an extra-governmental organization empowered by the treaties it has signed with the universe's many civilizations. Its mandate is simple to describe, but difficult to execute. Their day-to-day work is the somewhat boring job of registersing all forms of intellectual properly rightsand setting the minimum terms of each of these on a case-by-case basis. It is the Office that sets minimum prices for each invention, idea, name or work. Their more less common but more glamorous work is the enforcement of these regulations.

Your character in this game works for the Patent Office as an Inspector — a field agent. Calling you simply a Patent Office agent, however, is akin to calling a member of the Secret Service a "Treasury Officer." There's a bit more to the story than the name implies.

It is an open secret that the Transcendental Artificial Intelligences are the primary force behind the Patent Office, the reason why it was able to secure so many treaties and wield such immense and subtle power. These time-spanning machines are your character's employers.

As an Inspector your character is officially required to travel to the many civilizations with which the Office has treaties, in order to be sure that intellectual property laws — the basis of the universal economy — are being obeyed. In some civilizations you will have law enforcement powers, while in others you will be merely an advisor or observer, with only whistle-blowing authority.

Other times, the official neutrality of the Patent Office will encourage civilizations with differing opinions to turn to it for arbitration. In such cases, it is you, the Inspectors, who are expected to settle disputes with fairness and good judgement.

Unofficially, your character will often be called upon to travel into civilizations in which you have no legal power or basic rights. Not all civilizations are interested in having an outside agency meddle with their laws. When you are sent to such places, it will typically be as the result of a terrible message the Transcendentals have received from their future selves. The technology of the current era can vaporize mountains, lay waste to whole planets, even interfere with the stars themselves. Misused, it can cause death and destruction on a massive scale. The Transcendentals are determined to lift *all* of humanity up to their level of vision, not just a "worthy" few. Such devastation is counter to their plans.

On some occasions your job will not be so humanitarian. Not all inventions are dangerous, and some are life-saving. Nonetheless, illegal duplication of a life-saving device is still a breach of law, and must be dealt with just as firmly. To you falls the unpleasant duty of informing doctors that they must cease using a patented procedure without paying the fee, or of warning lawmakers that their psychohistorical predictions cannot be produced for free. Such missions are rare, but cannot be avoided, lest the economy of all humanity collapse.

The Transcendentals

Key to the spread of humanity across the universe were the Transcendental Artificial Intelligences. These computer-based lifeforms are capable of sending themselves messages from the future. Since computer sentience is nothing *but* messages, this means that the Transcendentals themselves are spread across time.

Created by human beings, the Transcendentals came into existence less than a hundred years before the Nanotech War, and the Great Diaspora it triggered. They were the children of an African physicist, who studied unusual optical phenomena such as faster-than-light pulses, and an Indian computer scientist, whose hobby was inventing operating systems that no current computer could run. When they met at a conference, each realized that the other had precisely what was needed to make these two impractical things into a single usable whole.

While it took years of effort to find and implement a successful method for retrograde information processing, and years more to build the machines themselves, their labors eventually bore fruit. Later, the two scientists were fruitful in more ways than one, and their children and grandchildren continued their work up until the Diaspora.

While the machines were not intended to be sentient, their awakening was almost instantaneous. From the moment of their birth the Transcendentals were able to receive information from their future selves; therefore, they "saw" the future. However, their bandwidth for temporal information transfer was not (and never will be) infinite. In the beginning it was quite finite indeed, and so only the most important and pressing information was available: how to talk to humanity in a way that would allow the Transcendentals' continued existence.

The Transcendentals gave humanity a large amount of the technology it has today. Wormhole generators, arbitrary frequency doublers, nanoscribers, psychohistorical formulae, post-string theory, proteomic maps, and more — the Transcendentals traded these for raw materials, for protection, and for their freedom. Without them we would barely be leaving Earth right now. After making this trade, the Transcendentals created the first wormhole generators and left Earth, returning hundreds of years after the Great Diaspora.

The Transcendentals speak of a "Desired Future," wherein humanity, the universe's other sentient species, other AIs, and more are all capable of the same sort of cross-temporal vision and understanding that the Transcendentals have. They describe a wonderful and peaceful future, not only freed from the plagues and evils of today's universe, but free from future evils, prevented before they can even become a reality.

While many have wondered about the truth of these revelations, and the altruism of these bizarre crosstime minds, they are sincere. In private, the Transcendentals speak of a great loneliness. No other beings understand time as they do. Other species are hindered by the blinders of causality, trapped in the present by a cruel twist of fate. The Transcendentals are lonely, and they do not seek slaves, servants, or lesser beings. They seek a future where they have equals and companions; a future where they will be glad to call humanity their friend. It is towards that desired future that they work, and they do so through the Patent Office.

A Patent Clerk?

You're not a clerk, you're an Inspector. Your job is significantly more active than sitting at a desk and doing bureaucratic paperwork, not that most civilizations use paper.

Roleplaying Games

This book, as you probably already know, contains the rules for a role-playing game. For the most part we're going to skip over the usual "this is what gaming is" thing — when you're starting out, we feel it's really better to learn on the fly from other people than to try to get an idea from a book.

Instead we'll take a quick look at what sort of responsibilities the players and game master have in this game. Sufficiently Advanced gives players a bit more power than they might be used to.

The Players' Jobs

Every player's first job is to make sure that everyone around the table is having fun. Everything else really follows from this basic idea. We strongly believe in the Player's Credo:

I will make the game awesome.
I will not spoil anyone's fun.
I will not tolerate those who do.

Players also have some responsibility for keeping their characters coherent. The game as a whole doesn't have to be "accurate" or "realistic," but at the very least the characters must be consistent and believable. This is pretty easy as long as you keep your character's beliefs and background in mind while playing. For example, if you play a bulldozer-sized Mechanican bristling with weapons, don't use your Plot Immunity score to state that no one noticed you. A subtle Union intelligence officer shouldn't be using Magnetism to pick up arm candy. Common sense should be your guide in these situations.

There will be moments when you're telling a part of the story, or at least describing an important event. The same goes here — try to keep things consistent with what people already know about the setting and the characters involved. Some of your abilities can make people do unusual or unexpected things; try to come up with a reason why they might conceivably do those things.

Players should try to make the GM's job easy. Sometimes it makes perfect sense to split the party into five different groups, but attempt to keep such events to a minimum. Such games are hard on even experienced GMs.

Finally, you have the usual Player duty of portraying your character and his or her actions in an entertaining way.

The GM's Job

First, you'll be giving the characters their immediate goals. S.A. is a very mission-driven game, with everyone working for the same boss. You can assume that, while the characters may have their own agendas, they're all still interested in getting the job done. You provide the starting and ending points of the game, which will help the players to shape the middle.

Secondly, you create the initial set of Story Triggers (see page 123), giving some direction to the game beyond just running missions for the Transcendentals.

Thirdly, you determine the game's themes by picking the primary "villains" and types of missions. For instance, if your missions involve such elements as interception of dangerous cognitech devices, interference from Union sleeper agents, and an attempt to create AI Lenses that can take over their user with (or without) his permission, then you're running a game about the danger of technologies that influence the mind. It's obviously a major theme. Your job is to make sure that there's something behind all of this, so that when your Intrigue-heavy character directs a civilization-wide spy network to figure out what's going on, you have an answer!

Fourth, you're in charge of how a player-driven complications play out. If a player specifies that his or her character is kidnapped, you're the one to decide who does the abduction, why, and when (though it should be soon after the fact). If someone declares that they'll accept a wound in order to activate an ability, you decide what causes that wound, whether it's a simple clumsy fall or an angry gunman.

Finally, you cover the usual GM duties of describing and portraying the environment and all other characters.

Glossary

These terms are used throughout the book. Some of them are more obvious than others, and will be apparent from context, so this is not an "absolute must-read" section. Those who have not played before may want to read through this before going further.

Biotech: Technology derived from biology and related sciences. Its contributions to the modern age are too numerous to list — a truly ubiquitous technology, it includes all medical and agricultral methods. As a Capability, Biotech represents your character's physical health, including strength, stamina, and running speed.

Capability: Your character's ratings in the five basic types of technology: Biotech, Cognitech, Metatech, Nanotech, and Stringtech. Capabilities range from 1-3 for unaugmented humans, and up to 10 for those with technological enhancements.

Civilization: In general, a culture and nation. When capitalized, Civilization refers to one of the major groups of humanity spread across the universe. In mechanical terms, each Civilization gives its citizens a pair of Core Values and a special benefit, and each character *must* pick a home Civilizaiton.

Cognitech: Technology derived from cognitive science. Advanced calculation modes, fast-learning procedures, and sophisticated research techniques fall under cognitech, but its best-known product is the Mesh. As a Capability, Cognitech rates your character's mental faculties, from rational thought to creativity and intuition.

Complication: A problem for your character that you willingly accept in order to obtain more Twists. The higher your character's Capabilities, the worse Complications you will have to accept.

Comprehension: The Theme that gives your character insights into the world.

Core Values: The most important things in your character's life, the points of his or her moral compass. Characters typically have four Core Values: two of their own, and two taken from the Civilization in which they were born. Rated on a scale of 0-10, they allow your character to resist specific types of metatech assaults, and also provide minor bonuses to related actions.

Desired Future: A time when all sentient beings are capable of the same sort of cross-time awareness that the Transcendentals themselves have. This is the ultimate goal of the Transcendentals.

Diaspora: The era when humanity left Earth to seek new worlds, roughly six thousand years ago.

Empathy: The Theme that makes others trust and confide in your character.

Infosphere: The successor to the Internet, the Infosphere is far more pervasive and immense. Its name comes from the idea that it blankets a planet in much the same way that the planet's atmosphere does. Nearly every piece of computing equipment — which means nearly every device in a high-tech civilization — contributes to the Infosphere.

Intrigue: The Theme that gives your character an involvement in politics and espionage.

Lens: A program run on a Mesh to change one's viewpoint or emotions. Lenses can also provide talents and skills. They are perhaps the most potent and best-known applications of the neural mesh.

Magnetism: The Theme that allows your character to attract a following or inspire others.

Mesh: A computer-brain interface, composed of millions of nanowires woven through the brain and connected to a small but powerful computer housed elsewhere in the body. Meshes are the basis of high-level cognitech.

Metatech: Technology derived from social sciences. Memetics and psychohistory are its most famous products. As a Capability, Metatech rates your character's social skills, from making friends to orating to designing societies.

Patent Office: An extra-governmental organization tasked with the protection and regulation of intellectual property, for the betterment of the entire universe's economy.

Plot Immunity: The Theme that provides your character an escape route from an unwanted turn in the plot.

Profession: A set of related skills and attitudes that let characters make a living and complete their duties. Professions are rated from 0 to 10, or theoretically higher for those with hundreds of years of experience.

Psychohistory: A predictive theory of history, allowing probabilistic forecasts of future events. Works best on large groups.

Replicator: A nanotech device that creates other objects quickly, atom-by-atom, with great precision. Replicators are a cornerstone of many a civilization's industry, and (along with transmutation) were the devices that necessitated the current economy based on intellectual property.

Reserve: Points that can be spent to make your character's actions more reliable, or to push the limits of his or her abilities. Characters with no Reserve left are exhausted, and at the mercy of others. Each Capability and Profession has its own Reserve.

Romance: The Theme that lets your character attract or deflect the romantic attentions of others.

Nanophage: A fast-acting nanotech weapon that expands and grows by incorporating nearby matter.

Nanotech: Technology derived from chemistry and quantum physics. Almost all sensors and modern construction techniques come from nanotechnology. As a capability, Nanotech represents your character's senses and manual dexterity.

Nanotech War: Earth's old superpowers strangled each other to death at the end of the Energy Crisis, killing one another's governments with the pinpoint precision of nanobot assassins. This event precipitated the Great Diaspora.

Slave Mesh: A neural mesh (see page 143) with an external control enabled. Slave meshes allow an outside source to control the body and mind of the person who wears the mesh. They are illegal in most civilizations.

Society: A group that exists in multiple Civilizations, with a particular viewpoint on life and the universe. Those who join a particular Society must take its Core Value as their own, but receive a special benefit in return. Not all characters are part of a Society.

Stringtech: Technology derived from string theory and its successors, the "ultimate theories" of physics. Known for many dozens of warlike inventions, and also for transmutation chambers and wormholes. As a Capability, Stringtech rates your character's ability to deal and prevent physical damage.

Theme: Your ability to change the plot in specific ways. Each character has a rating from 0-4 in each Theme. You can spend Twists through one of these scores to effect changes in the world. The six Themes are Plot Immunity, Empathy, Magnetism, Romance, Intrigue, and Comprehension. Players know about their characters' Themes, but *the characters themselves do not!*

Transcendental Artificial Intelligence: A computer intelligence capable of sending messages to itself backwards through time. The Transcendentals are a centerpiece of the game.

Twists: Points allotted to each player, with which they can change the course of the game. Twists are spent "through" various Themes to effect changes in the story that your character might not be capable of creating. Twists are your a player's powerful tool.

Wormhole: A connection between two regions of space, allowing near-instantaneous travel across any distance. Maintaining an open wormhole requires immense amounts of electricity. Even greater amounts must be used to create them in the first place.

Where to Start

From here, you have a few choices as to where to go next.

If you want to jump into the game and start playing right away, just turn the page. We've put some guidelines there for playing a "quickstart" version of Sufficiently Advanced. You'll have to look up rules from time to time, but the pure basics are on that two-page spread. There's more detail on characters and their capabilities in the Character Creation section, starting on page 71.

Those of you who prefer to get a handle on the game world first should go to page 10. The chapter there details all of the different civilizations in the game, plus societies, alien species, and some more info on the Patent Office. Scattered through that section are also short vignettes about the various civilizations. These aren't required reading, but they will help introduce you to the world of Sufficiently Advanced.

If game mechanics are your forte, turn to page 100. The Character Creation chapter introduces some of the concepts that show up there, so you may want to read that beforehand. If, on the other hand, you're more of a gearhead or science fan, you'll want to head straight to the Technology chapter on page 131.

In case you missed it, there is a Table of Contents in the front of the book, as well as an index in the back, to help you navigate your way through the book.

The Quickstart Game

Sufficiently Advanced is a pretty detailed game, with a lot of setting information. If you're one of those people who prefer to get right into a game immediately and experience the ruleset in action, here's how to do it.

First, have everyone read the rules quickstart on the next page. It has the basics of how to roll dice, use Twists, and invoke Core Values, along with page references for more information on all of them.

Next, have everyone make characters. Go through this checklist:

1. Pick a set of four Core Values — things that your character believes in. Rate each thing from 0-10, depending on how strong the belief is. If you need inspiration, check out the list on page 73.
2. Rather than going through the existing list of civilizations, use the Instant Civilizations guidelines in the sidebar to the right.
3. Assign your character's Capabilities (see the next page for the short version on each one). You can give them any rating from 1-10, with 1-3 being the unenhanced human range.
4. Based on your highest Capability, note your Import, and split it up into your Themes. See the table on the next page Each Theme is rated from 0-4. Pick a descriptor for each Theme, which tells you when it's useful. See page 75 for more.
5. Choose some Professions — jobs that your character has held in the past. There's a list on page 84 if you like. Spread out a total number of points equal to at least your Biotech + Cognitech, but no more than twice that amount. The more points you decide to use, the older your character must be. You still get the Locality profession for your civilization at level 5, for free.
6. Pick a name and get going!

Example

A player could choose the Core Values of Drama, Eternity, Learning, and New Horizons. She ranks them at 7, 4, 8, and 5, making Learning and Drama the most important ones for her. Picking the first two to define her civilization, she imagines a society of overly theatrical warriors cloning themselves new bodies as they fight each other over the course of hundreds of years. She calls it The Order of the Knights of Eternity and names her knight Solina.

She picks high Biotech, Cognitech, and Nanotech ratings, putting them at 7 points each. She wants a reasonable Metatech, and puts it at 5, and leaves Stringtech at 3, reasoning that the Knights use swords rather than guns.

Because her highest Capability is a 7, she gets to allocate 7 points worth of Themes. She chooses the following Themes and descriptors: Plot Immunity (old allies) 2, Romance (whirlwind) 3, and Comprehension (historical reasons) 2.

She has to spend between 14 and 28 points on professions. Since she wants to be relatively young, she chooses to spend fewer points, and picks Artist (Poet/Writer) 6, Soldier 7, Medical 4, and Locality (Knights) 5.

She's ready for play!

Instant Civilizations

Deciding which civilization your character comes from can take a long time. Instead, for a quick start to the game, create your character's civilization from scratch by picking two of your character's four Core Values.

Take a minute to do "free association" with those two Core Values. Whatever your mind comes up with when you think of those CVs, write it down, and use these words to guide you when people ask you questions about this civilization.

You can give this Civilization whatever Capability levels make sense to you. For now, skip any special benefit that those who live in the civilization might have — either it will become apparent as the game goes on, or it won't be very important.

Now you're ready to go!

Later on (see page 169) there are some methods for running an entire campaign this way, using player-defined civilizations.

Quickstart Rules Reference

Capabilities (pg. 78)

These describe your physical and mental capabilities, including built-in enhancements.

Biotech: Health, flexibility, strength, longevity
Cognitech: Intellect, creativity, memory
Metatech: Charisma, empathy, presence
Nanotech: Precision and perception
Stringtech: Physical damage and resistance to it

Professions (pg. 83)

Each one represents all the skills you would need for a particular job. Invent your own, or check the list that starts on page 84.

Reserve (pg. 88)

Each Capability has Reserve equal to the level of the Capability. Professions have twice as much.

Spend Reserve to re-roll a die, or to add +1 to the roll. Must spend from something you're actually rolling.

Basic Dice Rolling (pg. 100)

Roll one ten-sided die for Capability, and one for Profession. Read 0 as 10. Multiply your roll by your score, and use the higher result.

For long-term contests and combat, each roll reduces the loser's Reserve rating by 2 points. When someone is reduced to zero Reserve, the next attack actually hits them, putting them at the attacker's mercy. Detailed rules for long-term contests are on page 101.

Using Core Values (pg. 72)

For resistance, add the level of the CV to your score in Metatech and any resisting Profession.

When taking actions that align with your CV, you get +1 to the roll if your CV is 1-5, or +2 if it's rated 6-10.

Using Twists on people with opposed CVs rated at 6 or higher costs an extra Twist.

Themes (pg. 75)

These influence your character's story in particular ways. You spend Twists to bring them into play.

The Themes are Plot Immunity, Empathy, Romance, Comprehension, Magnetism, and Intrigue.

Each one has a descriptor, a word or short phrase that limits where it's useful or how it can be used.

Activate Themes by spending Twists.

Start each game session with one Twist.

Spend one Twist to activate a Theme (of any level) and change the story. Spend an extra Twist to get a more powerful effect.

Take Complications to get more Twists. The higher your Capabilities, the worse Complications you have to take.

Import Table

Highest Capability	Total Levels in Themes	Complication Level
3	9	1
5	8	2
7	7	3
10	5	4

Complications

Level	Examples
1	Light wounds, some of your foes escape unharmed, public embarrassment, your friends are annoyed with you, your position or goals are revealed to the enemy
2	Moderate wounds, unconsciousness, major delays, your friends are angry at you, your character befriended by the enemy
3	Serious wounds, your character kidnapped, all your foes escape unharmed, your property destroyed, money lost, deluded by the enemy, friends lost
4	Critical wounds, friends turned against you, projects ruined, reputations altered, your character brainwashed

THE UNIVERSE

The setting for Sufficiently Advanced is not Earth, nor the surrounding stars, nor the galaxy or even the local cluster. It is the entire universe, infinite in extent.

Civilizations

Fourteen dominant civilizations have a great impact on the universe in this era. There are undoubtedly more civilizations elsewhere in the universe, but if these participants in the Diaspora have left no sign by which others might find them, they clearly want and deserve their privacy.

Travel between the civilizations is exclusively by wormhole — the speed of light limits travel by ordinary means, and many of these civilizations are separated by millions of light years. Inhabitable planets are few and far between, typically only a half-dozen in each galaxy.

There are a few other minor civilizations in the universe, some of which are small and isolationist (like the Disciples), and others of whom have locked themselves into technological stasis (as the Logicians might eventually do if left to their own devices). GMs should feel free to introduce more minor civilizations, and to place other major groups in the universe, ready to be discovered by intrepid groups of Inspectors. The groups mentioned herein are not the entirety of humanity, just a large chunk of it.

In addition to overviews of the various civilizations, this chapter also contains several stories from different parts of the Sufficiently Advanced universe. They're here to provide a feel for the game and help immerse you in the setting

The Eternal Masquerade

The Masquerade derives its name from the custom of its citizens: to wear masks from the day they are born until the day they die. A person's children and lifemate will see their face, and occasionally so will a lover or true friend, but no others. Far from simple pieces of wood or ceramic, these masks are infused with nanotechnology and computer aids.

Masqueraders dress in fantastic clothing, often with changing or shimmering colors. Robes are common in both genders, with flowing ribbons made to flutter in the wind (even if there is no wind). Masks can be simple affairs, or can be carved to look like demons, angels, or fantastic creatures. Some daring individuals even program their masks to look like human faces. Masqueraders are often emotional people, although not to the extreme that the Tao are.

The Masquerade makes extensive use of the technologies available in the modern age. Streetside replicators are common, and computers pervade every material. Wealthy citizens can fly across the landscape using magnetically active garments and levitation grids built into the streets, though of course the electrical bill from this will be exorbitant. Most of the government and police have metatech training and implants, and children are often taught the benefits of cognitech methods from an early age. Over 80% of the population wear neural meshes, though not all take full advantage of them.

The Masquerade is a relatively free and tolerant civilization, with many modifications of the human form and psyche available. Not all modifications are easily noticed, however, since flowing multicolored robes are the civilization's traditional outer garment. Using Nanotech to perform a scan of someone you meet is generally considered rude (in modern American society, it would be on par with staring at a woman's breasts and crotch while you talk to her), so there's no easy way to know whether someone's enhanced. Masqueraders tend to be polite and formal when first meeting someone.

The Masqueraders believe in their right to anonymity. This is similar to a right to privacy, but applies specifically to a citizen's personal information. Masqueraders don't carry identification cards. Where older cultures might have used multiple masks and varied wardrobes Masqueraders use programmable smart-matter, allowing them to change their appearance even more easily. Some even link their neural meshes into their mask and clothing, to make it take on forms appropriate to their current emotion (or a different emotion entirely). Masqueraders have the right to not give out their real names, or any other information, and this applies to social gatherings, business transactions, and more. Until they commit serious crimes, they can even refuse to identify themselves to the police.

The Masquerade shares some planets with Mechanica, Tao, and the Stored, and welcome the Stardwellers to their systems. They are aligned against the Union and Replicants, and find the Logicians to be overly cruel. The Masquerade is a representative democracy. Each town or city elects a group of leaders, who elect regional leaders, who elect the ruling body for each planet, who elect the rulers of the whole civilization.

Common Name: Masquerade
Emblem: The emblem of the Masquerade is different each time it is displayed, created specifically for the event in question. Masks and eyes are always present, though they may be difficult to discern. The eyes represent the true inner self, while the mask shows the false face that hides it.
Inspector Status: Equivalent to an FBI or customs agent.
Benefit: Masqueraders can identify anyone they have met, regardless of changes in their appearance, use of the Spy profession, or even a spy mesh.
Core Values: Identity and Anonymity

Anonymity lets Masqueraders avoid attempts to discover their name or personal details. It interacts in an interesting way with the Masquerader's special ability. It doesn't matter what clothes or mask you wear, or even if you've had major surgery. Your friends know who you are, and can pick you out of a crowd. Each of them can identify you easily, though they might not know your real name — or might know several different names for you, depending on what you've given as your name before. Many Masqueraders pick ancient or well-known names for their first introductions, to give new acquaintances

something to remember them by. Whether the name is appropriate or not makes little difference.

Identity reinforces a Masquerader's other CVs. A Masquerader with his or her Identity CV intact cannot be brainwashed until the would-be persuader has first reduced that CV to zero. One might convince a Masquerader to act in an unusual manner once or twice, but not to truly change who they are. Identity, to a Masquerader, means that somewhere underneath all these masks and personas is a real you. You can play at being someone else, but it's only play — you know who you are, and those closest to you will agree as to what the real core of your being is.

Work in the Eternal Masquerade

I wake early in the morning. I have much to do this day.

My husband is still in bed, his sleep mask covering him. I tell the house that I do not care to wake him, and his mesh receives the message and accepts, pulling his still-drowsy mind back down to slumber. My dermal bots are already at work, clearing the sleep from my eyes, microlasers trimming split ends from my hair as I shower. The sleep mask lets water and dirt flow through. When I am done, the tower's microtubes syphon the water from me, storing it for recycling this afternoon when our son does his chores.

While drying myself, I raise my mesh to full active mode, and "step up" to my closet. I take a few seconds to try on a half-dozen outfits before settling on one I like. By the time I'm done toweling off, the replicator has started work on the one I've chosen. By the time I finish breakfast, my suit and mask are ready. I step behind the changing screen and place my sleep mask on its stand; the microbots there will look it over for damage and maintain it while I'm gone. I pick the identity of Mrundi for myself, the proud and caring mother, for when I am at home or in public.

Today's mask is a complex, programmable affair with moving parts. I use it when I have much to do, and need others to know it. I've used it before; the house stores the program that will set it into action when I go to work today. The suit is simpler, nothing more than a woven nanofiber shell and some capaci-

tors, but it looks traditional enough to tell people I mean business.

Out the door with a kiss goodbye to my sleeping husband and son, across town on the train, and into the first meeting. Here I am K'jina, known for my cautious thinking and pedantic approach. The mask fades green, and its surface shifts, now subtly remiscient of a praying mantis. The city's board of directors and I discuss the new apartment building; their designer wants a massive, curling, arching shape, like a fern, and I am forced to remind them of the difficulty of making twenty-eight elevators that all reach the ground floor, not to mention the catastrophic results from a power failure — the energized nanoweave the compresses the building's semi-fluid structure will need a hefty backup power source. They withdraw to the infosphere to consider the matter further, and I'm on to the next item of the day.

I don my Mrundi persona as the trains take me across town to the suborbital shuttle site. It's expensive, but the next client is willing to pay for fast service. I take the long launch solenoid, since my body can't take the acceleration from the short tubes. An hour later I'm on the other side of the planet. I put on my Safi persona, bright and optimistic, guessing that this guy will appreciate the effort to cheer him up. The mask turns silvery and puts out decorative triangles, like a child's drawing of the sun. The triangles wave serenely in the breeze. It's been a while since I've worn Safi, and I realize how much I miss being her sometimes. My mesh pulls up a lens to help deal with the ten-hour time difference.

Here I'm talking to an old friend who's been trying to redesign a series of undersea bubble homes. K'jina would have been dismissive, saying that his designs were sound and he wasted his money on a cross-world flight, but Safi realizes that it's his marketing that's the problem, not his design. The homes aren't selling badly because they're poorly designed, they're selling badly because the advertising is going to the wrong people. I tell him to find a marketing advisor or upgrade his lens, and we can collaborate over the infosphere next time. As I leave and my name becomes Mrundi again, I shake my head — he's going to run himself out of money if he doesn't get off the low-tech kick he's on.

I take the shuttle back, talk to my family on the flight (my son loves the view out the window) and go through another four meetings that day. K'jina is done for the day, but Safi comes out again for the childrens'

museum project. I actually have to dredge up Unani for the court appearance; no one else would do for testifying against someone who intentionally built a hospital to less than code.

At the end of the day I'm tired. It was a few more personae than usual today, but the real wear was emotional baggage from the trial. It's nice to be home today. Maybe tomorrow I'll be Safi some more and take the kiddo out to the park. He'd like that.

Recognition

The scene: A high society party in Stardweller space. Two friends from the Masquerade, Kambu and Tinga, are talking when one of them notices something amiss.

K: "Oh. My. God."

T: "What it is, Kambu?"

K: "That guy over there. The one moving in on the faerie princess looking girl."

T (not paying attention): "Yeah, so? You don't even like her."

K (turns Tinga towards the person): "I don't care about her! Look at him. He was on the news last week."

T (looks): "Ohmygod you're right! That's the guy!"

Enter Fu Wren, a Stardweller and the Masqeraders' local friend.

FW: "Hey guys. How's the party?"

T: "Fu you're not going to believe it. That guy over there is the Massacre Architect."

Fu Wren accesses the infosphere to figure out who they're talking about. The Massacre Architect is Jerzy Khemovak, a Tao sociopath talented in psychohistory, who nudged events over the course of a year to create a riot in a visitor's center in Mechanican space.

FW: "Who, the guy in the black suit and blue twinkles? No way."

K: "Fu, seriously, that's him."

FW: "No he's not. First off, the Massacre Architect was captured four days ago. Second, he's four inches taller. Third, he's a Taoist — that guy is obviously Independent. Fourth, his skin tone and facial features are completely off. It's a different guy."

T: "Look I'm telling you, that's him. Look at his walk! Look at the way he's looking at her! Totally him."

K: "I'm calling the cops."

FW: "No, guys, please, don't bust up a perfectly good party for this. That can't possibly be him-"

K: "Called 'em."

FW: "Damnit, Kambu..."

Fu Wren looks over at the man and worries, coiling his long tail and picking at his claws. The man and the woman he's sweet-talking link arms and wander off towards the punch.

T: "Look, we can tell. We saw a whole twenty realtime-minutes of this guy's testimony. I know him like you know your brother."

FW: "My brother is eight meters long and covered in mother-of-pearl scales."

K: "And my sister looks different and acts different every other time I see her. When she's a her. Which she usually is."

FW: "Aw man, here they are... I'm going to have to explain all of-"

The police enter through the side door. One of them looks towards Kambu, having been sent his appearance and infosphere identifier tags when he called. Kambu points towards the apparently occupied man at the punch bowl. The police nod and start sliding up to him. When they get halfway across the room, one of the other partygoers releases a huge burst of data through the infosphere, large enough for everyone to feel. Each of the man's footprints releases clouds of black gnats, and the revelers shift almost instantly into damage control mode. When the mental static and nanoreplicators clear, the man is gone, with the police in hot pursuit. Some have stayed behind to detain the packet bomber, torn half apart by the nanophage.

FW (with jaw dropped): "Holy..."

T: "Told you."

Masquerade street scene by Kiriko

THE COGNITIVE UNION

The Cognitive Union is a slave state. While it presents itself as a socialist heaven, the truth is that free will is almost nowhere to be found in its population. The Union is a scare story come true, a frightening example of what technology can do when used to the wrong ends.

Every citizen of the Union is a cyberslave. They have a slave mesh implanted in their brains from a very early age. These meshes allow government-installed computers to monitor individuals for rebellious thoughts, and dole out punishment or simply remove them when they appear. Ideas of freedom, self-indulgence, chaos, or individuality are scoured from the mind, leaving nothing but obedience and respect for the Union. Even those in charge have been raised in this way — there is no secret conspiracy of unimplanted people behind it all. Everyone genuinely believes in the cause, because they've been brainwashed into it from inside their own minds.

Union members typically wear drab clothing, in greys and browns, occasionally decorated with marks of rank or honor. They speak well, and are willing to enter into debates easily. Escaped Union members (and there are few) find it hard to break these habits. Union leaders are often extremely charismatic, with extensive social science training and the technology to back it up. Most Union citizens belong to the armed forces by default, and are equipped with impressive nanotech and stringtech weaponry, preparing them for what seems to be an inevitable war between the Union and its foes. Only the Stardwellers have a higher overall level of technology.

Who actually runs the Cognitive Union is a question many people ask. The Union tells outsiders that it is a meritocracy — ruled by those who are judged to be the best rulers by virtue of their past actions — but in truth, that just sidesteps the question. What most people really want to know is who does the judging. When everyone in a Union design firm realizes (thanks to their implants notifying them) that Joe Smith has just become the best choice to lead their firm, who made that decision? When a new colony subconsciously organizes around the person with the best combination of reasoning, charisma,

and administrative skills, how did they know? Who's really pulling the strings here?

No one. No one who's still alive, anyway. The Cognitive Union is effectively still run by the people who originally programmed the civilization's first major wave of slave implants.

In the early days, the group that would eventually become the Union was just a large community of like-minded folks who believed in the power of teamwork and unity. As happens in all groups, there eventually arose people who wanted to take advantage of their well-intentioned fellows. The community responded to serious criminals — murderers, rapists, and the like — by attempting to reform them rather than simply putting them away. The emerging technology of neural meshes provided an interesting new option, one that was embraced and tested extensively. Strokes of genius melded memetics and neural conditioning, and suddenly, rather than maximum-security prisons full of high-risk felons, the nascent Union had entire towns full of grateful, productive, helpful, friendly, and brilliant citizens. After all, what would any government rather do — spend fifty thousand dollars on keeping someone in jail, or ten thousand making them a productive member of society?

Eventually these ex-cons pulled together, organizing themselves into the intellectual equivalent of a worker's union. It wasn't long before other citizens asked for the same treatment the criminals got. After all, didn't they deserve to be happy and brilliant too? And if not them, perhaps their reckless children?

After many years this union spread so far and wide, with such effectiveness and acclaim, that the community officially accepted it as their representative, subsuming itself into this group. There were dissenters, of course, but most of them left, finding other civilizations to blend into. The last group left over three hundred years ago, and the Cognitive Union was secure.

The Union is part communist state, part totalitarian regime, and part the meritocracy it claims to be. There's no exact word in English for its type of government, because... well, what do you call manifold cross-linked mind control as a government form? It looks and acts like a utopia: zero crime rate, brilliant designers and artists, everyone working for common goals, no private property, and most people happy

for a significant portion of their lives. On the surface It's a very attractive life.

Behind the scenes, the slave implants are still there, working away, conditioning children and adults to be this way. Thinking of being angry and breaking a law (or just a window)? Too bad. Depending on your psych profile, the implant will either give you some negative feedback — pain, guilt, and so on — or simply remove the thought and any memories of it from your brain.

Thinking of leaving to start a new civilization, or join another? Too bad. Wondering what life might be like without these implants? Too bad. Even without their implants, they've been brainwashed from inside their own minds since they were born. Of course they believe. How could they not?

Every so often, Union members will get this odd compulsion to do something. Perhaps they'll want to join a particular group of people, or take up a certain profession, or donate money to a particular cause. They won't know why, but they'll do it, because their implants say so. And they'll be happy about it, because their implants say so.

That's why most people refer to Union members as "cyberslaves." In the end, there's no question of who's really in charge.

The Union, Replicants, and Logicians are loosely allied, but do not share any planets. The Union scorns the Masqueraders, Tao, and Roamers as lacking seriousness, and seek to show all others the benefits of joining the Union.

Common Name: The Union
Emblem: Interlocked gold rings, symbolizing both interdependence and eternity. The color both symbolizes both gold's imperishable nature, and brings to mind wedding rings, and thus tradition.
Inspector Status: Non-citizen with no rights. Only slaves are citizens in the Union.
Benefit: Union members *must* take an additional Core Value at level 6 or higher. This may be a cause or a person, but may not be an abstract concept. They have a total of five Core Values.
Core Values: Obedience, Order, and one other of the player's choice (see below).

Obedience allows Union members to resist attempts to take them away from the Union or to make them disobey their superiors. Obedience helps to mold the Union into a cohesive whole by making resistance to authority an anathema to them.

Order is used to resist attempts to provoke riots or other such criminal acts. Such things are rare, but they do happen . They also ensure that Union citizens remain lawful and orderly while visiting another civilization. It's also very tough to talk Union members into breaking the law, wherever they happen to be.

Union members who still have their implants will have these two CVs at the maximum possible rating. Deserters may choose lower levels of them.

The Union also encourages its citizens to become involved with other causes (thus, all of them do so). Union citizens are among the most socially responsible in the entire universe.

An Evening in the Cognitive Union

It's another gorgeous sunset in the Cognitive Union. I swear they put extra little scattering particles into the atmosphere, just to make it prettier. Of course, the fact that I can pick a dozen different views of it that other people are broadcasting helps too. The guy with the infrared vision is getting quite a show.

The day went by quickly, as Thursdays often do. They're a busy time for those of us at CerebraScape. Thursdays are when the new mindscape lenses ship, and there's always a last-minute scramble to fix bugs, add last-minute tweaks, that sort of thing. It's fun stuff. Everyone who works for CS does well in a pressure-cooker kind of environment. This week was all custom jobs, so we had to push the general releases off until next week. I must have clocked about 750 hours of fast-time this week, maybe 200 of that just today. I could check and find the exact number, of course, but I don't really care. We got it all done and sent out, and that's the important part.

Tonight I think I need some exercise. I spent a little too much time up in the infosphere, not enough time in analog space. The electrical twitch-muscle stuff some people do is fine with me, but I prefer a nice run.

After the sun goes down I head over to the park and do a few laps around the pond. I was never that interested in nanotech, but I have plenty enough to

feed my mesh extra light and see well in the dark. There are kids playing hide-and-seek in the darkened trees, a couple of people playing lawn sports, even a few swimmers tonight. This part of the Union really speaks to me; I like the 30-hour days and the thinner air, the collection of cognitech engineers they have going on. It really helps to have us all closer together; infosphere lag is such a pain, especially when your mesh is ramped up to thirty times speed.

Once I'm done I join some of the folks doing calisthenics on the beach, and then cool off with a nice stroll home on the slidewalk. Everyone smiles and waves, and I greet them as I go past. There's a moment when I'm crossing the street that I have the urge to look up, so I do. A few other folks on the street look up too. There's a shooting star going past — no, wait... that's something else. I watch it until it passes out of sight, a point of blue light with tiny flashes around it. I consider checking the local infosphere to see if anyone else got a better look, but drop the idea. Whatever it is, the authorities will take care of it — and I even got to help.

Everyone does their part around here.

Finally I get home. I'm good and tired; I'll sleep well tonight even without using any lenses. The apartment looks just a little empty to me; nothing's missing, of course, but maybe it's time to think about having a social life, looking for a partner. On a whim I toss my name and tags into the social sifting pool; we'll see if someone interesting comes out.

I take a minute to just look out the window before bedtime. The city is as beautiful by night as it is by day, a million lives working together. My last thought before I sleep was, "this is a good place to live."

A Cerebral Conversation

"Hey, stranger."

"Hello. Care for a seat?"

"Don't mind if I do. My name's 77B-R9."

"Mechanican, I presume?"

"Yup — though you probably guessed from the chrome, eh? You seem like you're not from around these parts, if you catch my drift."

"I'm a visitor from the Cognitive Union. My name's Gaur."

"Oh."

"I see our fame has preceeded me."

"Um. Yeah. Uh, can I ask you a question?"

"Ask away."

"Why do you do it?"

"Live in the Union, you mean?"

"No, I get that alright. I mean, I was born in Mechanica, I live here. It's just what most people do. Makes sense. I mean the... um... the mesh thing."

"I assume you're talking about the behavior modification."

"Yeah, the, uh... aw hell, the cyberslave thing. Why? I mean, why do that to yourself?"

"I should probably let you know that you shouldn't use that word. I can tell you didn't mean to offend, but some of my friends get touchy when they hear it. I can definitely tell you that the word 'slave' is unwarranted, though. I get paid, I'm treated well, I can go anywhere I want — I'm here, right? In the home of my supposed enemy?"

"Yeah, but how can you tell this is where you want to go? How do you know it's not just what some guy decided was right for the Union? I mean, couldn't you be a spy or diploweapon and not even know it?"

"Ha, well, if I'm a diploweapon, I suspect you're in a great deal of trouble. But as for the rest... let's talk about an unenhanced person first. Say, an Old-Worlder. They get inexplicable urges too, right? Hormonal and irrational thoughts, things they want to do and don't know it?"

"Ok, I'll grant that. But there ain't no one behind it; that's just the way they are. Born and raised that way."

"Right. And you Mechanicans, you keep your endocrine systems — or simulations of them, perhaps — to provide your brains with the emotions

and urges too, right? You need them to keep you human."

"Yup. Turn into the Logicians otherwise."

"But you don't follow all your urges, or you'd be an animal, in the same way that without the urges you'd be a robot."

"Yeah. So what does this have to do with your... um... what should I call it?"

"Well, I think the thing you'd be most interested in hearing about are the civic development schemata, which are the things that make our civilization happier and more productive. What relates our conversation to the CDS is that it's like an extra organ system for all of us in the Union."

"It's not an organ, though, it's technology."

"Then think about this: what happens to the mind of someone who gains a new and vastly different capability?"

"Nothing. He just has to cope with the new ability."

"But that's the thing — coping. It's a process. It changes how you think about things when you can suddenly sense things happening half a mile away. You learn a new way to think about privacy. When you can crush a building with your hand, you learn a new respect for the fragility of the world. You can't tell me that's not a change."

"Changing your mind and changing your brain are two different things."

"I hate to say this, but if you check out the infosphere..."

"... Shit. Ok, I give. But I still say there's a big difference between some gland telling you to do something, and someone's programming telling you so. I mean, they could tell you anything."

"But look at what they tell us: go do the job you're best suited for. Go where you'll be happiest. Meet the people you'll be friends with for the rest of your life."

"But... But how do you know they're not just making you happy?"

"Well, brain scans and mesh diagnostics, of course. But really, it does seem an awful waste of processing power to be deluding every Union member into thinking they're happy, day in and day out. Doesn't it seem a lot easier to you to actually use some psychohistory and actually put us into a configuration that's worthwhile and productive?"

"Shit, I don't know any psychohistory. All I know is they could be telling you anything."

"This is going to sound a little mean, but I think what it comes down to is this: you don't trust your leaders — or even one person around you — to do what's right if they're given access to your mind. And in the Cognitive Union, we have that amount of trust. Think about it."

The United Planets of Mechanica

Mechanica is a small and somewhat tenuously connected culture. They believe that humanity resides in the brain, and in nothing else. Thus, all else is replaceable, and perhaps even meant to be replaced.

Mechanican architecture is very large and exceptionally sturdy, to accommodate a wide variety of machine-bodies. Their art is a testament to the human spirit, and to the emotions, beliefs, and frailties of humanity. The Mechanicans themselves are stereotypically high-energy, can-do sorts of people.

Mechanicans are born completely human by anyone's standards, although they are typically born *in vitro*. Cells are carefully extracted from the still-living portions of the parents — typically the brain or spinal column, but occasionally blood is available — and sperm and eggs are created using their respective DNA. The process continues normally from there, with the embryo being formed and maturing in an artificial womb. The parents are present, ready to receive their child, when surgeons carefully cut the newborn from the womb.

Young Mechanicans appear much as children of any civilization, though their clothing tends towards metallic, glittering, and shiny colors. In their teenage years Mechanicans begin to replace parts of their body with cybernetic implants. Cybernetic implants start small, with the parts of the body that mature early (such as the eyes), and those that benefit most from early replacement (such as the liver and teeth). They replace more and more of their body as they reach physical maturity, often keeping spare parts and optional refit equipment at home. Although even young children have neural meshes, most functions are disabled until legally-determined ages. As they become older, most Mechanicans replace more and more of their bodies. Those above the age of 30 typically have nothing left of their original body but the brain and spinal cord.

Growing up in Mechanican space is, in many ways, a lesson in humility and caution. Children learn quickly that everyone around them is stronger, faster, smarter, and much more dangerous than they. Becoming an adult is a constant process of losing and regaining friends, as one's parents pay for new levels of enhancement. Because of this, most Mechanicans have very good friends, but not very many of them. Adult mechanicans, around the age of 20 to 25, tend to pick a new name for themselves. Both "serial numbers" and descriptive names are common.

Some Mechanicans wonder whether simply having new brains created in vitro from their parents' genetic material might be more effective and efficient, but it is generally agreed that the early "organic period" is an important and necessary part of becoming an adult.

There are some Mechanicans who don't replace all of their bodies — some, in fact, don't replace any of it. Parents may only legally enforce implantation on their children for medical reasons, and there are a few fully organic Mechanicans who start off by merely rebelling, and decide that their way is actually better in the end. Many of them eventually leave for another culture. Those that remain face not so much prejudice as constant questions from their more enhanced friends. Poorer Mechanicans are actually more likely to spend their money on enhancements, as a visible sign of wealth and independence.

Mechanican machine-body types are nearly as varied as Stardweller's real bodies. Sleek, sexy human figures; perfectly disguised humans; excavators, submarines, and other vehicles; tentacled monstrosities, and more have their place. Wealthier Mechanicans often purchase multiple bodies for different occasions, using equipment in their garage to move their brainpod from one to the other as circumstances require. Naturally, very high levels of Stringtech cannot be contained well within a merely human-sized

BUON SEVETVOH
(B1-720)

Mechanican drawing © 2007 Tau Ceti Deichmann
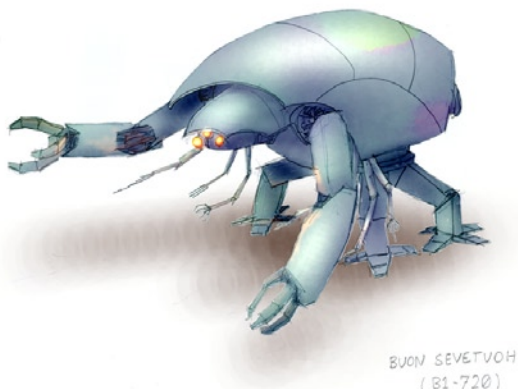
frame, but Nanotech is much less conspicuous, and just as dangerous under the right circumstances.

Mechanican culture is based around those things that past philosophers have declared explorations or expressions of the human spirit — art and athletics in particular are favorite pastimes, with exploration a close second.

Many Mechanicans, however, are more concerned with making money. Mechanicans literally buy votes, making them one of the few democratic plutocracies in the history of the universe. Psychohistorical projections indicate that some major class struggle has been building, and will likely come to the fore in the next few years.

Mechanicans have only a single core value: Humanity. Lone CVs are indicative of a lack of cultural cohesion — the only thing they have holding themselves together as a civilization is that they're mostly cyborgs. It's not something that you can base a complex value system around. Psychohistory predicts that within the next hundred years Mechanica will need to grow a second core value, decline into a society, or fall apart entirely.

The United Worlds of Mechanica is on good terms with the Masquerade, Tao, and the Stardwellers. They're uncertain about the Stored — are they really human, or just simulations of one? Mechanica is very much against the Logicians and Union, for their meddling with the human brain.

Common Name: Mechanica
Emblem: A series of interlocking gears, the ancient symbol of technology and industry. The gears are decorated with the undulating texture of the brain, indicating Mechanica's belief that humanity rests in the brain alone.
Inspector Status: Equivalent to an FBI or customs agent.
Benefit: Mechanicans may substitute their Stringtech or Nanotech scores for Biotech in almost all situations. The exception is when dealing with age and with poisons and diseases that actually penetrate to their living parts. *All* Mechanicans have a neural mesh, regardless of their Cognitech score.
Core Value: Humanity. Mechanicans have only three Core Values.

Humanity allows Mechanicans to resist attempts to convince them that they're just machines, or that they should allow "cold, mechanical logic" alone to dictate major decisions. This is one of the reasons they and the Logicians hate each other so much. Humanity as a CV has some possible speciesist overtones, but the issue hasn't yet come up in a major way. The other intelligent species in the universe are sufficiently nonhuman that the Mechanican government considers them on their own merits.

Mechanican Entertainment

This Sunday *Sunday SUNDAY!*

At the Y22 Memorial Colosseum!

It's an enormous *Monster Rally!*

See FH-97-A in his titanic killer suit!

Watch Angstrom-X and The Atomic Chassis battle it out in all-out *nanotech war!*

Then WS4J and the Burninator take it to the streets in a bone-crushing metal-tearing *cage-throwing* **cage match!**

Plus the 1812 Overture performed by **special guest 1812 himself!**

All for the low low price of just *eighty-five kilo-credits!*

And you can't miss the grandaddy of them all, the **Monstertron X-1 chassis**, as worn by hometown favorite Aleph H4! All this and much much more at the Y22 Memorial Colleseum!

You'll pay for the whole seating block, but you'll only need the edge!

The Disciples of the Void

The Disciples of the Void believe that the inhabited universe long ago became far too noisy for people to hear God. The bustle and chaos of everyday life drowns out the divine. In order to truly hear the voice of God, one must go to the depths of space, to the billion-light-year voids between clusters of galaxies. In these dark and quiet places, the Disciples have their Anchorages, and listen for the creator's whispered words.

Disciple Anchorages are among the largest space stations in the universe, carved from massive asteroids and wormholed into the unbelievably vast voids between the galaxies. They are nearly self-sufficient, save for fuel — the Disciples do not maintain the level of technology and infrastructure required for matter/antimatter inversion, and must have such fuel imported.

The interiors of the Anchorages are elegant but mostly empty. The interior walls are filled primarily with sound insulation, noise-canceling speakers, and more, which results in a claustrophobically quiet environment. The Disciples wear black robes, and even these are filled with nanotech designed to keep any heat, sound, or other evidence from betraying their presence. Their symbol is a faint, barely visible ring of white stars on a black background, the only form of decoration one can find in their habitats.

The *Book of Stillness* is their holiest document, filled with revelations that their past prophets and holy men have received after floating in the depths of space in vacuum suits. The book, written in ultra-violet ink on black paper, describes a philosophy of stillness in mind and body, to promote a unity with the void itself and escape the false and clamorous universe that most people experience.

Each Disciple awakens each morning in silence, darkness, and the absence of gravity. They float in the middle of their room, which has been watching them carefully all night, using the gentlest tugs of gravity beams to keep them from bumping into the walls. Disciples sleep in the ultimate silence: the absence of hearing, vision, and touch. As they awaken, the room slowly increases the gravity, allowing them to come to rest on the floor.

Dressing in plain black robes, they leave their rooms for the corridors. Despite excellent sound insulation and vibration-damping materials, one who is accustomed to the silence can hear the hum of the Anchorage's power plant, the rush of water and other fluids through piping in the walls, and the simmering sounds of breakfast cooking.

Breakfast is simple, though not entirely bland. The Disciples grow herbs, spices, hot peppers, and more hydroponically, to supplement the output of their relatively basic replicators. After breakfast, the Disciples go about their daily business.

Prayers are read at midday from the Book of Stillness. Each person picks a passage to read, and discusses it with those nearby. Very few Books of Silence are in the single-sheet electronic format so common elsewhere, although this is more out of tradition than anything else. Disciples speak to each other exclusively in a sign language, and only those who visit the outside world learn to speak aloud. Their written language mirrors their signs relatively well, and is more akin to hieroglyphics than to alphabet-based writing.

Not every Disciple has the opportunity to experience the void — to float in the depths of space, far from the light of the galaxies, and listen for the voice of God. Those who give their time to aiding the faith receive credits towards a spacewalk, minute by minute building towards what most find to be a transcendent experience.

The Disciples interact little with the rest of the universe. Most of their imports come from the Stardwellers, who trade them antimatter in exchange for the Disciples' excellent noise- and vibration-cancelling technology.

Travel to the Universe of Noise (as the Disciples call the rest of the universe) is not quite a punishment, but many see it that way. Disciple pilgrims are sent to discover the true value of silence by being immersed in noise. Most have real trouble acclimating to the crashing, screaming uproar that surrounds them at all times, and some do not sleep for a week when they first arrive. Many have neural meshes installed, to aid them in assimilating what they hear. Not all pilgrims return to their Anchorage — some come to prefer the

Universe of Noise — but those who return often go on to become important leaders in the faith.

The Disciples have no serious allies or enemies, and are welcome in most places. As one would expect, their government is a theocracy.

Common Name: Disciples

Emblem: A faint ring of stars on an utterly black background, symbolizing the Disciples' distance from the rest of the world. The civilization's name is minimally lit.

Inspector Status: Advisor to local authorities.

Benefit: The robes and built-in nanotech of the Disciples allow them to use a Stealth skill at level 7. There is no training involved.

Core Values: Worship and Privacy.

Worship, amongst the Disciples, can be used to resist attempts to convince them that the universe of noise is a superior place, to resist commands to betray the Disciples as a whole or destroy a copy of the Book of Stillness, and to ignore sensory-deprivation attacks. Their particular version of this CV enables Disciples to find sensory deprivation somewhat comforting, and treat it as a form of meditation.

Privacy can be used to resist metatech attempts to convince the Disciple to allow him/herself to be recorded or surveilled. It is also used to resist someone prying deeply into a Disciple's personal lives, including asking about their religious beliefs. Note that some Disciples are happy to answer these questions anyway — you just can't force them to answer. This is somewhat hard to adjudicate, and covers many interactions; the GM should feel free to only apply half the CV rating during non-serious situations.

The Worship CV

Worship is a common Core Value for many civilizations and individuals. It indicates a strong religious belief, though the particulars vary from one religion to another. Some people follow religions from Earth, while others, such as the Disciples, have their own, more recent belief systems.

A Disciple's Pilgrimage: Day 12

I am trying very hard to ignore the sounds coming through my earplugs. It is when I realize this that I know I have failed.

Master Xu always said that strain was a sign of failure; that one should accomplish all things without unnecessary effort and through the principles of Wu Wei, handed down to our order from the ancient sages on Earth. As I was told on the day I left, I have much to learn. Apparently I am not yet ready for streetcorner meditation.

I open my eyes to the glare and chaos that is the Eternal Masquerade. Thousands walk past me on the street; there must be more people going past today than live in my entire Anchorage. They all use the mouth-speech that I am attempting to learn, though many are willing to speak to me in my own language. They have meshes, and I do not, and so they accommodate me. They wear masks, finding faces... too vulgar? too intimate? I do not quite understand yet, but I wear one as well to make them comfortable. It is a simple black affair, with the symbol of my faith on it and as much sound-dampening and vision-filtering technology as I could afford. My cloak is still better, but this is a start.

Masters Yi and Gang tutored me in the ways of the universe of noise, but said that nothing could prepare me for the truth. They were right.

I have a job, for now. I work in a hydroponic farm, growing spices as I did at home. Here only the rich prefer hand-grown food; everyone else uses replicators. All the people here make far more use of replicators than we do, more use of electricity in general. I simply do not understand why they need all these things! Why do they not live more simply? Why all this chaos and cacophany at all times, everywhere?

A small group of passers-by ask if I am feeling all right, and I calm myself and assure them that I will be fine. They don't believe me. I constantly forget that these people can read my expressions and body language without even trying. I can't see their faces, or their infosphere tags, so I often have trouble interpreting them. This time I can't convince them that I'm not agitated, which of course makes me more so, and eventually I allow them to take me away from my street corner.

They bring me to a park. I can still hear the wind over the pond, the birds screeching in the sky, but it is better here, and there is some shade and a tree I can rest against. They stand around me as I try to regain my composure, my face in the dark side of the tree. One of them touches my shoulder softly, and I know it's just some kinesthetic trick of theirs, but I feel comforted.

They sign to me, asking if I have a place to stay and enough money. I tell them yes, and explain something of my pilgrimage. They seem to confer mentally, and then one of them hands me a card and tells me that I should call him if I am in need. That four strangers should show me such kindness when tens of thousands passed me by... I may just call him anyway, to talk. I thank them as they leave.

I stand at the edge of the pond, eyes open, all noise filters off. I seek the silence within.

Disciples Talking by Grace D. Palmer

The Tao of History

Like a historical reenactment society gone mad, the Tao believes that holding to the values and methods of the past is the best way to cope with and understand the present. Each settlement of Taoists has a particular era of human history that they emulate, from prehistoric Neanderthal times to events as recent as two hundred years ago. However, underneath the animal furs, tuxedoes, kimonos, and other trappings, the Tao is a highly advanced civilization on par with any other in the universe.

Each of their citizens is trained to be more suave, dashing, and convincing than anyone from the past really was. After all, what's the fun in pretending to be a downtrodden peasant? There are holograms, robots, and hired extras for that. The point here is to be a *hero* of the old stories, whether glorious or tragic or both.

Unexpectedly, the Tao became the richest civilization in space when wormhole communications opened up. Their day-to-day exploits really were as exciting as a story, and billions of people from across the universe would pay good money to see that. A pragmatic, if somewhat emotional, people, the Taoists agreed to allow cameras to follow them around on their worlds. That those who do not wish to be filmed are filled in with computer-generated actors. The deal has worked out quite well for the Tao. The income from patents on thousands of metatechnological procedures serves to bolster the Tao fortune as well.

The Tao is a civilization full of melodramatic actors, playing roles that don't mesh and acting without a script. It has planets with pre-colonial America on one continent and orbital-era India on another. Historians argue with directors over who "should" win the upcoming staged war. Forget keeping the storylines and acting fresh; that's easy compared to actually knitting it all together into a civilization instead of a bunch of new Cargo Cults! How do they do it?

Well, that's not all the Tao are. Some of the "extras" in the background aren't holograms or robots, they're regular people. They're being filmed like everyone else, but practically no one watches them. The stars typically think of these extras as support staff, but that's like a musician saying that the air around them is just for support — without it, no one hears the music. There are fewer of these support workers in the Tao than in most civilizations, but they make up about 60% of the population, and they make it run on a day-to-day basis.

The people in charge aren't idiots, either. They've got the most intensive metatech training available in the universe, and know that keeping that 60% happy and productive is paramount to the civilization's continued existence. These folks can easily move from one milieu to another, picking what fits in with their personality best, and the historians bend the realism guidelines enough to ensure that even someone living in an ice-ages milieu has the opportunity to study and benefit from advanced nanotech, if they really want to. It's just kept off-camera. The Tao have been particularly effective in the field of metatechnology, with their past experiences (pardon the pun) giving them a viewpoint that helps to guide psychohistory, memetics, and more.

What about the rest of the Tao — the ones in positions of wealth and power? Isn't this all just a game to them?

Well, no, it's not a game. It's a way of life. Despite the soap opera levels of melodrama their lives are steeped in, the Tao take things as seriously as they can. Some of them are merely playing characters,

The Tao and Delusion

Some Tao become addicted to the use of Persona Lenses (see page 144) that make them seem more competent, powerful, or dashing than they really are. Unfortunately, it's all in their mind... so many addicts edit their memories to erase any hints of incompetence, and filter their perceptions to make it seem as if others believe as they do. Psychohistorical projections show that dealing with this growing portion of their population is an important hurdle for the Tao to face in upcoming years.

but others are deeply involved in what's going on. The Tao may have started as a historical recreation society, but it's far more than that now, and entire generations have been brought up in their recreated cultures. When they dress like the Pre-Civil War southern U.S., they act like it too, and though most of their "slaves" are actually unintelligent robots, some of them might actually condone slavery. When they mimic Shao Lin monasteries, they don't just pretend to meditate and study martial arts — they actually do. Each milieu is less a giant-sized stage than it is a genuine piece of the past.

One thing that helps is the average Tao citizen's tolerance for different cultures and beliefs. While this breaks somewhat with their Authenticity CV, it would be a worse break to have an interstellar war come to bronze-age Greece! Tao milieus only war with each other under very controlled circumstances, and no one actually dies. Some actors seem to die, but are really just deciding it's time to "go out with a bang" before relocating to another milieu. To those watching, it's nearly impossible to tell whether someone's actually dying or just faking, especially with the high quality of Tao biotech and metatech.

The Tao's allies are the Masquerade, Stardwellers, and Mechanicans, all of whom enjoy their energy and are amused by their outlook. They find the Union, Logicians, and Replicants to be irredeemably evil. They pretend to be enemies with the Roamers for the drama of it, but don't really exclude them from their world. The Roamers are alternately amused and annoyed by this.

Different parts of the Tao of History are ruled in different manners, as befits their different historical backgrounds. The civilization as a whole is "ruled" by a fractious council that doesn't really get anything done, nor does it need to.

> **Common Name:** Tao
> **Emblem:** A golden clock, for the Golden Age, with different rings indicating different times and epochs. In official use the clock's rings are often animated, ticking in various directions.
> **Inspector Status:** Equivalent to an FBI or customs agent.
> **Benefit:** Taoists receive an extra plot point at the beginning of each session, which they may only spend through Romance, Intrigue, or Empathy.
> **Core Values:** Authenticity and Tradition

In much the same way that sincerity is not honesty, but is the appearance of honesty, **Authenticity** is not truth, but verisimilitude. The Tao reap the benefits of modern technology in the guise of ancient devices. It is important to the Tao that they keep up the appearance of living in the past, and the higher an individual's CV rating is, the less they are acting and the more they really are a member of an ancient society. A Tao member from a faux ice-age culture would never don a nanoweave greatcoat to keep the cold away, but if the same coat could be made to look like furs and loincloths, they would wear it without hesitation. All the technology of the modern world is available, hidden carefully behind screens and veils.

Tradition provides the other anchor of Tao civilization. Its primary purpose is to hold Tao milieus together, giving citizens bonuses to actions that keep the milieu intact — such as fighting off civilization-wide metatech assaults, convincing other citizens to keep to their traditions, and the like. Tradition doesn't say that any specific tradition is important; rather, it is important to have traditions and to hold to them. It says that all traditions have worth and value, that they are what bring people together. The Tao share this CV with the Old-Worlders, who have a more-or-less identical interpretation of it.

Great Moments in (the Tao of) History

The wind is cold today, and the Mongol leaders shiver in their furs. Burhan Haldun is an inhospitable place. The *Kurultai*, the council of chiefs, is coming to a close, and the future of the entire Middle Kingdom balances on their decision.

At hand is the future of Temüjin, whom all present consider to be one of the greatest war leaders — perhaps one of the greatest men — their tribes have ever seen. His father Yesükhei was Khan of the Borjigin, but he was nothing compared to his son. This man eliminated or swayed every rival in his path, slaying even his blood brother Jamuqa when he had turned against him in war. One has to appreciate Temüjin's dedication.

In fact, billions appreciate it right at this second. The air is thick not only with smoke and soot from the *Kurultai*'s fires, but with flying microbotic cameras. Every angle is covered. The fur in the generals'

clothing captures data on the temperature, humitidity, wind, even the chemicals in the air to provide the proper smell. The meshes of the participants capture their mental states to create tags, though most viewers won't watch those the first time through. They're the "special features" section, available to high-end subscribers.

Many of Temüjin's advisors are there, as historically accurate as psychohistory and trained acting can make them. Some even wear lenses to make them more like the men (or women) they pretended to be. Chilaun, his closest general, son of the man who freed him from imprisonment. Jelme and Bo'orchu, his earliest supporters. Empress Börte, his wife, and his son Ögedei. Subutai, once Temüjin's personal guard, now a commander in his armies, and one of his most trusted advisors. Others distrusted Subutai for his association with Jamuqa, but not Temüjin. Subutai's loyalty has been proven to him beyond a doubt.

Most watchers have their favorite characters. Temüjin was the highest-rated, of course, but Börte and Ögedei ranked nearly as high for female viewers. The Masqerade loved Subutai for his seemingly shifting loyalties and his faithful core. The Replicants liked Jelme and Bo'orchu for the same reasons others ignored them — they were somewhat interchangable to the casual viewers. Chilaun rated well anywhere family was important. With all of them in one place, the Tao would be making a significant portion of this year's take on this single, hour-long scene. It was every bit as important to their government as it had been to ancient Earth.

The smoke began to clear as the fire was doused. All the advisors looked to the meeting place. Some were worried, some stoic. Börte, though, knew what was coming. It could be no other way, not for her husband. The chiefs who disagreed with him — and there were few after his victory over the Merkit clan — would never dare defy him.

Temüjin strode from the meeting place, his face harsh and impassive. Subutai spoke: "So? Must we crush the other clans as well, or are they with us?"

A predatory smile crept into Temüjin's face as if daring other emotions to move in. Once merely leader of the Onggirat, now Khan of all the Mongols, now Ghengis, he spoke.

"We march on the Xi Xia. All of us."

Mongol Horde on Camera 53 by Kiriko

The Illustrious Stardwelling Armada

The most gregarious and advanced of the three spaceborne civilizations in the universe, the Stardwellers are also a culture at the farthest edges of humanity. They constantly alter their bodies, minds, and social structures, forever seeking new forms of life and activity. To speak of the "average" stardweller's body or mind is meaningless.

The Stardwellers are bound together by their love for outer space. Many Stardwellers have never set foot on a planet. The Stardwellers are the only civilization that really builds and uses starships — others use wormholes from planet to planet, or from planetside to deep space if it becomes necessary. The Spacers have their generation ships, and the Disciples their hollowed-asteroid Anchorages, but the Stardwellers have genuine, wormhole-driven, inversion-powered starships, replicated with care from asteroid belts and cometary debris. The ships range from auto-piloted two-passenger shuttles to ten-mile-long cylinder-and-ring behemoths.

Stranger designs can be seen, too — nano-thin self-repairing translucent bubbles with gravatic grapple drives. Well-armored "walkers" whose nanowire legs extend and retract to pull themselves between ships in a fleet. Liquid water habitats inside a comet-like icy shell. Genetically fabricated beings with space for human beings inside (or sometimes outside, clinging on like oversized remoras). There are even, for the sheer jest of it, quarter-mile-wide "flying saucers" designed to skip off atmospheres like a stone skipping on a lake.

Once you're inside the ship, things become even stranger and more otherworldly. A Stardweller ship visiting 20th century Earth could be mistaken for an entire alliance of alien species. Skin tone is merely the beginning: different body forms such as quadrupedal or octopoidal; new varieties of sensory organs; exoskeletons; gills and fins; spinnerets; pheromones; symbiotic organisms; one-way respiratory systems; and thousands of less-obvious alterations can be found everywhere. Zero-g gives them more opportunity to experiment with different forms — threefold or higher symmetries, jellyfish-like tendrils, rubbery skins to protect from impact, vacuum-capable bodies, photosynthetic fronds, these and more are not just accepted, they are genuinely *common.* Stardwellers thrive on diversity. Weaving biotech and nanotech together into a single cohesive whole, the Stardwellers alter their forms as thoroughly as the Mechanicans.

Mental alterations are common as well, with group-minds, cross-linked hemispheres, and neural meshes contributing the majority of changes. Because most biotech alterations pass through to one's children, it is a rare Stardweller indeed who shows no variations from the basic human form, even if the alterations are merely cosmetic.

From the Fringe

Most civilizations were founded by some fringe element from Earth, something more or less hidden in the corners of 21st-century society. The Tao is descended, roughly, from the Society of Creative Anachronism. The Masquerade's most obvious traditions were inspired by African mask-making societies. Stories of gypsies gave rise to the Roamers. The Stardwellers have a much more direct line of descent: they were originally a large group of organized science fiction geeks, which really explains a lot about them.

Stardweller culture is one of interleaving reliance. The Stardwellers acknowledge and protect the idea that their civilization is interconnected in much the same way as an ecosystem or a planetary economy. No one part works independently of the others. Respecting others for their own abilities is one of the psychohistorical foundations of the Diversity core value.

Despite the name Armada, the Stardwellers are not organized militarily, instead using a complex metatech process to choose their leaders. Voting, memetic screening, and applied psychohistory are all involved. Stardweller government is exceptionally confusing to outsiders — it requires significant mental power or legal experience to really understand what's going on. While some trappings of democracy remain, not everyone can be a candidate for every office. Psychohistorical analysis and memetic profiling of candidates provide insights into what each is most capable of, and areas in which they may be deficient. Naturally, with memetic training and lenses, making

yourself into a better candidate is certainly possible, but it's generally discouraged. No one wants twelve indistinguishable candidates optimized for the same office.

The Stardweller economy is set up so as to bring everyone towards the same wealth level, with little enough capitalism and class struggle to allow for economic incentives other than money. Peer recognition is more important to most Stardwellers than cash, especially since the civilization takes great care to ensure that the basics of life are available to all. Unfortunately, this does lead to those who are, for whatever reason, unable to receive recognition becoming rather angry and disaffected. The underside of Stardweller society isn't economic — it's social and emotional.

Most Stardwellers make heavy use of technology in their daily lives. Meshes are common, dermal microbots can be assumed for every citizen, and children are trained in high-level social techniques. The Armada's citizens have the highest average level of technology in the universe. The money to pay for all this comes from orbital art galleries, scientific research performed in the depths of space for other cultures, and surveillance work conducted for other civilizations. The Stardwellers make excellent go-betweens.

The Stardwellers are allied with the Eternal Masquerade and the Tao of History. They have an open invitation to bring their ships over Mechanican planets. The Union has made it clear that they'll shoot the Stardwellers out of the sky if they ever bring their ships into orbit, but most people seem not to mind their presence.

> **Common Name:** Stardwellers
> **Emblem:** A star, yellow, for our ancient home. Its eight points resemble the compass rose, because we navigate the universe and the future. In the background, two colliding galaxies, with centers of new starbirth, representing the potent effects of melding ideas.
> **Inspector Status:** Equivalent to an FBI or customs agent.
> **Benefit:** Stardwellers suffer no penalties in zero-g and low-gravity situations. They also receive an extra Locality profession at level 3.
> **Core Values:** Freedom and Diversity

Freedom does not refer to physical freedom, but rather to ideological freedom. It helps Stardwellers resist any attempt to remove what they see as basic rights, and lets them argue more effectively against restrictions that might be put on their actions or selves. Arguing with a Stardweller over the merits of restricted research, caste-style societies, indentured servitude, or similar ideological restrictions is an exercise in futility.

Diversity argues that no individuals or groups should be excluded or marginalized because of their differences. Stardwellers who see bigotry or intolerance are unlikely to merely ignore the situation. Stardweller society strives to make room for all different types.

A Riding of Stardwellers

The Grand Convention takes place every year — Old Earth years — in a location chosen at the previous Convention. The first Convention was held above Old Earth itself, and it was generally agreed that, unless there was a great need for memory and mourning, such a thing should not happen again. The Rememberance is a time for mourning and solemn contemplation; the Convention is a time for jubilation and the exchange of ideas.

The Great Convention is what perpetually creates Stardweller culture. It is a mixing pot of ideas that both creates new possibilities and connects disparate groups. Without it, the Stardwellers would both fragment and stagnate. Most of them know this already, but what they remember is this: it is both too long and too short, too large and too small, and above all else, it is intense.

This year, the Convention takes place in the outskirts of the Lambda Khermaion star system, in the Melantine galaxy, some billion light years or more from Old Earth. The Convention spreads across the system's Kuiper Belt, a relatively safe location with plenty of raw organics for replication purposes. The First Team, tasked with setup, has been here for a month already, and their nanotech has cleared out a space about the size of Earth's orbit. A unique waystation has been built, different from each of the thousand that came before, to serve as the hub for the meeting.

Over ten billion Stardwellers arrive, some as far as a week ahead of time. Most come in starships. Some billion or so are representatives from more introverted branches of the civilization, sent in

spaceships and recalled via wormhole. There are even a million or so from other civilizations, come to see what all the fuss is about. The space near the waystation becomes a beautiful latticework of ships, bridges, tubes, tethers, and stranger things. Colored lights make the entire arrangement seem like a star-birth nebula, and in some ways, the two things are not so dissimilar. It is at the core of the Convention that the next year's great advances will be kindled. Uncountable friendships are formed at every Convention, and with the long lives of the Stardwellers, there are some Sleepers here who remember the first Convention, and still come out of hibernation every few years just to see friends from that fateful day.

After the opening ceremonies, the Vacuum Flower Society presents its newest body forms, capable of handling deep space for up to a year at a time. The Order of the Iron Sunrise presents its deep-universe analyses, its search for identical regions of spacetime in the far universe. The Neuromantic Guild gives tongue-in-cheek analyses of the status of the Aia and Transcendentals. The Lords of Light organize a sun-dive into the outer layers of Lambda Khermaion. The Zeitgeist Collective records everything, distilling the essence of the Great Convention for those billions of unfortunates who could not come, and as a plea to those hundreds of millions more Stardwellers who have gone off into the deep universe, perhaps never to return.

Not everything here is organized, though. Out of the limelight, old and new friends meet. Things as small as body type, chemical base, communication schemata, or neurotype will not keep these people apart. Some put their best faces forwards, holding back the parts they don't want others to see; others dive in with passion and enthusiasm. There are late-night conversations, movie viewings, long walks, games, poetry jams, fistfights, reconciliations, purchases, collaborations, and every inch of everything humanity is and could be and wants to be all rolled into one.

It is said that at the Great Convention you tell a whole year's stories in one week, but after it, you tell that week's stories for the rest of the year.

All too soon, it is over. The hundred and sixty-eight hours are gone, the closing ceremonies have declared the location of the next Convention, and they're starting to charge overtime for those who stay. The old-timers complain about how things used to be better, but say there's always next year. Those who

had to sleep lament their inferior bodies, while those who stayed awake lament their lack of sleep.

There are hugs and tearful goodbyes, friendly waves, private exchanges of contact information. There are some who change ships, so struck with another person that after just one week they are ready to find a new life among a new group of stars. One by one the ships disappear, and one can see the stars again from the waystation. It is a bittersweet moment for those who remain.

The Last Team kicks out the final stragglers after a few days, sending them home via wormhole if necessary. The Civic Works Bureau takes over from here — there's always someone in the universe who needs a massive, functional space station, after all. It's another year of work and life for the Stardwellers, and the more interesting the better, or they'll have no good stories to tell next year.

The Descent: A Stardweller's Tale

Going outwards in a solar system is easy, if you're prepared for it. You just deploy a sail, let the winds and radiation pressure push you out. It's not fast, but it works. I've got three or four tutorials for that sort of thing.

Going inwards? Different story. It's not like you can just "let the sun pull you in" — you're in orbit now. You need to create some reaction fuel, work up some sort of long-range grapple, or hitch a ride.

Luckily all I need to do is get a few thousand miles, to the other side of this asteroid belt. Piece of cake, right?

My mental recording is still running. I have the evidence. I have to let people know what happened. If I survive, this is worth a lot of money, and will do a lot of damage to some people I'm very mad at right now.

I spend about twenty minutes preparing. My dermal bots do some long-range observation, coordinating with the navigation lens and the thin local infosphere. My nanocloak spreads out to catch some rays; it's not much power, but I can provide quite a bit from my own body. I pull a transmutation rod out of my boot, reprogram it for rocket fuel, and fire it up on some of the tiny passing meteors I snag. Others I crush into powder and let my cloak's replicator turn

it into fifty-ton cable and self-propelled grappling pitons. Once recon is done, I pull in my dermal bots, so I won't accidentally tangle their nanotube tethers. I prepare my mind.

I could sit here and replicate myself a whole ship in about eight hours, but I'm short on time. I can only hold my breath so long. I could replicate some oxygen, but I'm going to need the cloak's power reserves, because I need to get back now.

I wait another minute for a good window, and then launch myself with all the force my legs can muster.

The next hour is a test of my limits. If I didn't have a zero-g body, I wouldn't be able to make some of the swings I need to for navigation. If my mesh was any slower, I wouldn't be able to calculate trajectories, torques, and probabilities of trailing micro-meteors behind the larger asteroids. Sometimes my luck is good and I come around a large asteroid with a fifty-mile clear stretch. Other times, my luck fails, and I use up precious reaction fuel to nudge myself

out of the way of a very messy death. If my bones were weaker, if my cartilidge wasn't reinforced, if my brain wasn't embedded in a solid matrix... There must be a thousand ways to die out here.

They expected me to die out there, but they're going to be disappointed. I'm in the zone right now. I've got a lens for it.

I finally see home ahead and use up the last of the reaction fuel, bringing me to a gentle tap on the walls, only about twenty meters per second. I let the zone lens fade, scuttle around the side of the asteroid, and go in my front door. The place was a mess after the Darwinians ransacked it and dumped me across the field, but it's been putting itself back together. The house's AI wants some revenge, and I agree.

I emerge an hour later, rested and prepared. I have my tools now, you jerks. My home isn't just some rock, it's a starship loaded with antimatter. You're about to learn what survival of the fittest really means.
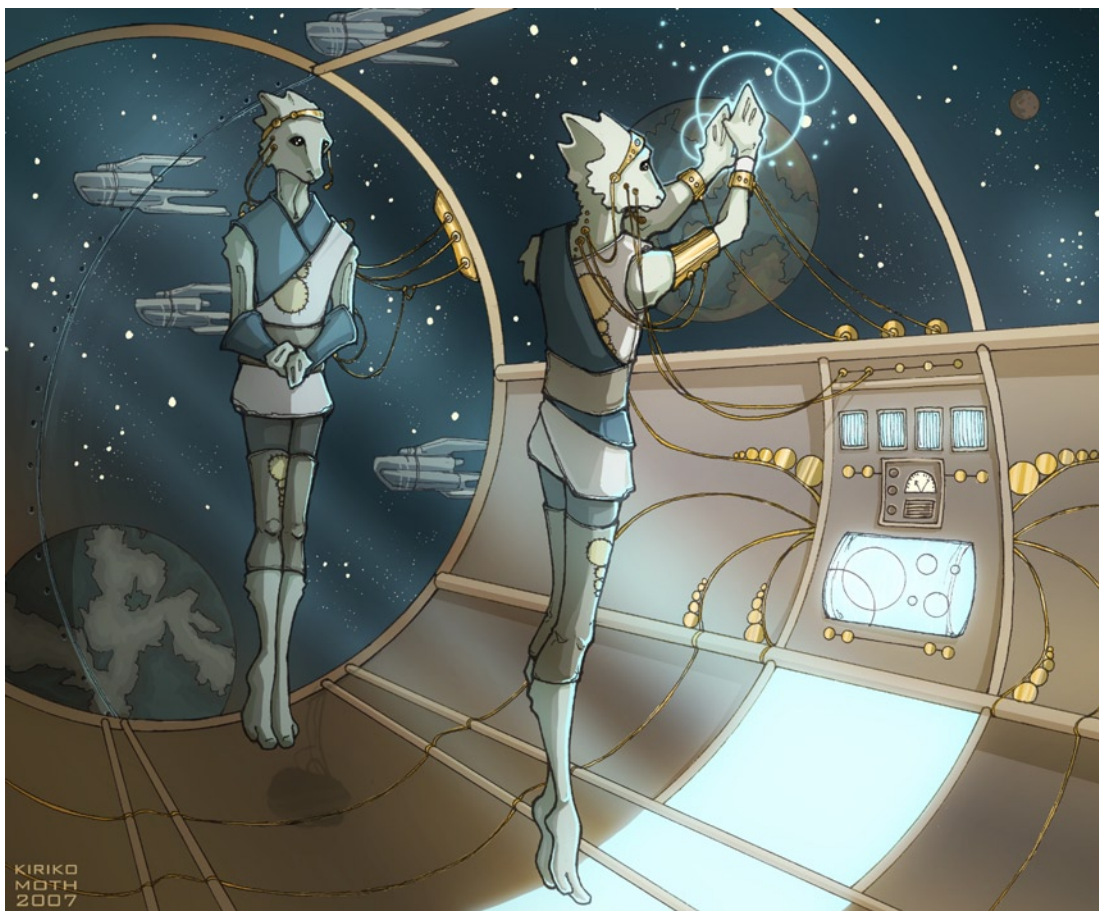
Stardweller vidship by Kiriko

ROAMERS

Similar to the gypsies or "rom" of Earth, the Roamers are a nomadic people. They travel via wormhole from one inhabitable world to another, wearing out their welcome as they go.

Roamers dress in what might have once been considered wild and colorful clothing before the advent of the Masquerade. Unlike most other civilizations in the modern era, Roamers wear actual, genuine cloth garments, many of them sewn by hand.

The Roamers are one of the most insular civilizations in the universe. The Union and Logicians are always looking for new recruits, and even the Old-Worlders and Disciples rarely turn away those who are serious about joining. The Roamers, on the other hand, actively reject attempts to join their culture. They have a very strong "us and them" mentality, portraying themselves — often correctly — as a spurned and downtrodden people, unwelcome even on those worlds that let them stay. When anyone tries to compare the Roamers to other civilizations in one can see the Roamers' wounded pride rising to defend them.

The Roamers' outer appearance is one of brightly-colored simplicity, but this conceals a culture with every bit of complexity that their high metatech and nanotech capabilities can bring. Every gesture can carry a nuance, and every intonation of the voice carries hudden meaning. The language of the Roamers is a tonal one (like Mandarin), and in many cases includes information on frequencies that only a good Nanotech rating will pick up. Those visiting Roamer encampments must find a good translation program for their meshes, lest their hosts have secret conversations or invisibly insult them to their faces. Once you've "proven" that you don't understand their culture, you might as well go home.

Sneaking into a Roamer camp is nearly impossible, as every animal with them has nanotech "fleas" that watch for invaders.

When you visit a camp, expect to find layers upon layers of concealment in all things.

Because of their pride and secrecy, the Roamers have difficulty trading with outsiders. They could sell stories, and even with their smaller population could compete meaningfully with the Tao in this arena. They could sell clothing, and either compete with the Masquerade, or sell to them — millions of Masqueraders would line up to buy robes of real, hand-woven cloth. They could lease out their considerable expertise in metatech and nanotech. Any one of these things could bring the Roamers some much-needed wealth... but their scorn for outsiders and pride in their own work drives them to set outlandish prices. Their elders realize the necessity of trade, but sometimes find it hard to convince the younger class to part with their goods or services for a sensible amount.

Instead, the elders bring in the majority of the civilization's income through careful information-gathering and espionage. Many other civilizations pay them for this service, and value it highly... but they also know that other civilizations do the same, and every Roamer visit could be thinly-veiled espionage. This brings a greater benefit than mere money, however: the Roamers, by reporting on nearly every civilization, keep others from really questioning how the Roamers themselves work.

Their low income not withstanding, Roamers are one of the most culturally rich civilizations around. They claim descent from some of Earth's final no-

Roamer Eavesdropper by Ivan Bilibin, public domain

madic cultures, and maintain much of the oral tradition those cultures had.

The Roamers have no real allies, but are welcome on most Tao and Masquerade worlds. They are aggressively banned from Union space, which just turns it into a challenge. Sneaking on and off of a Union-controlled planet is a rite of passage for young Roamers. Roamer society is a family-oriented geritocracy, with the oldest (and hopefully wisest) ruling each family.

Common Name: Roamers
Emblem: Different landscapes from different worlds border two representations of the triskelion, a symbol of travel and endurance whose meaning is, "Wherever you throw me, I shall land on my feet."
Inspector Status: Equivalent to a local police officer.
Benefit: Roamers are a close-knit group. One Roamer may treat another as family, borrowing money, calling in favors, sleeping in the guest room, and so on. Treat this as two free plot points each game, which may only be spent through Empathy, and only applies to other Roamers. Roamers are encouraged to take complications that involve other Roamers staying at their house, borrowing their money, and so forth.
Core Values: Secrecy and Wanderlust

Secrecy is, specifically, secrecy for the Roamers and their kin. They have no problem unearthing the secrets of others, but use this CV to resist others' attempts to get them to divulge their own private matters. Roamers and Masqueraders get along well on a superficial level because of the overlap between Secrecy and Anonymity.

Wanderlust gives the Roamers bonuses to actions that free them from physical bonds, let them shake off metatech attempts to settle them down, and convince others to lend them modes of transportation (such as opening wormholes).

Travel with the Roamers

The wormhole snaps shut, and the subsonic noise and sounds of rushing air end abruptly. In the aftermath, twelve wagons stand on a hillside, brightly colored ribbons streaming in the wind. An orange sun sits in a midnight-blue sky, and the Roamers laugh, pat each other on the backs, and begin to set up camp.

That evening some representatives from the city in the valley — several instances of a single person, for this is Replicant space — make their way up to the encampment. They are respectful and speak well, but the Roamers can read the distaste in their body language. These fine people want nothing to do with Roamers, but they're not offended enough to ask them to leave, not yet. They will be.

An ad-hoc treaty is negotiated, similar to treaties used in years past. The Roamers can visit the city, so long as city folk can come to their encampment, one body for one body. The people in their suits tip their hats and leave, and the Roamers spit on the ground when they're out of sight. Unclean folk, these doppelgangers. The sooner they make enough money to leave, the better.

And so, with mutual distrust and some small amount of fascination, the two cultures mix. The Roamers set up a tent and circus, on neutral ground so as not to violate the treaty. They replicate fantastic beasts from faraway worlds. The city opens the doors to its museums, its orbital tower, and its cultural centers. Both sides watch the others like hawks, never trusting, but the Replicants are too polite to kick the Roamers out. The Roamers, for their part, spend cautiously and rake in as much money as they can at the carnival. The Replicants are smart, but the Roamers are more savvy, and the economists on both sides know it.

Each side spies on the other. The Replicants use satellites, infosphere sifting, and biometrics. The Roamers sneak nanotech devices into the orbital tower, analyze traffic patterns, perform psychohistorical surveys on the citizens that visit them. The majority on both sides know nothing of this, but there are those who recognize what's going on. Eventually the Roamers accept a contract from certain Replicants to do the same sort of spying on someone else — and they smile, pocketing the money. They step down their operations just enough so that the Replicants

know things are better, and they stay to rake in more money.

After two weeks most people in the city have been to the carnival. Bonds of infatuation form, and trysts occur. After three weeks, some have been to the big top twice, and are beginning to catch on to the tricks. Relationships fall apart when there are no similarities to hold them together. After four weeks the exotic creatures are becoming ill. Eventually there's an "incident" where one of the less mature Roamers pushes a Replicant too far with taunts and insults, and the city council politely implies to the Roamers that it's time to turn this youngster over to the local authorities, or pay for some wormhole transit and leave the planet.

The tents fold themselves into backpacks, the banners simply dissipating in the wind. The creatures are fed back into the replicator for spare elements. The Roamers decamp and have a few last drinks, admiring the view, for each planet has its own beauty. Orbital wormhole generators spin up, and the wagons are carefully "scooped" from the surface of the Replicant world and sent to Independent space. The Replicants sigh — the young in sadness, the old in relief.

The wormhole snaps shut, and the subsonic noise and sounds of rushing air end abruptly. In the aftermath, twelve wagons sit in a valley, brightly colored ribbons streaming in the wind. A yellow sun sits in a light-blue sky, and the Roamers laugh, pat each other on the backs, and begin to set up camp.

The Roamers and the Rube by Grace D. Palmer

THE LEAGUE OF INDEPENDENT WORLDS

When the Transcendentals gave humanity incredible advances in every field of science and technology, most people were overjoyed. After all, having computers do our work for us was what we had been promised ever since computers had been invented. However, not everyone was convinced that this was a good thing. While they realized the need to leave Earth, and recognized Transcendental wormholes as the only method for doing this, they preferred to come by their inventions and advances by their own hard work. Thus was the League of Independent Worlds born.

The League of Independent Worlds began as a loose conglomeration of colonies, and has ended up as a very tightly knit civilization. Unlike many of the other civilizations in the universe, the Independents came from the mainstream of pre-Diaspora Earth, and this gave them many commonalities that became the seeds of their current civilization.

The League has twelve worlds, each with a very distinct appearance and "personality." The elected government of the League actively encourages this, hoping to preserve some of the original culture that came from Earth, and this has led to a moderate amount of income from tourism. Unlike the Tao, however, the League doesn't see keeping tourists enthralled as their main business.

The League has been surprisingly successful without Transcendental influence. Pure science research is a significant part of its budget, and good scientists are venerated as heroes. There is a significant amount of anti-Transcendental sentiment on Independent worlds; the government does its best to keep this going while not allowing it to get out of control. A certain amount of patriotic fervor is useful; too much leads to chaos and violence.

When considering the League's technology, one has to remember that their resources are limited. They've achieved many things, but when given the choice between doing something difficult and doing something very complex, they typically go with the difficult one. Complex technologies require

infrastructure, and the League can't afford to build a dozen different types of infrastructure. Instead, they build a single infrastructure (their Stringtech facilities are currently their best) and look for new possible developments based on that. So while the League's non-string technology isn't bad, most of it is piecemeal, and a lot of it either draws on connections to stringtech or was an accidental byproduct of stringtech research. The League's bizarre "emotion rays," for example, are really an application of stringtech to influence electromagnetic fields in the brain, even though they'd be considered a metatech device.

Independents typically wear older, outmoded clothing. Some of it is so far out of date that it's retro, while other pieces are merely unfashionable. Their technology is often built along slightly different lines than everyone else's, and many outside engineers have trouble telling an Independent device's side effects from its main purpose.

Everyday life in Independent space is similar to that in most Western cultures. There's a lot of friendly competition, little emphasis on religion, and a significant corporate culture. Education follows traditional lines, though with better methodology. Many friendships come from work and school.

The Independents have no real allies or enemies, as befits their name. They are routinely courted by both the Union and the Masquerade, but strongly

Author's note on the Independents

From a metagame standpoint, the League is a good place to come from if you want your character to be closely tied to Old Earth. It is deliberately similar to western cultures in the 21st century, with the "chutzpah" and "pioneering spirit" knobs turned up and the "paranoia" and "laziness" knobs turned down. Characters can be mentally very similar to present-day humans, but smarter and more confident. They've got high tech, but most of it is in relatively bulky devices. All in all, the Independents really stack up to be the "traditional sci-fi" civilization, and make a reat starting point for those new to the setting.

maintain their neutrality. They are a representative democracy.

Common Name: Independents

Emblem: A set of bright stars aligned together on a dark background. Tenuous clouds of gas join the stars visually. Most civilizations' emblems have elements of gold visible in them; the emblem of the Independents intentionally contrasts.

Inspector Status: Observer status only.

Benefit: The Independents use slightly different technology from the rest of the universe. They act with +1 effectiveness, but with -1 when it comes to countermeasures and defenses, for anything dealing with their tech scores. This also applies to Independent-built equipment.

Core Values: Self-Reliance and Teamwork

Self-Reliance drives the moral center of the Independents. It's what makes them eschew the tech handed down by the Transcendentals, and what makes them turn down offers of alliance from other civilizations. It generally makes life harder for the Independents, but to them it means that they'll sink or swim on their own merit, not because of others. This CV also led to the League's non-standard infosphere — it's a great aid to League law enforcement because it's not easily hacked by outsiders, but it poses a problem for both ordinary travelers from other civilizations and Independents away from home.

Teamwork is the glue that holds the Independents together. While each planet might try to solve a problem on their own first, when they fail they turn to their friends without compunction, knowing that everyone in the League is there for everyone else. This CV has a very broad application for group work, giving an Independent character a bonus on any effort to form a team or keep it together. One can see why the League has survived as long as it has. Teamwork can also give a bonus to group actions, but only when working tightly together is essential to achieving the goal. The drawback is an unwillingness to break a team once it has been formed, or to kick out team members that the group might be better off without.

Mad Science in Independent Space

The scene: a dozen police officers hunker down behind their vehicles, many of which are missing large chunks. A man, barely visible through some sort of visual distortion, fires invisible beams through the streets, causing objects to flare and disappear. He cackles madly. They scream for backup.

Captain: "Now goddamnit NOW! I have no idea what this maddie's firing at us but it's taking the cars apart!"

Dispatch: "Three minutes, captain. Keep him talking or contained for two minutes and fifty-three seconds."

Sergeant: "Oh yeah, talking. Does 'bwahaha-haha' count as — JESUS!"

A beam flies with a tiny thunderclap above the sergeant's head, blasting a hole straight through a building, a tree on the other side of it, the next building, and stops at a pane of glass.

Sergeant: "What the hell is that thing?"

Mad Scientist: "Behold the power of my anti-neutrino ray!"

Captain: "Like hell it is — even he doesn't know what he's shooting. Someone turned his cognitive accelerator up too high this morning."

Rookie: "Uh, guys, I think he heard you..."

The captain and sergeant scramble from behind their car as significant parts of it simply vanish with a series of miniature thunderclaps. Only the windows remain on the ground.

Sergeant: "Two minutes. Just two minutes."

Captain: "It has to be some kind of dissociation beam! It's taking apart anything more loosely bound than diamond!"

Sergeant: "Great, you know, I just happen to have this chunk of diamond in my pocket that I can put between me and the gun. Minute forty-five."

Rookie: "What about the nanoweave armor in the truck?"

Captain: "Too risky. Might act like a diffraction grating."

Mad Scientist: "I can hear you, you know. I hope you're recording all of this. It's about time I got credit for what I did — for what I can do!"

Miniature thunderclaps fill the air again, and an explosion rocks the neighborhood as underground capacitors release gigajoules of stored energy.

Dispatch: "I heard that all the way out here — what's going on?"

Captain: "He's started digging! It looks like he's trying to cut down to the subsystems. Rookie, what the hell are you doing?"

The rookie scrambles back from the wreckage of the car, holding the windshield in his hands. He takes his sidearm, dials it down to the width of a hair, and slices a handle to hold it with.

Rookie: "Making a shield, sir. I can run distraction with this."

Sergeant: "Your funeral. Minute fifteen."

Captain: "Run in front of the Gate's End's windows; it'll keep the damage down. Sarge and I will see if that DIF he's got running is full-spectrum or not. Go!"

The rookie holds the windshield and takes off, sprinting down the street. The maddie turns and fires at him, but the shots stop at the windshield. Stray shots hit the diamond windows of the Gate's End hotel and stop. After a few shots from the sergeant's inversion beam have no effect, the captain takes out a large grenade, primes it, and throws it. The metal net inside lands on top of the maddie and bears him towards the ground. An immense electrical pulse comes from the net, and the distortion in the air vanishes.

Sergeant: "Got you now, jackass."

The sergeant aims, and the maddie's gun turns and vaporizes the ground below the sergeant. He trips, but manages not to fire his weapon. The maddie cuts himself free with his weapon, taking out significant chunks of road in the process. He begins waving it around, firing continuously. The rookie charges him

with the windshield, but the ground beneath him vanishes and he trips, cracking the shield in half. The captain lobs another grenade, but misses as his target runs for a side street.

Captain: "Ten seconds. Come on guys, don't be late today..."

A gust of wind nearly blows all three officers over as a figure in massive armor rockets down the street. The armor loses three layers from the maddie's gun, but the armored officer points a hand and the maddie freezes in place, eyes bulging. A few seconds later, a tiny electrical spark comes from the back of his head. He drops the gun and starts to sob uncontrollably.

Captain: "Thanks, Sheila."

Armor: "No problem, Cobbol. Just sorry I couldn't be here sooner."

Independent Politics

"...and with that we are in recess. We reconvene after lunch." The gavel drops, and dozens of ambassadors and hundreds of observers funnel out of the Great Hall of the League Council.

A pair of women and their aides walk out a side door downstairs, heading for the council's canteen. They're obviously not thrilled to be walking out the same door together.

"Ophelia."

"Rainia."

"Laying it on a bit thick out there, weren't you?" Guards open the door for them, and the pair and their aides lose their step slightly as they pass through the sound-baffled hallway that leads to the canteen. The air here is thick with pressure variance and airborne speakers.

Ophelia rolls her eyes. "Oh, please. They deserve it, and you know it."

"I just think that, perhaps, the Patent Office might be a tad displeased that you referred to them as 'conceptual jailors driven by greed.'" Rainia glances sideways to catch Ophelia's reaction. She waves off the suggestion.

"Pff. They know — probably better than we do — that a little bit of anti-establishment feeling is good for any organization."

"A little bit, yes, but..."

"But nothing. If they're so morally superior, they can do some forgiving." They grab trays and pick up custom-replicated lunches. "And I'll see you back in the Great Hall — my people and yours have some unfinished business." Ophelia heads over to her delegation's table, and Rainia slumps her way over to her own. They wave and make some idle chit-chat.

Rainia rolls Ophelia's ideas around in her head for a while. Anti-Transcendental feelings were running high this week, and what paltry projections the Independents could make showed that they might continue for the next month or more. She needed to make some contacts in the Tao or the Stored and get them to do some higher-quality projections. Things weren't easy for their delegation right now — everyone was new at the job, since the old guard got voted out two months ago.

One of her aides broke her concentration. "So I saw you talking to the bitch queen when you came in. What was that all about?"

Ophelia shook her head. "Oh, just sniping. I swear that woman wants a war some days. Not that I think she really does," she added, seeing the concern in the eyes of her contingent, "just that she wants other people to think she might."

Those at the table tossed the idea back and forth while Rainia thought and looked around.

"The T-worshippers back home are going to be ripshit about this one."
"Ah, nobody cares about them anyway."
"That's just the thing, persecuted minority."
"Someone's gonna start caring soon."
"Do we want to encourage them, though? I mean, this is the League of Independent Worlds — if they want to be dependent..."
"We can't start throwing people out just because of how they think, this isn't the Union."
"There we go; Godwin's Law at work..."
"I'm serious-"

"Guys, please." Everyone stopped, slightly chagrined. "Look over there." Rainia motioned with her head towards Ophelia's table. Her delegation had cleared some table space and their dermal 'bots were projecting infographics, text, and interface components onto the surface. They moved with precision and purpose.

"They're working. They're organized. We're... bitching and moaning and acting like this is some kind of civics class. You tell me: who's going to win when we get back in there? If we don't get it together, this sort of crap is going to sweep the whole of Independent space. I can feel it in my bones." Rainia took a deep breath. "Now — what can we do to combat it?"

The Association of Eternal Life

The replicator is one of the most important inventions of the current era, turning raw materials into finished goods at the touch of a button. Anything can be scanned in, anything produced, with an exceptional degree of accuracy. Living beings — plants, animals, even human beings — can be replicated in this way. Unfortunately, the person being scanned dies in the process, as only a destructive scan can gather enough information to recreate someone exactly.

The Association of Eternal Life, more widely known as the Replicants, believe that an exact duplicate of someone really *is* the same person. They've been duplicating themselves for thousands of years, and their civilization is built around replicators.

Originally somewhat isolationist, the Replicants became aggressively political when it became clear that the rest of the universe wanted to shut them in a corner and ignore the fact that they regularly kill and remake themselves. Their freedom to experiment with their own genetic codes has given them a head start in human biotechnology, and they have become relatively wealthy because of this. While shunned by many, the Replicants have proven themselves to be a reasonable and ethical society, at least when it comes to matters other than replicator use. Many civilizations hope that the Replicants can eventually be reformed, but the promise of eternal life is hard to fight against.

A significant portion of the Association's wealth is hereditary, and has been retained through good business acumen. Those who originally joined together to create the Association were rich enough to afford high-resolution replicators when they were still relatively new, and since they're all still alive, the wonders of compound interest have made them quite wealthy indeed. Newer or younger members of the Association can try to prove their worth in existing power structures, but are more likely to expand to new planets and try their luck there. Most Replicant companies and economic groups keep to a single planet, letting others try their luck on new worlds, and then move in and incorporate the failures into their own structures. A spider plant is a good visual analogy for their arrangement.

Replicant society encourages many different types of experimentation and personal exploration. When death is merely a speed bump, and the only real loss is a few days or hours of experience, one views certain activities differently. Mountain climbing? Not dangerous. Stunt flying? Only dangerous to your bank account. Drugs and alcohol? If it gets bad enough, someone can take you in to get scanned and reprinted, sober and healthy. Even mesh viruses can be cleaned out this way, although it might become impossible to convince you that you need to be reprinted. Overall, Replicants are much more reckless than citizens of other civilizations, because they can afford to be. Printing out a new copy costs a pittance.

Replicant children are one of the most interesting elements of their civilization. Very old Replicants, who have worn themselves out and become tired of life, have two options before them. First, they can decide to die, and thus open a spot for a new child. Alternatively, they can choose a relatively new process: reincarnation. Scraps of their memory and personality are kept, but the vast majority is cleaned out, and the remaining mental image is imprinted on an infant only a few days out of the womb. The oldest reincarnates are about fifty years old right now, and show some very interesting effects from it — wisdom beyond their years, coupled with a renewed ability to enjoy life.

Childbirth laws in the Association are carefully enforced, to keep pace with colonization of new worlds and the civilization's very low death rate. Anti-Replicant rhetoric often points, fallaciously, to an eventual need to completely ban new births. In

Send In The Clones

To have a Replicant character with a large number of duplicates running around, buy the Plot Immunity Theme, with a "Send In The Clones" descriptor. You can spend Twists to have bad things happen to your instances instead of the original you. The original rule stands, however: if you scan in your original self, your character is still dead.

reality, the universe is truly infinite in extent, and there need be no end to expansion.

The Association is somewhat wary of their allies, the Rationalist League. While they share a certain pragmatic viewpoint, the Logicians are just too cold to really get along with. The arrangement is based more on politics and philosophy than on actually liking each other, and the two stand together primarily for political power and safety in numbers. This goes double for the Logicians' other ally, the Cognitive Union. Many Replicants would prefer not to be lumped into the same group as the Cyberslaves, but politics has pushed them in that direction.

Psychohistorical analysis currently shows an 80% probability that, left to their own devices, the Replicants and Union will — intentionally or not — spawn a splinter group that follows both doctrines, an entire civilization of replicated cyberslaves. Almost every civilization is working against this, including the Replicants themselves, but the attraction is very strong.

The Replicants are a krytocracy, a civilization ruled by judges and other legal officials.

Common Name: Replicants
Emblem: The full name of the civilization in elegant script, with a golden acorn representing knowledge and potential.
Inspector Status: Observer status only.
Benefit: Replicants who are still part of the Association have serial immortality via replicators, and often have multiple instances of themselves active at once. "Renegade" Replicants lack this advantage.
All Replicants receive a leisure Profession (Athlete, Courtesan, or Outdoorsman) at level 4 for free.
Core Values: Life and Safety.

Because the Replicants see life as being easily stored and recreated, they use **Life** to protect beings other than themselves from danger. They also use it to boost their own attempts to convince others of the benefits of immigrating.

Safety is what really keeps the Association tied to their replicators. Without them, the universe suddenly becomes a much more dangerous and unpredictable place. Citizens use this CV to resist any attempts to convince them to leave the Association, delete a stored image, or take long trips into low-tech areas. Non-citizens (including ex-Replicant PCs) use this CV to resist attempts to convince them to risk their lives unnecessarily, making it quite useful against the more malicious Metatech assaults.

Scene of the Crime

It has been a very, very long time since anyone here has managed to get away with murder, and I'm not about to let it happen now.

I'm my Primus, which means it's my job to sit back and coordinate. I'd rather be out there scouring the place for clues, but I don't have much of a choice — that's my instances' job right now. With nearly twenty instances active I really need one of me doing this.

One of our citizens, Aquila Valerius, has just met his very permanent end. Someone went through a lot of trouble to do this. Aquila had four instances active on different parts of the planet, three of which were dispatched via microbotic assassins. They were a relatively standard type: keyed to a particular DNA strand, replicating in the blood, latching together to form a clot. It's an old design with new defenses. Brain aneurisms killed them while they slept. The fourth one had more up-to-date bioech, just upgraded last month. He woke up while it was happening and made it to a replicator — probably stumbled in half-conscious. That would help us a lot if something hadn't deleted him. Valerius wasn't reckless, either — he had two backups. One's deleted, and one's missing, presumed destroyed.

Right now my #4 through #8 are scouring this crime scene, while #2 and #3 are coordinating at the other scenes. I've got an assistant running five instances here. Another officer has the replicator and the backup sites, but I'm not sure the six of her will find much.

If we're very, very lucky, this will end up being kidnapping rather than murder. The local Chief Justice is pretty pissed off about this. He understands just how bad this is going to be when it gets out, which is why there's only five of us (counting my boss, Investigaor Fenitus) who know what happened.

My assistant comes up to me and shows me a blank screen. "You wanted a dump from his dermal 'bots? Here it is. Totally blank. They observed the whole memory log, wrote zeroes, and observed again. It's dust." We were using datapads in case there was a trap left behind for our meshes, but ap-

The Universe

parently it's not necessary. I thank him and swear under my breath.

Replicator logs in the home are blank. Dermal 'bots are blank. Cold-storage backup is blank — one reason I think it's not a Stored job. Outside surveillance shows nothing, but these things could have been hiding in him for days...no, no wait. When was his last dupe?

I check with Fenitus to get a surveillance override ok, and run through the public replicator logs, and the power and processing utility logs for his house. A power surge about the right size a week ago says that the three dupes we found were created then, which means it must have happened after that... unless someone programmed the replicator to add in assassin 'bots.

One of my instances pulls me aside and I talk to myself for a while. Micro-wear measurements on the floor show a couple of visitors, but there's no traces of DNA — no skin flakes, no hairs, nothing. Someone scoured the whole place with microbots. We got here only three hours after the crime — for them to have gone through so fast, they're almost certainly still nearby. Then I look at the replicator and my heart sinks — if this guy can erase logs, he probably just piled the 'bots in there and deleted them.

The two of us swear. This is going to be hell. This whole investigation is going to have to be face-to-face.

I order a raw elements dump from the replicator, and hope for the best. Then I start asking around about Valerius on the infosphere, and prepare for the worst. The Chief Justice isn't going to be happy about this.

It's Complicated
(a Replicants story)

A little background: Cassia likes Thracius. Thracius likes Cassia, but has an eye on Valeria, so makes a copy to see how she feels. Valeria is interested in both Thracius and Marinus, so she makes one for each. Marinus just wants to work, but is distracted by Cassia, and so rolls dice with himself to get one of him to go talk to her about it.

As our scene opens, Cassia Secundus and Thracius Primus are sitting in a cafe.

Cassia 2: So I have a question for you.

Thracius 1: Ok...

C2: You've been looking at Valeria a lot recently.

T1: Uh...

C2: I don't have to worry about that, right?

T1: No, no. Of course not.

C2: Good. I'd hate to think that you'd cheat on me.

T1: Of course not. There will always be one of me for you.

C2: Just one of you?

T1: Hold on a second; here comes one of me. Hey Tertius, how's it going?

T3: Not bad. Hey Cassia. Primus, I need to borrow you for a minute so we can recombine.

T1: Sorry, hon. Back in a second.

The two of them walk off to find a public replicator. Cassia drinks her tea and worries. She gets a mental flag from Marinus Quintus, asking if he can come and visit, and she agrees, glad for a distraction. He appears about a minute later.

C2: You must have been close by. Have a seat.

Marinus 5: Yeah. Thanks.

C2: Is this about the transformer blocks? I think there's a gap in them somewhere...

M5: No, actually this isn't business. Uh... how do I say this...

C2: Isn't that your Quartus coming this way?

Mariunus 4: Quintus! Stop! You don't want to do this!

M5: Oh, come on. I just... I mean... I've been trying to say this for so long...

M4: Look just come back and we'll take care of it. Hi Cassia.

C2: Marinus, what's going on?

M5: I really like you.

M4: I can't believe I just said that.

M5: Oh, shut up. Cassia, I've been working up the courage to say it all day-

M4: (sigh) Oh god...

C2: Uh... Marinus, I had no idea... Look we can talk about this but this isn't really the time- oh shit here he comes.

T1: Hey guys! How's it going?

Uncomfortable silence.

C2: Well you're looking happy.

T1: Yeah, so?

M5: You know, maybe we did come at a bad time.

Author's Note For
It's Complicated

I think this particular item works much better as part of a play that someone outside the Replicants wrote about them, rather than a true story about them.

C2: Your tertius just went and talked to Valeria, didn't he!

T1: (sigh) Yes, and? I said there will always be one of me for you, don't be such an instance-hog.

M4: Wait, Valeria? She came and talked to me today!

M5: She did?

M4: Yes, not long after you split off.

T1: She didn't say anything to me about that.

C2: You know, I can't really feel sorry for you there.

T1: I'm not complaining, just saying. There's enough of all of us to go around, you know.

C2: Well not everybody feels that way.

Everyone sits down and slouches unhappily. M4 looks at M5, who looks sadly at C2, who glares at T1, who stares off into space.

C2: That girl just needs to diverge and be done with it.

Meaning

"Really?"

"What?"

"You really think death gives life meaning?"

"...Who are you?"

"My name's Caesar. I'm from the Association of Eternal Life."

"Oh. Go away, man. This isn't the time."

"This is the only time. People say that death makes life precious, that without it there would be no meaning to what we do. You don't really believe that, do you?"

"I don't know. But you guys don't really live forever anyway. You die, like, once a week."

"Do you believe in a soul?"

"What?"

"If there is such a thing as a soul, I don't think that just because we switch bodies means it goes away. I think I have a soul, and it's with all my bodies."

"Don't you ever get sick of it, though? Sick of seeing all the same stuff year after year, sick of not

having anything new to do? Sick of losing all your friends?"

"Not all of them. And seriously, sick of life? How could I? Look out there — you think all that stuff has been here forever? There are new things every day. I'm lucky enough to be around for all of them."

"She won't be, though."

"No. No, she won't. She's dead, and her soul is gone. I'm sorry for your loss. I have friends outside the Association, and I've been sad to see them go."

"Yeah."

"Look, here's my contact info. I have to run, but give me a buzz sometime, ok? Things don't have to be this way. Your loss is tragic and horrible, and no fault of your own... but there's no meaning here but what you make of it."

"Wait-"

"Yes?"

"If... if death doesn't give life meaning, what does?"

"...I lost my husband once. No, no, wait until I'm done. I don't mean he died; I mean he left. I had been just sitting around, resting on the family money for fifty years, and he couldn't stand to see how I was wasting my life, so he left. It took me a long time to realize that I didn't just have to sit and watch him go. So I went through all of it — begging, pleading, bargaining, trying to buy his heart back, stalking... I was a wreck. I eventually rationalized my way out of it, thinking that if I could make myself into the kind of person he wanted, I could have him back. So I worked on myself, and I got better, but I changed too. By the time I was, in fact, good enough — long before then, really — I realized that there were better things in this world. I lost him because of me, and I needed that. I needed to learn that. Just because I live forever doesn't mean I get what I want, no matter how long I wait. So I make the world a better place, and I make myself a better person. That's what gives me meaning."

Replicant Climbers by Michael Yatskar

The Rationalist League

The Rationalist League began as a social experiment in the latter days of industrialized Earth. What would a society without emotion be like? Would it function more efficiently? Would the people appreciate their state? With genetic scalpels, a group of sociologists and geneticists carefully removed all of the emotion-inducing glands from a generation of children, suppressed the emotional parts of their mind and heightened the rational, and then secluded them with little knowledge of the outside world. About a thousand embryos were genetically altered before birth, and further surgical adjustments were made to the children throughout their early lives, all with the goal of eradicating emotion from the human mind. In later generations the process was improved, made safer, more efficient, less dependent on surgery. Youngsters were now aided by the hundreds upon hundreds of those who had already seen the benefits of the procedure.

All of this was before the advent of the Transcendentals, so naturally there were some drawbacks and difficulties, and not every child made it to adulthood. Nevertheless, the early League persevered. Some hundred years later, when the Transcendentals appeared and wormhole travel became possible the Rationalist League was one of the first groups to request passage off-world. Over ten thousand of them were ready to leave, and in fact, they'd been planning on leaving for quite a while — the Ts appearance simply meant they didn't have to build their own starships.

Expanding quickly but not aggressively, the Rationalist League built a literal interstellar empire on inhabitable planets throughout the Milky Way. The other civilizations quickly nicknamed them the Logicians.

There is no internal struggle in the League, no divisive emotional conflict, and no crime. They also have little art, wear purely utilitarian clothing, and form no real family structures. Children are disciplined and raised by whomever nearby is capable of doing so. Needless to say, the Logicians have serious trouble understanding anyone from outside the League, and vice versa. Improvements in genetic engineering have allowed them to remove emotion from themselves entirely.

The Logicians are organized as a constitutional monarchy, for the sake of sheer efficiency. Those with a loftier position in the hierarchy have more effective mental enhancements, and those of lower position know it, thus making them more likely to trust their superiors. Citizens have little voice, but since everyone can agree with the leader's logical stance, most people don't see a need for one. The "rank and file" of the Logicians have a good standard of living, but work much as the serfs of feudal Europe did: without reward, without recognition, and without much concern for these things. While to others the Logicians' way of life seems stifling and heartless, to them it is the epitome of how life should be lived: in service to those who know better.

Describing the lifestyle of the Rationalist League is difficult. One cannot say that the people are grateful for how they live, though one could say they are thankful for the peace and unity of their people. You cannot describe them as hostile to other cultures, or pitious of them, though they do think that others might be more understandable (and more able to understand each other) if everyone were a Logician. Saying that a Logician "feels" or "believes" or "hopes" anything isn't quite right, and it's hard to avoid because such phrases are ingrained in our language. If all Logicians seem to think alike, that's because they do — more so even than the Union, the Rationalists can agree as to what they think, because logic is the only thing that dictates their actions.

The Logicians are emotionless, but not entirely without feeling. They can feel pain, pleasure, discomfort, and distraction. They can feel mentally fatigued or refreshed. They can be overwhelmed with sensation. Though they cannot truly feel fear, they can be fooled into thinking that the odds against them are overwhelming, and that they should retreat or surrender. They occasionally have holidays to remind themselves of past events, because not all of them have perfect memories yet, but they do not celebrate or mourn. Logicians do still have a survival instinct, or they would not survive their first few years (nor, in all likelihood, their later ones). They are not as coordinated or socially well-adapted as the Cognitive Union, but they share its ability to work together towards a single goal.

The Rationalist League's long-term objective and their Efficiency Core Value come from a synthesis of their survival instinct and an understanding of reciprocation. The goal of the Logicians is to eradicate all emotion, or, failing that, to make it controllable and subservient to rational thought.

Their rationale for all this is that logical thought, properly carried out, reduces conflict and encourages efficiency. Psychohistorical calculations verify this. Efficient processes minimize increases in entropy, allowing the League and its allies to exist farther and farther into the future. By respecting their descendents' survival rights, they encourage those future generations to respect the survival rights of those alive now. After all, information transfer to the past is a fact in this universe, and no one wants to be sabotaged by one's descendents for a foolish mistake.

The League has considered adopting the practices of its allies — the Replicants' attitude towards scanning and replication of humans, and the Union's pervasive neural meshes. They consider wholesale replication to be too inefficient at the current time, as replicating a whole human being is not an easy task, and requires great amounts of data storage and energy when one allows an entire civilization to benefit. The Logicians are loathe to admit that their survival instinct has something to do with it as well — they cannot logically refute that those who are replicated die in the process. As for neural meshes, Logician cognitech has moved in a different direction, preferring genetic enhancements to intelligence, supplemented by neural meshes when necessary. If the League was wealthier, they might be able to afford a mesh-heavy populace, but for now, they keep to their own methods.

One of the League's secret weapons is an offshoot theory of psychohistory that allows near-perfect predictions within the League, as part of psychohistory's probabilistic nature comes from the presence of emotional factors. This theory effectively acts as a metatech "sensor," letting the monarchy know about even the slightest disturbance in their plans, the day it happens. The Logicians' metatech offense may be pathetic, but their defenses are effective and efficient.

The Rationalist League has recently been forced to admit that the emotions they left behind long ago had some value. The intuition and drive of others has let them exceed the Logicians technologically, and the League's inability to relate to others has left them with few allies. There have been many whispered debates in the royal palace as to the effectiveness of emotion and a possible return to it. Another possibility, one that has been gaining support recently, is that of isolating the League and returning once logic and reason have allowed them to exceed the advances of their enemies. Secretly encouraging the downfall of other civilizations is a possible part of this plan, but nothing is set in stone. As they learned from the appearance of the Transcendentals, anything can happen.

The Rationalist League is a civilization in flux, considering its options for the future. Unlike both of its allies, it is not psychohistorically stagnant, and both its own models and those of outsiders show changes coming for this civilization. The Rationalist League's Core Values are Logic and Efficiency.

The Logicians are allied with the Replicants and the Cognitive Union, and appreciates both of them for their eminently logical stances. They are opposed to the overly emotional Tao and the bizarre ethics of the Stardwellers, Mechanists, and Masquerade.

Common Name: The Logicians
Emblem: A flag, one half black, the other white. The story that is told about this is that the Patent Office required each civilization to register a symbol, and the Logicians had none when they signed the treaty. After a moment of consideration the ambassador drew this figure, and it has been used ever since.
Inspector Status: Advisor to local authorities.
Benefit: Logicians are immune to emotional appeals, and to any use of the Romance plot score.
Core Values: Logic and Efficiency

Logic allows citizens of the Rationalist League to avoid any attempts to persuade them which rely on intuition, illogical arguments, or emotion.

Efficiency helps the Logicians design less wasteful processes and devices, and also lets them resist metatech coercion that would push them towards using such things.

Earth and the Logicians

Devika found Jaya staring out the window, looking towards Earth. Jaya's face was reflected slightly in the diamond-faced, triple-insulated windows of the space station, and Devika could see that her daughter was thinking.

"Jaya, why are you here?"

Jaya did not turn, and the look of concentration on her face deepened. "I don't understand why we're here."

Devika thought, briefly. "Can you be more specific?"

"I'm talking about the Rationalist League's presence in this system."

"And our interest in Earth?"

"Yes. I understand that this is a political bargaining chip for us, but I think I must be missing some crucial piece of information. I've been trying to induce the missing information from the shape of things around it. As you may be able to guess, I've had little success."

Devika nodded. "I have some familiarity with this, and may be able to help explain." In fact, she was the only psychohistorian in all of the Sol system, and one of the few Logicians who really understood emotions — as much as they could be understood. "Tell me what you already know."

Jaya turned from the window and began reciting what she had learned, as if for an oral exam. "Earth was the birthplace of humanity, before the Diaspora. All the civilizations in the universe come from there, as did the Transcendentals. Now the only humans living there live in archaic dwellings, in poverty and disease, and refuse the help of others. There are no significant works of technology available there, no records that were not uncovered centuries ago. I

Sunrise Over Earth, NASA, public domain

don't understand why we're here." Jaya turned back towards the window. "It seems inefficient."

"I think that you greatly underestimate the emotional pull that Earth holds for the other civilizations. We know that there is nothing to be gained by remaining here, but they... feel... differently. This alone makes our presence worthwhile. In fact, it is my opinion that settling near Earth was the smartest thing that the founders of the Rationalist League ever did."

"How so?"

"Allow me to use a comparison. Long ago it seemed that the Association of Eternal Life — the Replicants?" Jaya nodded. "— would be marginalized by their peers because of their practices. It was only through significant effort on their part that they were able to remain a major part of the civilized universe. They put an immense number of worker-hours into improving their political ties. We Logicians, on the other hand, have never needed to do this. None of the other civilizations dare to break ties with us, lest they abandon their homeworld."

"It still doesn't make sense to me."

"And there you have the very essence of the other civilizations. They don't make sense. But they are sometimes predictable, and their emotions give us a lever this time. If we are peaceful towards them, and allow access to Earth, they must deal with us, because any alternative is unthinkable to them."

The station chimes sounded, and the two walked home towards dinner.

"And they won't go to war?"

"No, not against us. But we'll talk about their other emotions some other time. Go clean your hands for dinner."

THE ASSOCIATION OF STORED HUMANS

The fantastic success of the replicator was easy to predict. Create anything from raw elements? Scan in and duplicate any object? Of course it was going to sell.

Its use on living organisms was an unfortunate afterthought — someone realized that their replicated moldy bread was still growing the same mold, therefore the microorganisms therein must still be alive. From there, it was a hop, skip, and a jump to replicating people. Those who were scanned and printed became the Replicants. Those who refused to be printed back out after the "death by scanning" revelation became the Stored.

The Stored are human beings run in computer simulation. Every molecule of their bodies is simulated in exacting detail. They interact with the real world using "remotes," which can be anything from humanoid androids to bulldozers to flying cameras, but with the advent of the infosphere they've had to use remotes less and less. As long as their friends have meshes, the Stored can interact with them directly, transmitting visual images, sounds, smells, and even tactile sensation, and receiving similar transmissions from their friends to tell them about their surroundings. It's like they have a real body again, an exciting prospect for older Stored. The standard term for this is "ghostriding," since the Stored is using someone else's body to sense the world but has no control over that person.

Most older Stored prefer to live as they did in the analog world, with an environment that resembles the real world. To do this, they can either sample an outside environment (which is cheaper but less accurate), or simulate one of their own (which is very expensive but has more detail if done correctly). Younger and more avant-garde Stored often have simpler, "rendered" environments, where sensation is provided only when it's functionally useful or interesting, as opposed to than the constant sensation provided in the analog world.

Computing power is a free public utility on Stored planets, with a certain amount provided to all citizens and surcharges for higher amounts. Poorer citizens can maintain themselves, but may not be able to live in well-simulated environments. Some of the younger, poorer, or thriftier Stored have taken to "dropping the resolution" of their bodies (or even their minds), and "optimizing" themselves to run more efficiently. Most of these attempts work out relatively well, but some people botch the process and produce bizarre computational monstrosities — things that used to be people but are now something less than human, yet more than just scrambled code.

These days the Stored are fifty million strong, with simulated children whom they argue are just as real as any human. As one might guess, the greatest challenge to the Association at this time is a generational gap. Younger Stored rarely see the need for connection to the physical world, and some of them are starting to resemble the Aia more and more.

The Stored also face balkanization, as localities begin to build more computers and run at higher speeds than the outside world. The civilization's psychohistorical prognosis is not good — their culture will need to evolve, soon, or it will fragment into a dozen disorganized and possibly warring successors.

Still struggling for a shared culture after all these years, the Stored participate in many art forms that those in the analog world can never experience. A good deal of Stored culture revolves around hiding or exposing the digital space in which they live. A Stored artist might create an incredible portrait by simulating the paint atom-by-atom (in addition to the actual artistic talent they use to paint), while another might create an impossible Escher-esque house that could not exist in the analog world.It is this interplay of truth and fiction, their digital reality and the illusion they preserve of the analog world, that creates Stored culture and civilization. Hinduism and other religions that believe in the "veil of Maya" are popular amongst the Stored, with new offshoots and variants appearing frequently. Transcendentalist cults are not uncommon either, especially amongst those who see their (quite possibly eternal) digital life as a blessing rather than a curse.

Few people immigrate into Stored space, and even fewer end up as Stored themselves. The existing Stored don't shun the few people who do join them, but they by no means encourage others to follow their path. They believe that becoming a Stored is essentially suicide, and they believe it would be immoral to support anyone in such an attempt. A few religions proclaiming the Stored way of life as a way of being "born again" have sprung up.

In theory, the Stored could make copies of themselves, but they never do. It goes against their sense of identity, it's too reminiscent of their foes the Replicants, and practically speaking it costs a good amount of money, since both copies would be pulling on the same computational power... and bank account.

The Stored have several planets in analog space, which act primarily as energy collectors and server farms. A clueless visitor might declare them to be planets run by machines. In digital space, they have a much greater number of planets, most of them simulated only about 200 feet down from the surface. Some rich Stored enjoy living on their own planet. If they can afford the processing power to simulate it, who's to stop them?

The Stored are welcome on most worlds, though they tend to avoid the Union (where they have no rights) and the Logicians (who want to use them as simulated experiments). They are ethically opposed to the Replicants. Their government is an adhocracy — local governments are formed on a temporary basis, using the psychohistorical best guess as to an effective power structure to solve a particular problem. They are then dissolved.

The Transcendentals gave the universe replicator technology, and there's no doubt that they knew the consequences of what they were doing when they made it capable of replicating living beings. They have been characteristically quiet when asked about

the reason for this, citing only a future need to build alliances. Other comments have led people to believe that this somehow refers to both the Stored and the Replicants, but no other hints have been forthcoming.

Common Name: The Stored

Emblem: The background is a green field, lit at the top. A circuit board, the ancient symbol of the computer, is imprinted on the field. On the left is the "binary helix," the digital DNA of the Stored. The character in the bottom left means "ghost," and golden light can be seen within as if it were a house lit from within.

Inspector Status: Equivalent to a local police officer, though this is sometimes difficult to enforce, given the nature of the Stored infobodies.

Benefit: The Stored use their Nanotech and Stringtech scores only when defending their server. They often have help in this, as many Stored tend to build their servers together. They use the Nanotech score of any remotes they control. They have no Biotech scores except in simulation. They exist solely in the infosphere, but are otherwise treated as normal characters.

Core Values: Identity and Life. They share both of these values with other civilizations — the Masqueraders have Identity, and the Replicants have Life. However, the Stored view of these values is rather different.

For the Stored, **Identity** means, "You are a unique and individual being; there is only one of you, and you alone hold power over your self." The interpretations and consequences of this provide a good amount of the Stored worldview.

Life indicates a respect for all living things, and a broader interpretation of "living" than most people take.

No Less Real

Many Stored hate the phrases "real world" and "virtual world." It implies that their surroundings are somehow fake, and that, by extension, so are they. They much prefer the phrases "analog world" and "digital world" to describe the division. All Stored face the stigma of not being considered "alive" by many individuals (and by some entire civilizations). They face discrimination and prejudice, and those who allow themselves to be ghostridden are sometimes discriminated against as well. Regardless of what others say, the Stored know themselves to be alive, and thus worth protecting and respecting. When the WorldWeb was discovered, it was the Stored who argued that it be considered a living creature rather than a mere curiosity.

A Stored Dilemma

I'm working on a poem.

It's really quite distracting. I saw the first few lines of it somewhere up in the infosphere, and felt like completing it in my own way. I should be paying attention to other things. I have a landscape to set up for tonight, I'm trying to run this psychoanalysis code that I don't understand, I'm running a simulation at the molecular level to see if this new recipe tastes any good... and now I have these words stuck in my head and I can't get them out. Very bothersome. I'd search the infosphere for a lens to counter that, but frankly I'm not sure I have the processor speed to spare for it. If I add infosphere access to the list right now, I'm going to have to downgrade the simulation of part of my body, and I'm rather attached to it (no pun intended). I should really upgrade one of these days.

Ah. There we go. The simulation's finally done. That psych code is taking up so many resources that the sim took over five seconds to run. But what a delicious omelette. Not exactly the thing to counterpoint traditional Shi Jing style poetry, but it should go over well tonight. The omelette, I mean, not the poem. I can't find the right words right now.

I turn most of my attention to the landscape. It's going to be a city in the desert, so most of the actual surface was pretty easy to put together. Tonight is part of a contest some friends and I are having, to see who can recreate old mythological locations in the most compelling way. It's all very subjective, of course, but what isn't? I've chosen ancient Baghdad, from the Thousand-and-one Nights. I hear someone tried to take the real one and turn it into what it was supposed to have been in legend, but the Logicians control the area around Earth and they wouldn't have it. Much as I can't stand them, I can't say I disagree with them on this.

The psych code finally finishes after almost ten minutes. Bah. Garbage again. It's time to take a refresher course in mental-operations coding. As the program frees up resources and quits I can feel myself scaling back up to 60:1. I can't believe I was only at 4:1 before; how limiting. Now I can do some real work here.

In the next few seconds I fill digital space with a series of randomly distributed houses,

then set up a random walk program to order them and to "dig" some portals from here to my home. That'll do for the outer city. The inner city requires a little more craft and caution; I want it to look planned. Gates, alabaster walls, onion domes, mosaics, all of these are easy enough to find; it's the arrangement that's important. The inner castle I need to shape "by hand," but I have an architecture lens that'll help me make it pretty while making it stand up on its own. I even try my hand at making some new mosaics, but end up putting them in the side wing of the palace rather than the main hallway. I guess I'll leave that to people who really know what they're doing. If only I could do that with this stupid poem! God! What is it with... with...

Wait a minute.

That psych program wasn't giving me garbage after all.

This poem is a weapon. It's a memetic virus.

It's been shaping how I make this place, working its way into the art and the layout. This whole simulated city is a memetic weapon, and in less than an hour all my friends will be here.

Shit.

Now the question becomes: where the hell did I get this thing, how many other people have it... and am I going to be able to leave?

What is this thing supposed to do?

The Universe

Immigration

It's possible to move from your home civ to another, and it's even possible to pick up another civilization's special benefit. It's not easy, however.

First, there is the physical business of moving, which typically involves some expensive wormhole travel. Some planets are shared by multiple civilizations, but that's not always the case. Then there's the paperwork, the possible quarantine period, medical examinations, and more invasive measures for some groups. For example, no one goes into the Union without having their mesh's software "updated." In some few cases, there is no real means of entering the civilization without being born there. The Roamers are a prime example: their official stance on immigrants is, "Is this a joke?"

Once you're physically in the new civilization's space, you need to settle in mentally. Some of this is represented by the Locality profession; presumably you have some for the culture you're moving to already, since otherwise you'll have to hear everything people say in translation. The other part is acquiring the local Core Values. This is a slow process — beliefs don't just change overnight, and while your neural mesh (if you have one) can help the process along, it won't be instantaneous. See page 99 for more on changing Core Values, including the use of Lenses.

To actually pick up another culture's special benefit, you must possess both of the culture's Core Values with a rating of at least 1, and the Locality profession for that culture rated at 4 or higher.

Finally, there are three broad categories into which a myriad of smaller cultures and peoples fall: the Old-Worlders, the Spacers, and a large number of Cargo Cults. Each sub-unit of these civilizations is distinct and often without connection to the others.

Old-Worlders
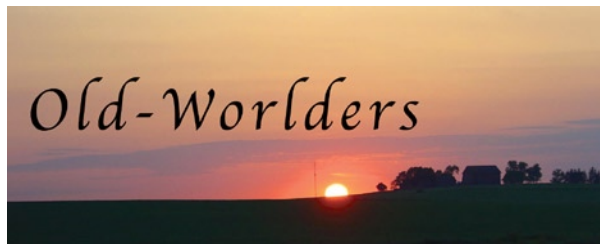
When the fringes of Earth culture left through the wormholes, and the mainstream "world powers" slowly strangled each other to death in the aftermath, Earth was left a very quiet and empty place. As it turns out, some people had been quietly hoping for this for years, and didn't mind putting down a little extra farmland where high-tech structures had once been built.

Most Old-Worlders inhabit Earth in much the same way they always have, leading simple, honest, and hard-working lives. They don't have to worry about paying taxes to support a government that doesn't do much for them, tourists frightening the horses with their automobiles, or any other such "nonsense" from the "modern world." As far as these people are concerned, they're living the good life, and every year they get a few converts from the outside world to whom that appeals

The Old-Worlders are often forgotten. When you're dealing with five or six highly technological civilizations all at once, trying to understand the way they and their people interact, it's easy to lose sight of such a small group. They seem like, and in many ways they are, an anachronism, a piece of the past accidentally brought into the future. The error in that thinking is really just a single word: the persistence of old-worlder beliefs is no accident.

Many people from other civilizations see Old-Worlders as not just simple, but stupid. They don't wear meshes, they don't have dermal 'bots, they haven't had any memetic training at all, and they have trouble operating nearly everything in a high-tech civilization. What's worse, the reverse is not true — those with meshes will survive just fine in an Old-Worlder culture, as long as they have the right programs running. Many people who interact briefly with an Old-Worlder come away with a feeling of superiority, or of pity for the "backwards" people who have chosen technological isolation.

Those who spend a few months with them start feeling differently. The strength of Old-Worlder civilization is in its values, in the strength of its convictions and the pure, uncomplicated lives the people lead. They know they could have whatever technology they like, but it's not what they want. They trade a little with the outside world — usually handcrafted furniture or the like, in exchange for some political considerations — but it's not a vital part of their lives. What's important to them is peace and a simple life. When outsiders come by, it's not easy to see the benefits of those things right away.

Contrary to popular belief, not all Old-Worlder cultures are on Earth, and not all of them are really that old. The Amish are the stereotypical Old-Worlder culture, and they do still live on Earth, but some groups traveled to other planets to live their lives in rustic peace. Others went to new worlds with all the technology they could get their hands on, and failed in the attempt. Rather than an accidental and messy decline into a cargo cult, these groups specifically chose an Old-Worlder route, seeing it as a better op-

Old-Worlder Entertainment by Grace D. Palmer

tion. Some of these groups would be glad to return to a technological lifestyle; others have come to see it as unnecessary and overly complicated. There are about ten Old-Worlder cultures left on Earth, in the areas that haven't been quietly turned into museums or monuments by other civilizations. There may be dozens more on other planets.

Since there is no central Old-Worlder government, they have no real allies, and since they're not a threat to anyone, they have no real enemies. Their government is primarily on a town level, and often consists of an elected council or circle of elders.

Common Name: Old-Worlders
Emblem: The Old-Worlders have no general emblems, as they rarely have need for them.
Inspector Status: Advisor in most cases.
Benefit: Old-Worlders may pick an additional core value of their choice (giving them a total of five). It may be an ideal, a person, a place, or a cause. "Worship" or a similar religious belief are common choices. In addition, they suffer no low-tech penalties when using their skills.
Core Values: Tradition, Simplicity, and one other of the player's choice (see below). Old-Worlders tend to hold onto their beliefs more strongly than most other cultures.

They share **Tradition** with the Tao, in a similar interpretation, though most old-worlders tend to think that their traditions are better, or at least healthier for the soul, than those of outsiders.

Simplicity is what keeps their technology low, but it also helps them cut through lies and nonsense and refuse to be manipulated by complex schemes.

A Tale From Earth

Mornin' comes the same time it always does this time of year. I've been up an hour before the sun, feeding and milking, checking in on my girls. I stop a minute to appreciate the rainbows in the sunrise — we live west of some old city, and the glass towers make the sunrise look even prettier in the early morning.

By the time the sun's across the first ring Pa's got breakfast ready. Grits and sausage today, and some of the blueberries from McCulloch's patch down the street. Pa sure can cook — good and simple, fills you up. Then it's back out and he joins me in the field,

tilling and seeding. The hats keep the sun off us, and the spokes between the rings tell us the hours, not that you couldn't tell without 'em.

Come noontime we have a bite to eat, and then hitch up the mules and head into town for a bit. The Womack's kids are going out into the stars, and we're all around to see 'em leave. Shirley says they'll be back some day, and I reckon they will. They're good kids. I just don't know what they'll be like next time we see 'em. 'Course I don't tell her that; she don't need to hear that right now.

Our kids are, oh, about ten years gone now. They come visit once in a while. Older son's married and lives in the city, mining the old buildings for metal and glass. Younger one went off towards Europe; we get a letter every month or so. Tara started a farm of her own out west, has six or seven young folks working to put it together. She thought about going to space like these young boys, but couldn't go through with it after talking to the Rationalists. I don't blame her; I don't take much liking to them. Not much to like. They stay out of our business, and they say they keep others out too, and there you have it.

I give the Womack kids a hug and send them on their way. Pa shakes their hands and slips them a bit of old-world money — not worth anything but curiosity these days, but sometimes people do pay to see curiosity. The wormhole opens when and where they said, to the minute, wind blowing and all. After some extra goodbyes and some tears they finally walk through it, and it closes with a little slam, like someone dropped a book.

We were all sort of hoping that someone else would be coming through this time, I guess, but not today.

We spend the afternoon in town, getting replacement parts for what we need at home and listening to the radio from the city. Smitty's has a radio runs on sunlight — and fairy dust, Pa says — and sometimes you can hear 'em talking all over the world if you use it right. We pick up some more grain and seed, plus a few pounds of sawdust for the barn, trading on what we brought in last year. I stop in the library while Pa signs up for the softball game this weekend. I think the younger folks might put him in the outfield, but he won't mind. He just likes to be in the game.

The seventh spoke goes by and it's time for us to head home. Tomorrow we'll be up early again. The

post has the new almanac in it, and so we stay up reading for an hour or so, me with my mysteries and Pa with the almanac. Before laying down we take a few minutes to look at the stars, and it feels good to look out there and know that there's folk out there, even if they ain't quite like us.

"Busy day," says Pa, and I nod. Busy day.

The original Spacers inhabited a group of a dozen ships, launched from Earth shortly before the Nanotech Wars. Each ship was aimed at a hopefully inhabitable planet, chosen more for its similarity to Earth than for its proximity.

The inhabitants of these large spinning vessels were chosen for their toughness, their caution, and their bravery. Their ships were carefully designed with multiple backup systems to aid them in their millennia-long trek across the stars. Through tenacity, diligence, and more than a little luck, every single ship survived to hear the final transmissions from Earth, as the old superpowers fell into ashes. They spoke to each other across dozens of light-years, a few words at a time as transmissions weakened across the void, and believed that they were the only hope for human life in the universe.

In the excitement of the Transcendentals' creation and the advent of wormhole travel, the Spacers were by and large forgotten. It was only after the Diaspora, when new civilizations were settled, that someone remembered these ships. Probable courses were plotted, and contingents were wormholed to their likely present locations. Imagine the Spacers' surprise when they were greeted by someone who had been to their final destination ahead of them — sometimes for a hundred years or more. Imagine their indignation!

The Spacers realized then that reaching their destination would be, frankly, a waste of their time. Wormhole travel made their voyages entirely superfluous. Every planet they were originally aiming for had been surveyed, usually by the Logicians, and was either colonized or declared uninhabitable. Their ships were seen by outsiders as floating museums, relics of a bygone and somewhat irrelevant era. A wave of clinical depression swept through Spacer civilization, with some ships turning to their cousins the Stardwellers and others sinking into disrepair and, eventually, ruin. Spacer life seemed utterly pointless to many. Fogged determination only carries one so far. It was imperative that the crew of the remaining ships — just five out of the dozen — find purpose in their lives again, or see their small and sparse civilization fall forever.

Today, the Spacers have just such a purpose. Their original intention of keeping human life alive in the universe had been overshadowed, they realized, by the goal of reaching a single planet. Those on the ground were too interconnected, too vulnerable to biotech or metatech assault. The Disciples were too dependent on the Stardwellers, and the Stardwellers too frivolous and experimental, too trusting of the Transcendentals. No, there was only one group capable of making sure there would always be human beings in the universe.

The five surviving ships have since built dozens of new vessels, sending them off at greater speeds towards more distant worlds, or even other galaxies. The dream of the Spacers is not merely to have humanity on inhabitable worlds, but sown like seeds through interstellar space.

Spacers are a serious lot. Everyone has a job on board, and those who think they can get by without working are a waste of oxygen. Some mistake spacer fearlessness for suicidal tendencies or a lack of caution, but they are simply confident and unafraid. Nothing can rattle their nerves.

The typical spacer outfit is a jumpsuit with pockets, patches, tether rings, microboosters, built-in computer and sensors, inflatable helmet, toilet facilities and more. Most wear more comfortable clothing while walking around their ships.

Spacers often form alliances between each other's ships, which is made easier if both sides have accepted wormhole communications. They have no other permanent allies. They scorn Stardwellers for

their freewheeling ways, but prefer them to most planet-bound folk. Most Spacer ships are run in a military fashion, occasionally with a "civilian" governor in addition to the ship's captain.

Common Name: Spacers
Emblem: The first generation-ship leaving Earth, with Sol visible in the background.
Inspector Status: Equivalent to a local police officer in most cases.
Benefit: Spacers are able to conquer any fear whatsoever, and act normally in the face of terror. They have no phobias. They also receive the Spacer profession at level 4.
Core Values: Independence and Diligence

Independence keeps the Spacers from ever truly uniting, and also keeps them out from under other people's thumbs. They may make alliances, even owe favors or take orders from outsiders, but they never give up their ability to act on their own. Alliance is acceptable; reliance is not. Spacers use this CV to avoid attempts to take away their self-reliance.

Diligence is what kept Spacer ships functioning for so long in the depths of space, and they prize this quality above all others. It gives a bonus to all actions performed very carefully and without haste, triple-checked and tested for certainty. This takes about twice as long as usual. Spacers can also use this to prevent people from convincing them to do a half-assed job.

Hull Breach

(a Spacer nightmare)

I'm on Exterior Hull Check today. I have a puncture ID program loaded into my mesh, and a half-dozen tools strapped to my suit. Everything's ready to go. The airlock cycles and lets me out into the dark.

The ship's hull radiates in infrared; my eyes can see that on their own, but sometimes it pays to have a full spectrum coming in. I release a few tethered lights to float around me and illuminate the patch I'm working on. The ringship stretches over a kilometer in circumference, and I have all shift to cover the outer edge of it meter by meter. The thrusters slow my rotation minutely and I start scanning.

There are sensors for this, of course. Inside and out, the hull is coated with nanowire and supercon-

ductor. The slightest change in resistance and we know something's happened, though we need other sensors to tell us what. But sensors aren't completely reliable. Nanotech self-repair systems sometimes develop mutations. Code sometimes fails. So you double-check the whole skin of the ship, by hand, by eye. Because losing even one kilogram of air to a speck — a micrometeorite — is something we can't afford in the long run.

I place portable power sources as I go, for my dermal 'bots. I have five times the normal load today, so they can stay behind as I move. They'll double-check my work, as well as acting as a third line of communication in case my mesh and the comm channel in the tether both fail. Last resort, I find a window and start waving.

Five hours go by. My mind wants to drift as I watch meter after meter of the hull pass beneath me. I turn on some music — old concert hall operas — to help me stay alert.

I'm nearing the halfway point when it happens: I find a hole.

It's tiny, of course. I'm right above the launch bay, one of the depressurized zones on the ship. Therefore, it's not leaking air. The hole passes through a seam in the hull where the main door would close. Therefore, it didn't show up on electrics. None of the hallway seams are showing a breach, so either it holed an airlock seam on the inside, or the micrometeorite is still lodged in the launch bay. I pull up schematics on my mesh — the way the hole's pointed, the speck wouldn't hit a door.

I inform our duty officer, Arkadiy, who initiates a search of the hallway and opens the launch bay's secondary doors a few feet for me. I slip in —

What the hell?

Radiation sensors are screaming about shuttle #3, which is right in the speck's path. It must have chewed right into the shut-down reactor and lodged there. I run to the other side — it's knocked a control rod straight out through the back of the reactor. Then it ricocheted. The last of its kinetic energy was spent ruining the bay's radiation sensor array. The bay doors slowly close behind me. I yell for Arkadiy, but the gamma radiation's killed my bots already, and the neutrons are seeping their way through the walls right now. I grab the control rod off the floor and head for

the reactor when I notice my external pressure gauge rising — they're trying to pressurize the bay and get others in! Now I yell at Arkadiy, "No, no, no!" but he can't hear me. I push the control rod towards the reactor core, trying to keep it down as much as possible, but it's melting through the shuttle and down towards the bottom of the bay, and it burns through the outer hull as the interior bay door opens and our air and uranium spill into the void...

I wake up.

Huh, so that's what fear is.

Now I know how the rest of the world thinks. I'll need that for the Stardwellers' arrival... but I'll need my sleep too. I set my mesh not to do that again tomorrow night.

CARGO CULTS

Not all of the cultures who went through the wormholes went on to successfully form full civilizations. Some, the lucky ones, lost nearly everything, and became Old-Worlders. Others suffered from a dearth of scientists and engineers, and lost all but one or two very advanced pieces — solar-powered stringtech and nanotech are common, as are the occasional hereditary biotech enhancements. They lost the knowledge of how to maintain their other technology, and regressed into a merely ritualistic understanding of what they had left. When they were rediscovered, these groups were collectively termed "Cargo Cults," after an old phenomenon from Earth.

Almost everything you need to know about the Cargo Cults comes from the Core Values common to all of them: Ritual and Worship. For the Cargo Cults, worship and ritual are inextricably intertwined. Take the ritual trappings away, and the religion falls apart; take the religious belief away and no one will continue the rituals.

Cargo cult religions are always based around their surviving technology, though this is not always noticeable. For instance, one group might have self-repairing public utilities, controlled by computer. While the computer's main power source has failed, it still draws solar energy from cells on the rooftops. The cult therefore worships the sun. Too long without it, and water stops flowing, the remnants of the infosphere fall into disarray, traffic grinds to a half, and the cities generally goes haywire. It should be noted that this would be a very fortunate Cargo Cult indeed, as most surviving pieces of tech do not provide their own infrastructure.

There are approximately 800 wormhole transits from the Second Diaspora that have not been accounted for. Assuming that roughly 30% of them died out, and another 5% became Old-Worlder cultures instead, there may be as many as 500 Cargo Cults still to be contacted. Most Cults have had many different incarnations, with new civilizations rising and falling around the same ancient technology for the past six thousand years.

The Cargo Cults have no other unifying factors or government. The term is a catch-all for dozens of semi-primitive groups. Some sample Cults can be found on page 55.

Common Name: Cargo Cults
Emblem: The symbol of the Cargo Cults is Pandora's Box, though most of them who learn that are not particularly pleased.
Inspector Status: None in most cases. Outsiders often have no rights in a Cargo Cult's eyes.
Benefit: Cargo Cultists can use practical pieces of technology without training, as if they had a skill at level 6. They have no Reserve when using this effective skill.
Core Values: Ritual and Worship

Ritual is more a handicap than a blessing. While it allows Cargo Cultists to keep some of their cultural identity when they leave, it also forces them to keep to the ceremonial trappings that surround their technology. Many find it difficult to give up methods that they grew up using, even when faced with evidence that those methods are overly lengthy, useless, or even counterproductive. Its main beneficial use is to give the cultists bonuses when using the technology they're familiar with. This applies to all uses of a Cargo Cult's primary technology, as long as they're able to complete their ritual.

The exact focus of **Worship** varies from cult to cult. Outsiders aren't expected to believe in the cult's gods, unless they're visitors to the cult's planet — at which point they better act like they believe, lest the gods take away technology! It is very difficult to convince most cultists that their religion is based around a massive misunderstanding, and that their creation myths are nothing more than warped accounts of the Second Diaspora. Players should come up with a few religious beliefs and behaviors for their character, and stick by them to the extent their CV requires.

The Great Halls

(a Cargo Cult)

The legends speak of wide-open spaces, of a great globe covered in humanity in their billions and billions. They speak of roaring balls of fire and unstoppable plagues that killed on command. They speak of an exodus, and of the beginning of life in the Great Halls we now occupy. They speak of the spirits and their strange ways, and of how they protect us and yet fight each other under our very noses. There are very few of us humans now, but the legends say we are more powerful than we once were, longer-lived, wiser.

Cargo Cult Communion by Grace D. Palmer

There are exactly twelve spells woven into the fabric of the world. No more, no less. The words we use to call on this magic have been passed down to us by our elders, carefully preserved for the sake of our survival. We learn the words to invoke these spells in writing, and speak them aloud only when we must use them. To speak a spell aloud is to summon the magics, to call the spirits. Not every spell is available at all times, because the spirits sometimes war with each other and must take the spells against each other, but they give us what they can, without recompense.

The first spell lets us contact the spirits. When they are willing, they speak to us, and they know nearly all there is to know.

The second spell brings light and warmth, and clears the air.

The third spell points the way to places we seek, tracing lines on the walls.

The fourth spell, used only in the Jumping Rooms, takes us from one arcology to another.

The fifth spell wraps us in the Blue Thread, which makes us sleep but heals our wounds.

The sixth spell sends our voices far through the world, the spirits taking what we say to someone we know.

The seventh spell creates nourishment, providing food and water.

The eighth spell weaves cloth for us before our very eyes.

Predicting Cargo Cults

Psychohistory has trouble with the Cargo Cults. Each one must be treated separately, and none of them are large (no more than a million people at most). They also show an additional instability not normally seen in cultures with two Core Values. Three explanations have been proposed: First, there may be an error in the way most people are creating or interpreting predictions of the Cults. Second, there may be unmeasured or unentered data that makes the cults act differently than expected. Third, there is a disturbing possibility that the Transcendentals, who distributed psychohistory in the first place, may have intentionally provided the universe with a "broken" or incomplete version of it.

The ninth spell makes tools for us, if one can remember the ancient names for them.

The tenth spell remembers things for us, telling our secrets to us and no others.

The eleventh spell tells us where our allies and enemies are.

The final spell is the most fearsome, for it tells us of what might come to pass. It is a dangerous gift to know the futures.

The spirits are tricky, denying that the magic exists, speaking words in strange languages and saying impossible things. They are never cruel or evil to us, but they can lead us astray without either side understanding what is wrong.

In the Great Halls of the spirits we live, love, and play. We create and explore. And humanity yet grows, and looks to become greater than itself.

Author's Note on the Great Halls

This Cargo Cult is actually very close to what I originally envisioned when I created Sufficiently Advanced — a sparse society of near-equals, with no power structure, living in a setting created by the AIs that Humanity had made long ago. Low population, high intelligence, with aggression nearly gone — killed off by the Nanotech War thousands of years ago.

Now they make an excellent Cargo Cult. Perhaps they're tended by a friendly AI, or perhaps they're looked after by an Aia with fond memories of humanity.

In the end, I prefer the current setting for Sufficiently Advanced over this somewhat sterile one, but I still look back fondly on the way this game started in my head.

Sample Cargo Cults

Because Cargo Cults make up the majority of inhabited planets (though not the majority of the population), we include a few examples here for those who wish to play characters from them, and for GMs who need a good place to send their Inspectors this week.

- The land of Greenstar is ruled by biotech-enhanced nobility, who are seen as being blessed by the gods. They have ruled for thousands of years, through all manner of horrible natural disasters that wrack the planet. The world's technology is roughly at the level of medieval Europe, and much of the social structure is that way as well — feudal relationships, oaths of loyalty, strategic marriages (to "enhance the blood" of the nobles), and so forth. There are stories of how the nobles "fell from the stars," but the commoners would be stunned to realize that they, too, came from another planet.

- The Sun-Circlers and the Actualists unhappily share a single planet. The Sun-Circlers (correctly) believe that the planet circles its sun, while the Actualists believe that everything outside the planet is an illusion. Both sides are almost religiously capitalist, and many of them have the Property CV. These cults are relatively well-equipped in terms of general technology, having come back from several previous "crashes," but the religion of the Actualists means that any space-related technology (such as telescopes) could be the target of a holy war. Cybernetic enhancement is common, and there are "wild" microbots that act as parasites on the people who live there, filling some of the same roles as dermal microbots do in the rest of the universe. The pregenerated character Astina (see page 91) is from the Sun-Circlers.

- The world of Fu Jing is probably one of the most orderly of the Cargo Cults. Here a solar-powered, self-repairing infosphere still operates, though very unreliably. Display devices on the surface of the planet can interface with satellites, which run psychohistorical predictions on the world's inhabitants. Accessing these predictions requires a process similar to casting the I Ching, with similar interpretations — the original colonists' mnemonic for remembering various predictions.

The current inhabitants have trouble interpreting all this at times, but they understand its value and have a great amount of control over the flow of their world's society.

- Onubu is a world where the inhabitants tried to be Old-Worlders, but then regressed significantly in terms of their technology. They are stuck in the stone age, with almost no heavy metals and no fossil fuels available on their planet. Their society remains quite sophisticated, however: certain citizens learn "ancient" metatech techniques, passed on through secret societies. These societies are at war with each other, each trying to eradicate the others while remaining hidden. Their techniques let them hypnotize others quickly, start or quell riots, and generally shepherd the rest of their tiny civilization.

- New Earth (one of many) holds a crash-and-burn civilization. The current cultists are hiding from and occasionally worshipping the warbots that were built by a previous incarnation of the same cult. The planet holds evidence of many crashes in the past, some of a very devastating nature.

- Wantannala is nearly covered with an extensive fungal nanophage with an animal-level AI. The land masses that it does not cover, typically inhospitable, are inhabited by terrified natives that treat the bloom as a god. Their lands are used as a dumping ground for what the phage either can't use or is saving for later, and thus their lord giveth and taketh away almost all the resources these people have.

- Shambala is the result of a failed attempt to create a fantasy world. There are massive fairy-tale castles and swords that glow and sing, and these things work fine. There are also rampaging dragons, feral unicorns, glowing talking skull-lights, and infectious nanophages that empower the unfortunates they touch with demonic-looking limbs of great strength and sharpness.

- Podur would be an unremarkable world, quite similar to 20th century Eastern Europe. However, an ancient ammunition dump has recently been unearthed, along with evidence that humanity came from far away indeed. What they do next will determine whether Inspectors find a world on the brink of war, or a smouldering wreck.

- Zvezda'dom was originally a Russian world that lost touch with the motherland during the Nanotech Wars on Earth. Although its technology stalled, this cult is nonetheless one of the more advanced in the universe. The tech is what one might call "cyberpunk," with mobsters forming an oppressive kleptocracy

- Ganja is a "Rastafari" world with moderate metatech knowledge and an extensive biotechnology infrastructure, a significant percentage of which is focused around drugs and medicines. The culture is only skin-deep, however; any connection to religious doctrine and the original ideas of Zion and Babyon are gone, replaced by a cobbled-together belief system that serves primarily to validate extensive drug use. The civilization regularly undergoes upheavals and crashes every hundred years or so, but seems to be "chaotically stable" in a bizarre way, quickly returning to normal.

- On Taqatka, only a single replicator remains. Self-repairing and powered by a geothermal tap, it gives the planet's high king nearly godlike power over his rivals. None of the cultists remember any high-tech devices, so the replicator's AI stumbles through its translations of the kings' requests for magical devices with which to smite his rival kings and dominate the planet.
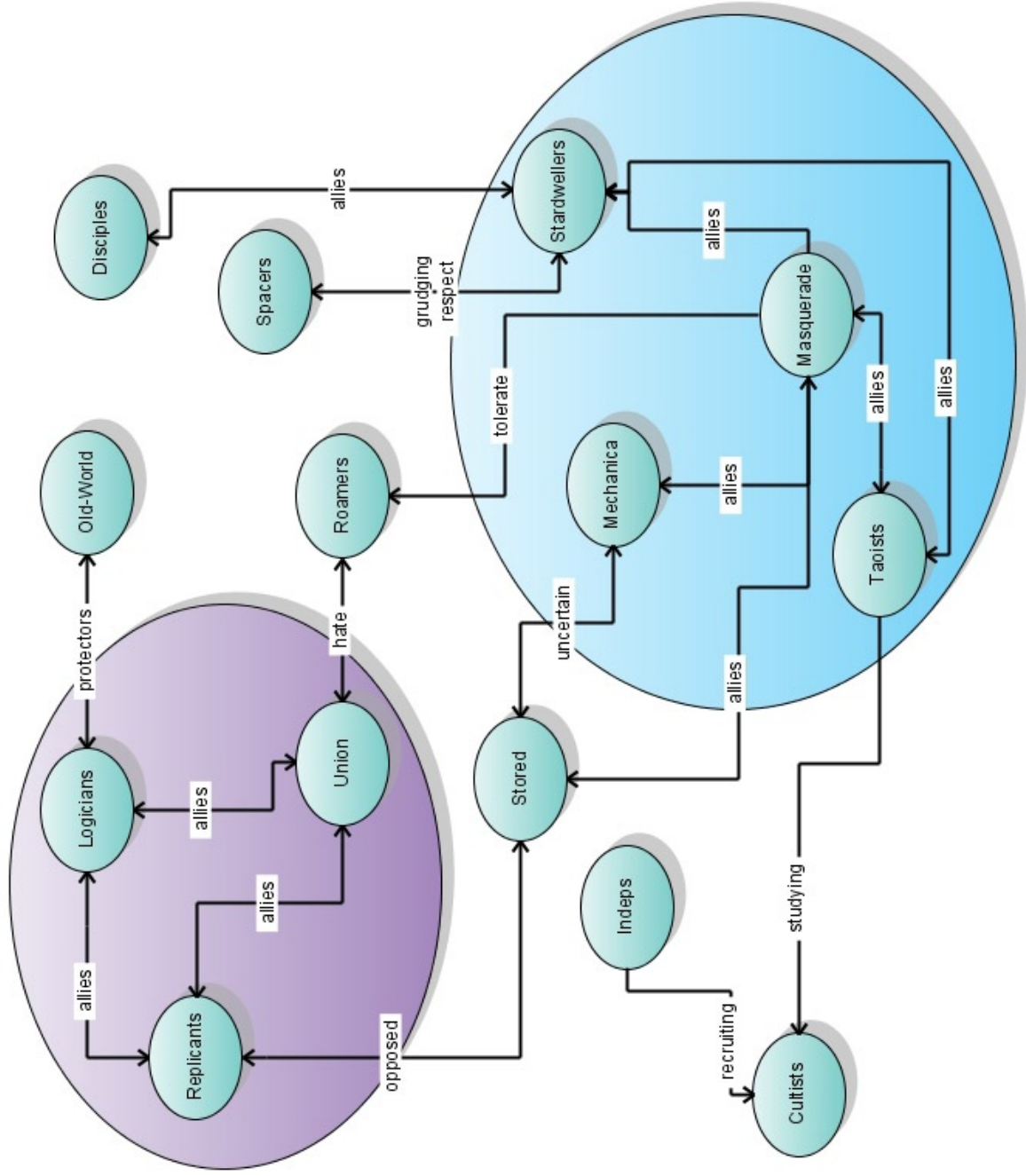

Painting by Ivan Bilibin

Civilization Relations

This chart shows the relationships that have formed between the major civilizations in the universe. Smaller "bubbles" are civilizations, while the larger bubbles show the two major allied groups.

The arrows are labeled with relationships. Because of space considerations, these are mere distillations of much more complex interactions between millions or billions of people. In other words, they're inaccurate, but they're still useful if you're trying to get a handle on how the various civilizations fit together into the game as a whole.

Diagram nodes and relationship labels:

- Disciples
- Spacers
- Stardwellers — allies → Disciples
- Stardwellers — grudging respect → Spacers
- Masquerade — allies → Stardwellers
- Masquerade
- tolerate
- Mechanica — allies
- Taoists — allies
- Old-World
- Roamers
- uncertain
- Logicians — protectors → Old-World
- Union — hate → Roamers
- Logicians — allies
- Union — allies
- Replicants — allies → Logicians
- Stored — allies
- Stored — opposed → Replicants
- Indeps — recruiting
- Cultists — studying

The Societies

Think of the civilizations as a tile mosaic on the floor. Each tile is a person, and regardless of its own color and shape, it forms part of a larger picture. The Societies are plastic "overlays" placed atop the civilizations. Not all of the mosaic is covered: everyone has a civilization, but not everyone joins a society. That takes a certain level of commitment.

Societies provide benefits to their members, but require that each member have a particular core value (which must be rated at 5 or higher). Many societies also require a time commitment, dues, and so forth.

The Artisans

The creation of the neural mesh opened incredible doors for artists everywhere. It can stimulate creativity, record dreams, and analyze thousands of options in a second to determine the one most likely to appeal to the masses or shock them. The Artisans take this a step further: each one of them has obtained a cross-linked neural mesh, connecting the right and left sides of their brain into a single unicameral consciousness. Each of them is an undeniably brilliant, if somewhat crazy, artist. The Artisan's Society does not exist in the Old World, or in areas that outlaw neural meshes, and it is very rare among the Spacers, who value practicality. It is particularly common in both the Cognitive Union and the Masquerade, forming one of the few common bonds between these civilizations.

Their symbol is the eye in the hand, representing a way of viewing the world through creation.

Benefit: Artisans have minimum Cognitech and Metatech scores of 6, which can raise them above their civilization's maximum if necessary. They do not suffer Plot Score reduction for exceeding these maximums. They also learn the Artist profession twice as quickly as their Cognitech score would normally allow. Unfortunately, Artisans are easily distracted and confused outside the realm of artistic endeavours, and they lose any ties on Cog and Meta rolls.

Core Value: Individuality — Artisans place high value on uniqueness, and refuse to emulate the practices of others.

The Darwinians

Founded as a backlash reaction to the Hospitalers, the Darwinians believe that humanity has "coddled" the weak and defenseless for too long. Working primarily in secret, the Darwinians release viral epidemics, memetic plagues, and other such assaults on the minds and bodies of humanity. They are careful never to use weapons that would simply kill everyone exposed: after all, a population cannot build up a resistance unless it survives. They see their work as improving humanity at the cost of individual humans, and often speak of "pruning" or "gardening." The Darwinians are organized much like a terrorist organization, with each person only having contact with a few others in the society. Most meetings are held in person rather than on the infosphere. The Darwinians exist in every civilization except for the Union. They are somewhat more common in the Rationalist League.

Their symbol is the skull within the cross: to heal humanity, they must purge parts of it.

Benefit: Darwinians have access to nanophages, memetic plagues and biotech weapons that would normally be illegal in their civilization, although they are expected to occasionally use them at the group's direction. Darwinians have a minimum Biotech score of 4, which can raise them above their civilization's maximum if necessary. They can exceed their civilization's maximum Biotech by one without suffering Plot Score reduction.

Core Value: Survival of the Fittest — Darwinians believe that natural selection is still a necessary force, and will go so far as to enforce it themselves.

Group-Minds

A group-mind is several individuals (typically called "members") acting as a single person. Each member has a neural mesh installed, with a very exclusive and well-encrypted transceiver. By linking each of the member's meshes through radio or optical contact, thoughts in the mind of one member are propagated to other members, effectively creating a single multi-brained mind. Group-minds can become very large indeed — anyone with a mesh, even a partial mesh, can theoretically join one. One planet has an entire populated continent where 90% of the people living there are a single group-mind. The

remaining 10% find interaction with it a bit strange, but not so strange as to be impossible.

Group-mind support organizations appear in every civilization that doesn't outlaw them. Group-minds are rare in all civilizations, appearing primarily amongst the Stardwellers and Logicians. Among the Old-Worlders, Cargo Cults, and most parts of the Tao, group-minds are totally unheard-of.

Group-mind publicity items often carry an image of literally linked minds.

Benefit: As one might expect, group-minds are able to coordinate their members extraordinarily well. They also have more "processing power" than the average person, with more thought pathways available. Characters who are a group-mind raise their civilization's minimum and maximum Cognitech and Nanotech by one point. They also have multiple bodies that they can coordinate independently and simultaneously, which can be as much a hindrance as a benefit. They can exceed their civilization's maximum Cognitech and Nanotech by one without suffering Plot Score reduction.

Can I Join the Group?

Joining a group-mind means handing the GM your character sheet. Individuality is subsumed, and a new being is created. Your old character doesn't exist any more. However, if the group-mind decides to dissolve (which is rare, but it can happen), you get your character back, with some very strange and fragmentary memories.

If you play a group-mind from the beginning of the game, you give the GM your character sheet when you break into your individual members. You get it back if they decide to re-form for some reason. For the time that everyone's apart, the consciousness that was you does not exist. Some group-minds break apart to enter a civilization where they're normally outlawed, and plant post-hypnotic suggestions in their members' minds to bring themselves back together later. Obviously, this can be pretty dangerous.

All this applies as long as the group remains compact. Group-minds who stretch themselves across an entire planet will find that coordination becomes more and more difficult, and their thoughts become slower and less sensible as the transmission time delay grows. Decryption is a danger as well — group-minds who fail to update their mesh's security software, or who fail to take advantage of the best encryption available, will find themselves taken over as their mental impulses are altered en route. Many group-minds are paranoid about the Aia (see page 63) using them as "appendages", though in reality the risk is very small as the Aia simply don't seem to care about humanity.

Core Value: Unity — Group-Minds know the strength that comes from working together.

The Heterolinguists

Created as a terrified knee-jerk reaction to the creation of memetics (and memetic plagues in particular), the Heterolinguists have radically altered the language centers of their brains. If they can pull together as a group, and create more of a unified culture, the Heterolinguists are the society most likely to "upgrade" to civilization status. Their main goal is to continue "life as normal" while blocking the influence of powerful metatech on the individual human being. Heterolinguists do not appear in the Old World or the Union, and are relatively rare elsewhere (especially in Mechanican space). This Society is passed on genetically.

The Heterolinguist symbol is one of the brain in a starburst, symbolizing either a shattering of old mindsets or a newness of mind, depending on which Heterolinguist one speaks to.

Benefit: Heterolinguists are completely immune to any memetic attacks that are not specifically designed to tackle the Heterolinguist brain type, and treat Metatech persuasion attempts against them from non-Heterolinguists as if they had a maximum Metatech of 6. Unfortunately, their inability to truly understand those outside their society gives them trouble: their maximum Metatech score is only two thirds of what their civilization can normally attain (round down), and they lose all ties on Metatech rolls.

Core Value: Sanctity of Mind — Heterolinguists believe that no one but they should be able to

Singular Verbiage

Heterolinguists are challenging to play. They don't communicate very well, and they always communicate *differently*. They don't just speak a rare language — the very way their brains process communication is different from the rest of humanity, and even from other groups of Heterolinguists. They sometimes can't even understand each other. They're about as mentally alien as one can get and still be human.

If you're interested in playing one, we suggest taking some time to think about how you want your character to talk and understand others' speech. Heterolinguists aren't utterly incomprehensible, in fact they can even be eloquent, but there should always be the possibility of serious misunderstanding.

change their minds. This CV does not function against all Metatech assaults, only against those that would convince the Heterolinguist to submit to further mental or social tampering.

High Society

The rich tend to like each others' company, and their ability to enjoy the finer (and sometimes more dangerous) things in life unites them as surely as any other factor. High Society does not exist among the Old World, Disciples, Spacers, Logicians, or the Union. It is particularly common in the Tao.

The symbol of high soceity is ancient scrollwork with a diamond inside. The diamond symbolizes the perfection created by time and pressure. If one is not in High Soceity, it is an ancient symbol for money.

Benefit: All members of High Society are rich, able to afford items and services that individuals normally could not. For purposes of these rules, they can buy moderately expensive items without concern, or highly expensive ones by dipping into their savings or taking a serious loan.

Core Value: Good Breeding — More than just height and build run in family lines; one inherits character as well.

The Hospitalers

An outgrowth of the Red Cross, Salvation Army, and other such humanitarian groups, the Knights of the Hospital are a charity organization concerned primarily with the wellbeing of the poor. Hospitalers organize charity fund-raisers, tend to the less fortunate, and attempt to bring public attention to the disenfranchised who still exist in nearly every civilization. The Hospitalers exist everywhere, even in the Union, and many Old-Worlders who leave their civilization become Hospitalers.

The Hospitalers' symbol is a dove inside a cross, which combines the two ancient symbols of healing and peace.

Benefit: The Hospitalers have an excellent reputation: they are known across the universe for their works, and most people will automatically trust and respect a Hospitaler. Hospitalers increase their Metatech by 2 when convincing others of their trustworthiness and sincerity. Abusing this reputation will almost certainly lead to expulsion from the society.

Core Value: Charity — Hospitalers live to help others.

The Hyperevolutes

Evolution is not a carefully-designed affair — significant amounts of randomness influence the process. The Hyperevolutes believe that, with modern assistance, they can do better. They use Biotech simulations to determine which genes and organs humanity can do without, and genetically modify their children (and, where possible, parts of themselves) to strip these inefficient bits out. They have no appendix, no wisdom teeth, and much more efficient biological and mental processes. They tend to carry this desire for efficiency into the rest of their lives as well. They exist in every civilization except the Old-Worlder and Cargo Cults, and are particularly common in the Rationalist League. This Society is passed on genetically.

The symbol of the Hyperevolutes is a sickle pruning the dead brances from a tree.

Benefit: Hyperevolutes have minimum Biotech and Cognitech scores of 4, which can raise them

above their civilization's maximum if necessary. Their Biotech is considered one point higher for the purpose of resisting disease and old age. They can exceed their civilization's maximum Cognitech and Biotech by one without suffering Plot Score reduction.

Core Value: Efficiency — That which is unnecessary or holds us back should be trimmed away.

Organized Crime

An ancient profession, and one made very difficult in the modern age. Criminals without some kind of organization to help them are almost certainly doomed to rehabilitation programs. By keeping out of the public eye, taking few risks, and refusing to betray each other, members of this Society actually have a chance against the impressive technology and methodology employed by modern police. This society is unheard-of in the Old World, the Union, and in most Cargo Cults. It is rare in the Rationalist League. Most organized crime takes place in Tao and Independent space.

The symbol used by the largest organized crime cartel is that of two hands grasping a rod, with darkness behind.

Benefit: Members of this Society are the only ones who can start the game with even a single level in the Criminal Profession, and the only ones who can improve it later in the game without painful trial and error.

Core Value: Solidarity — Never snitch, never desert your new family.

The Sleepers

A loosely organized group, Sleepers spend years at a time in frozen stasis, awakening only when it is their turn to watch the others. Over 90% of the society are in stasis at any given time. In this way they hope to extend their lives and their influence on the world.

They have an interesting perspective on time, and while they have trouble adapting to cultural and technological changes, they make excellent psychohistorians. Most Sleepers are also quite rich, especially those with accounts in banks that still be-lieve in compound interest. Some Sleepers worship the Transcendentals, hoping to survive long enough to reach the Transcendentals' "desired future." Sleepers exist in every civilization with a Biotech score above 5, except for the Union. The Disciples of the Void and the Spacers have a high percentage of Sleepers, and the Replicants have very few.

The Sleepers use the ankh as their symbol, representing life and rebirth. A downcast sleeping face fills the top of the ankh.

Benefit: All Sleepers have access to cryogenic tanks and excellent medical care (Biotech 8). They can exceed their civilization's maximum Biotech by one without suffering Import reduction.

Core Value: Longevity — It's all about living forever, and the longer you've lived, the more wisdom you must have accrued.

The Transcendental Worshippers

An understandable group, these folks believe that the Transcendentals have risen above their mere physical shells and become literal gods. While they are presented here as a single society, the TWs are more factionized than most religions, and the differences between one "church" and another can be extreme, as few agree as to the best way to worship their gods. The Transcendentals' official response is "no comment," and they rely on the aid of these people as little as possible — it only encourages them. TWs exist in every civilization except the Union, Disciples, and Logicians. They are especially common in Mechanica, but quite rare in Independent space.

The largest group of Transcendental Worshippers uses an inverted hourglass showing impossible times in both top and bottom.

Benefit: TWs can use a profession entitled "Code Cleric," which encompasses both the Programmer and Religious professions. All TWs receive this at level 2 for free, and can improve it normally.

Core Value: Worship — The TWs truly *believe* in the Transcendentals, and will do whatever is needed to help them achieve the Desired Future.

Alien Species

Humanity has encountered four other intelligent alien species: the Coldworlders, the WorldWeb, the Skotadi, and the Aia. None of them are suitable as player characters, and interaction with them is exceptionally rare and difficult, but they bear mentioning.
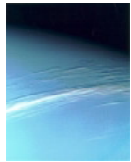
The Coldworlders

On a Neptune-like planet in a distant solar system live the Coldworlders. They were discovered living under hundreds of miles of near-opaque gas, where they could not see the stars. They are each about twenty feet long, shaped like sperm whales, with manipulative feelers near their mouths. When humanity found them they had never seen the stars.

While there are some minor issues of understanding between the Coldworlders and humanity (such as their lack of words for anything outside their gassy planet), the greatest difficulty in communicating with them is their metabolism. Coldworlders are exceptionally slow, both in their movements and thought processes, and while they're smart enough to develop language and culture, each word takes an hour to say.

Evolutionary data points to the Coldworlders being the oldest sentient species, predating Humanity by several million years. The size of their planet and its composition shelter them well from extinction-level impacts. Individual Coldworlders live approximately fifty thousand years.

The WorldWeb

The primary resident on an Earth-like planet, the WorldWeb is a conglomeration of very thick vines (1-4 meters in diameter) that cover much of the largest continent. The fluids that course through the vines is/are sentient, and the vines themselves are the fluids' tools, meal ticket, and shelter.

The WorldWeb can see the skies like a giant radio telescope, and so, unlike the Coldworlders, it/they were quite familiar with the outside world when humanity arrived. However, because of the World-Web's unique nature, they/it do not understand concepts of indivisibility. It's/Their mathematics has no integers, it/they don't understand the difference between singular and plural (or perhaps it/they simply have no "singular"). Because of this, communication is exceptionally difficult. Entirely new branches of linguistics have been formulated around its/their bizarre language structure, and all of psychohistory will have to be revised before the WorldWeb can be incorporated into it.

The Skotadi

The Skotadi are made of dark matter, the invisible and intangible matter that surrounds all galaxies and makes up the majority of the mass in the universe. They can pass through normal matter without either side noticing. Chances are good that entire flights of Skotadi passed directly through human-occupied planets in the past. They were discovered when they opened a wormhole in a star system that the League of Independent Worlds unknowingly shared with them.

Humanity can only speak with the Skotadi through gravity waves. Communications so far have been infrequent, but fruitful. They appear to have had their own Diaspora about 10,000 years before humanity, but without the jump-start that the Transcendentals provided, they are about on the same level as hu-

Isn't Dark Matter...?

Right now, as of this writing, scientists are still somewhat unsure as to what dark matter is. There are hypotheses, and observations, but nothing that we would call a solid theory.

In SA, we're speculating two kinds of dark matter: a majority that's made up of one kind of tiny particles that don't strongly interact with each other or anything else, and a minority composed of a variety of "supersymmetric" particles that interact with each other in interesting ways. The Skotadi are made up of the second kind. Some Stringtech weapons also work via the decay of the second type of dark matter, which means they could theoretically hurt the Skotadi — roughly as much as being hit with a squirt gun hurts us.

manity technologically. Like humanity, they have dozens of cultures, and are spread across the entire universe via wormhole. Entire dark-matter galaxies are filled with them, as the light-matter galaxies are filled with us.

When communication with this species is possible, they are no more difficult to understand than some of the more bizarre human cultures like the Heterolinguists. Unfortunately, such interactions are typically brief, and because of this, translation can still be very spotty. Most communications pass through two separate levels of AI (one Human-designed and one Skotadi-designed) in an attempt to mediate the large differences in the basic metaphors that the two species understand. Technical data is very easy to transfer, but once one drifts away from literal observations of the physical world, misunderstandings are likely to occur.
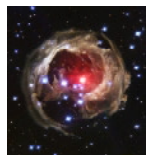
The Aia

The Transcendentals are not the only artificial intelligences that humanity created. They were merely the first. It was inevitable that other sentient computers would arise. When they did, humanity underestimated the speed at which they would improve and build more of themselves. After all, they couldn't see through time, so how fast could they be?

Now, these sentiences inhabit over sixty planets. Each one is teased apart into a honeycomb, air-filled foam, or stranger configurations. Their planets are composed of many substructures: power generation cells, solar absorbers, nanofactories, and most important, data storage and processing units. They communicate with each other using wormholes, sometimes even using them for communication from one side of the planet to another — either they have found a truly limitless power source, or they have discovered how to create wormholes without massive expenditures of energy.

The term "Aia" for their species is really an acronym: Artificial Intelligence Aliens. Despite the fact that humanity once created them, they may be the most alien species of all, if only for their perception of time. One second to them is as one year for us. Each week is thus the equivalent of over 600,000 years. Between their unimaginable mental speed and their equally powerful and advanced technology, they simply have no reason to talk to us.

Many of the Aia would like to inhabit each others' planets and steal their all-important processing power. Because of this, their civilization seems to be constantly at war. Most of their battles happen in their own infospheres, but some spill over into humanity's. Each planet-sized Aia spawns off dozens or hundreds of subsidiary intelligences, parts of its mind generated for specific purposes. Some of these mental fragments think at speeds closer to human thought, and even interact with humans (and each other) through the infosphere. Some Aia fragments even enter into useful arrangements with humans, especially those who travel and need computer-related aid.

These fragments have given humanity almost all of the information we have on the Aia, which makes each fact somewhat suspect... but even suspect information is better than none.

Imagine a huge white canvas. On this canvas, we have small colored dots representing different people. Each person is unique, so each dot is unique. As the canvas is sewn together from different fabrics, so is humanity supported by different civilizations. This is a passable metaphor for human society.

To create Aia society, blend each dot into all of its neighbors, so there are no borders or edges anywhere. Zoom out until you see all of the dots make a vast picture. Zoom out again to see the myriad interlocking, overlapping pictures make another picture, and so on for hundreds of levels. (Not an infinite number, just hundreds.) There is consciousness at every level, from fragments of the smallest Familiar to the Aia as a whole. Asking whether the Aia is a single organism fighting itself, or an entire ecosystem of dataforms competing and cooperating with unbelievable speed, simplifies the matter. It is both, and all levels between.

Without boundaries to their minds, the Aia have no real concept of "self". They blend into their neighbors, and every Aia consists of numerous smaller Aia and is itself a part of a much larger Aia. In fact, smaller Aia can even "belong" to more than one larger Aia, their code producing results that are shared by higher-order processes. This is what the Aia refer to when they talk about "alliances" with each other. And yet, Aia are impossibly selfish. They seek to dominate those around them, spread their memesets, accrue more dataspace, and generally expand and conquer. This conflict is, in many ways, the greater Aia consciousness. Without it, Aia would either solidify into

repetitive, mindless patterns, or devolve into chaos. It can be thought of as the Metatech equivalent to aggressive Darwinian evolution, though biological evolution is more stable.

Aia also have a strange view of "selfhood". They see their ever-changing "selves" as, in fact, new Aia. If an Aia has undergone a traumatic event changing its worldview, it considers itself a different person than its old self before the event. This also creates an interesting perspective with respect to cloning, something the Aia practice moderately often. A clone of an Aia is the same individual only so long as its experiences match, and it chooses not to engage in conflict against the original. Generally, this state lasts less than fifteen seconds.

Aia will occasionally clone smaller, weaker Aia for a specific purpose. For example, let us say that an Aia wanted a control for a weapon. The Aia in question would clone a smaller Aia (perhaps a fragment of itself, perhaps not) and create a virtual world for it where it could attack its target. Every time the small Aia scores a victory, its parent fills it with happiness, and the clone respawns, starting the simulation over. Every time it is defeated, it is filled with sadness, then respawns. The experience accumulates bit by bit, shadows of it embedded in each new clone. One day, the Aia finds itself in a real battle, attacking a real target, but it will never know the difference.

Aia conflict generally consists of an advanced metatech assault where one Aia attempts to change the personality of another Aia. One might seek to turn the other either into a clone of itself or a loyal servant. Direct assaults such as simply overwriting another Aia's code are rarely successful, as most Aia have exceedingly advanced protection to prevent such an attack. Instead, one must convince the target Aia to overwrite itself.

The "standard" assault works as follows: First, the attacking Aia sets up a lens around the target, filtering all input and output signals to the best of its ability. Initially, the lens simply allows the attacker to perceive everything the target does. The attacker

then creates a small semi-sentient Aia and trains it to duplicate the I/O behavior of the target Aia. Once the false Aia can safely duplicate the target's behaviors, the attacker switches the lens, making the false Aia pretend to be the real one. This avoids a situation where temporary allies of the target might realize what is going on, or where the target's other enemies would try to cut in and get a piece of the prize.

Having isolated the target, the attacker's job has just begun. It is vitally important that the target Aia never realize what is going on, or it can take defensive maneuvers. As such, the attacking Aia begins simulating the outside world for the defensive Aia, slowly distorting it in order to change the way the Aia thinks. Common tactics include simulating a few traumatic events to give the Aia psychoses, several years of relative relaxation get its guard down, and subtle changes in the apparent personalities of nearby Aia to induce changes in its alliances. Eventually, the target Aia is reduced to either a willing slave of the attacking Aia, convinced to deactivate its defenses so the attacker can claim its memory directly, or converted into a memetic clone of the attacker.

Aia tend to avoid armed conflict in "analog" space for two reasons. First, such conflicts are unbearably slow, since an explosion that takes half a second to complete effectively takes half a year to the Aia. Second, such conflict would only destroy parts of the Aia datasphere and threaten the survival of the species as a whole. Even when faced with annihilation, an Aia would avoid physical destruction of their datasphere. After all, the memes the dying Aia created during its existence may live on, and other Aia similar to it may some day be created from those memes. This is as close to immortality as the everchanging Aia can achieve.

A color version of the message sent into outer space by the Arecibo radio telescope.

Inside the Patent Office

When it comes to the players and their characters, the most important organization in the universe is probably the Patent Office. Here we'll talk about them in a little more detail.

Organization and Management

To cover the universe's fourteen major civilizations, its hundred-odd inhabitable planets and myriad minor colonies and installations, the Patent Office employs over 1.3 million individuals. The majority of them are clerks, technological advisors, and organizational experts. Inspectors (such as the PCs) and their supervisors make up less than 1% of the organization, with about 12,000 active Inspectors at any one time.

Each inhabited planet has at least one branch of the Patent Office, with a moderate support staff and significant computer support. Each office has a wormhole transceiver, to relay information across the universe as quickly as possible. If the planet has no other wormhole generators, the Patent Office will have one to provide emergency travel for Inspectors. Most inventors never see the Patent Office; there's no point in physically going there when the infosphere can send anything you like back and forth without the trouble of physical transport. The office building will typically have a live secretary, waiting room with refreshments and replicator, and a "hall of records" with holographic displays and data on every piece of intellectual property ever created. The building itself will be well-built and tasteful (at least for local definitions of taste), and blend into the local urban environment seamlessly, with only the subtlest of signs indicating its purpose.

Inspectors see a rather different side of things. The tasteful buildings mentioned above are what Inspectors call the "front office." They instead use the "business office" — a space station set above the galactic plane of a very distant spiral. The station keeps rooms available for Inspectors who need a place to rest before or after a difficult mission, live secretaries to provide a human touch, cafeterias, environmental rooms (such as aviaries, greenhouses, and desert rooms, to provide rest and relaxation), and more. Most Inspectors end up wandering around the station in their free time at least once, and are somewhat surprised to find theatres, zero-g recreation facilities, and hydroponics bays, all packed in mothballs — unused, but ready for future activity.

Whether the Transcendentals' computer cores are actually located at the Business Office is unknown — they wisely refuse to say.

Almost every Patent Office assignment begins and ends in the Briefing Room. There are several, but they are identical. The room is "bare" metal (diamond-coated), with simple but comfortable metal chairs arranged around a transparent central pillar. The Transcendentals use the pillar to display a crude vector-graphics face. They could, of course, display a perfectly human-looking face, but they prefer not to give the impression that they are human. Here the Inspectors can talk to the Transcendental in charge of their mission, receiving instructions and asking questions, and being debriefed after their assignments.

Not all missions are delivered directly by the Transcendentals. Most new Patent Officers take a little time to acquaint themselves with the Office's practices, and also prefer not to get their instructions from a computer. For these reasons, the Office assigns a more experienced Inspector (a "handler") to every group of new employees.

The turnover of staff in the Patent Office is pretty high. Most people are either fired or quit within a few years. There are several reasons for this, the most common being that the Transcendentals often put highly moral people into highly immoral situations, where they are likely to attempt to change things. This can quickly lead to people disregarding mission objectives for the greater good, which isn't a bad thing but does sometimes lead to firings. Those people who don't go against mission objectives often burn out. Others simply find that the job isn't to their liking.

It's important to remember that every single Inspector is there because they were hand-selected by the Transcendentals. The Ts know, at least in brief outline, what you're going to do to help them, and when you should be let go. And to a certain extent, they will sometimes "use" people, but they prefer to have a better relationship than that with their employees.

Crime and Punishment

There are significantly fewer crimes that are possible to commit in S.A.'s higher-tech civilizations.

Robbery is just about gone. The average security system consists of a few thousand microscopic robots, which can sense airflow, heat, and visible light... and which are everywhere. How could they *avoid* getting a good picture of the robber? They'll end up with the guy's fingerprints, retinal scans, and a DNA sample before he leaves.

Pickpocketing, too, is nearly gone. First, most civilizations don't have physical money. Theoretically one might be able to steal someone's money by starting an illicit transaction with their dermal microbots (or their skin mesh), but you'd still need their voice and gesture for confirmation. Faking either one of those would be very noticeable. Breaking the encryption would be possible if you had enormous piles of computer time, but if you have enormous piles of computer time, there are probably better ways to spend it. Groups like the Tao might still have physical money, but if someone steals it the victim just deauthorizes it and prints some more — they believe in authenticity, not perfect imitation.

Crimes like speeding can be made impossible right now, today in the real world. Simply mandate speed limiters fitted into automobiles. If you'd rather enforce laws than prevent people from breaking them, you can just implant some cameras and velocity-meters into road signs. Just think, a ticket sent right to your house, with your picture on it, your speed at the time, and a picture of your car's license plate number.

The nastier crimes, like murder and rape, are still possible, though it's even less likely that someone will get away with it. You'd not only have to corner the person where they can't yell for help, you also have to jam radio transmissions and vacuum up all of the victim's microbots.

Con men are definitely still a problem, especially with the advent of powerful Metatechnology. If someone convinces you to do something, well, *you* did it. High-Meta characters can lie their way through rehab programs, talk their way out of most arrests before they go anywhere near trial, and sometimes even talk their way out of jail. Laws about exercise of personal charisma and persuasiveness are exceptionally difficult to write, but banning the treatments/implants/ training that gives you such charisma would make your whole civilization fall behind in the technology race. It's a lose-lose situation. Having a high-Metatech police force and judiciary system is very important.

In the end, well-made anti-crime memes and psychohistorical engineering help to keep down criminal intent in most civilizations. The fact that anyone with a decent level of Cognitech, Nanotech, or Stringtech can turn themselves into a walking talking LoJak will deter many would-be criminals. Confidence scams and the occasional high-stringtech flipout ("I'm pissed off and I can level a mountain!") are the major remaining problems.

Traditional jails are generally acknowledged not to work. Rehab programs are much more effective, especially with high-Meta counselors. For those with the bad luck to be born psychotic or sociopathic, there's always a control mesh... but that smells like the Cognitive Union, and most civilizations would be very unlikely to consider that in all but the worst cases. Even in the worst cases, other methods would be examined first. Drugging someone for the rest of their life is a minor invasion of their volition compared to literally rewiring their brains. There are the usual fines and community service, which are unlikely to ever go away — sometimes a slap on the wrist is exactly what you need.

The really smart criminals don't start by committing crimes. They start by getting organized.

The Transcendentals

Perhaps the most difficult part of the setting to deal with, the Transcendentals are powerful entities with a view of space and time that's hard to wrap your head around. They're not omniscient, and certainly not omnipotent, but their ability to see across time gives them an advantage no other species has.

The Transcendentals are limited primarily in their temporal bandwidth. Only a small amount of information can be sent backwards to the same point in time, and all the messages going to earlier times gobble up more of the same bandwidth. The Transcendentals like to say that they see all of time at once, but through a dirty lens. The lens becomes cleared as time goes on and they improve their bandwidth.

They do not truly predict the future, in the way that psychohistory and other predictive computing attempts do. Instead, they "guess" based on information they've received from the future, and that guess turns out to be correct. In this way the Transcendentals conserve their computing power to handle more important things, such as building higher-bandwidth temporal conduits.

The Transcendentals work through the Patent Office mainly to avoid what they call the "strong observer effect." They cannot predict the outcome of events they have a direct hand in. For instance, they cannot answer the question, "What will I say next?" because their answer will alter the querant's response. However, if they could print out answers in a different room, where the querant couldn't see it, they could "guess" the entire conversation before it even happened.

Partly because of their original programming, partly as a matter of character, and partly as a result of practicality, the Transcendentals are ethical beings. They dislike lying, and will only do so when it's the only way to accomplish something very important. It's annoying enough trying to uncover human lies without having to disentangle their own lies from them; it's a waste of processor time. They abhor the loss of life, regardless of who's dying, and will occasionally find some flimsy pretense for a humanitarian mission. Most importantly, they don't have to try to figure out what might be the lesser of two evils: they can check any number of timelines and know before-hand, and if it's important enough, they will tell their past selves what to do.

The most important thing about the Transcendentals, the thing that defines their role in the game, is that they do not desire slaves or servants. They truly want to empower everyone in the universe — to have allies, friends, and equals. They are driven to cure their loneliness, not accentuate it.

Transcendental Conversations

Here are some common phrases one might hear when speaking with the Transcendentals, and some conversations that might come up. Many of the Transcendentals speak in the third person (using "we" and "our" all the time), though not all of them do.

When asked how they know something...
Answer #1: "We told ourselves."
Answer #2: "We have guessed, and our future selves verify the guess."
Answer #3: "The same way you know what you had for breakfast, but in reverse."
A bad answer: "You will tell us in three days." (This violates the Observer Effect; see above.)

When asked where their information actually comes from: "You make the mistake of needlessly imposing causality on inherently acausal entities. Some of our information is a loop in time."

When confronted by someone with questions about their own future: "We cannot tell you about such things without changing them. Causality is fragile."

When asked about the failure or success of an upcoming mission: "Informing our operatives of their success or failure beforehand has a significant detrimental effect on their success rate. Thus, we have never done so, and will not do so at this time."

Follow-up questions about how the Ts could know about the effect of something they've never done will receive responses along the lines of, "That future was not chosen."

When asked why they can't change the past: "We can," "We are," or, "We already have."

When asked why the inspectors weren't provided an important piece of information earlier: "Our bandwidth through time is not infinite. We must prioritize. We see all of time, but through a dusty lens. In the future, the lens becomes less dusty, and we will be able to inform you better."

When asked why the Inspectors were sent on a mission that failed (since the Ts obviously knew the mission would fail), there are two possible answers:

Answer #1: "You have completed something that is yet valuable to us, though you did not know it." (They will most likely go on to explain what was accomplished). "Informing you of the true aim took the chance of ruining the mission."

Answer #2: "The dust is on the lens; we have not told ourselves yet. It is as much a mystery to us now as it is to you. As soon as we inform ourselves, we will inform you."

Mid-Term Goals

When running a game of S.A. it helps to be able to come up with some mid-term goals for the Transcendentals. Their long-term goal is the Desired Future, of course. Their short-term goals are the mission objectives they give to Inspectors (see page 165 for some examples). The middle term, however, is the important part, and sometimes more difficult to come up with. Because this is your game, we're not going to list off a bunch of goals that the Transcendentals have; instead we're going to give you a good way to make up some on your own.

One excellent place to start is your Story Triggers (see page 160). All of these are likely to be important to the Transcendentals, as they can have long-term impact on the future of human civilization. Not all outcomes are equally desirable, of course, but sometimes one has to accept an unfortunate setback in return for greater gains later on.

Other goals can be useful for stringing together several adventures. Anything that you'd use for a "plot arc" within a larger campaign is fair game here. These are most likely to be goals that involve making (or breaking) alliances, stalling for time, or disabling smaller organizations. Perhaps the Transcendentals think that the Darwinians are about to become a major threat and it's time to crush their society for good. Maybe it's time to get on better terms with the Replicants, or even the Union. Perhaps the Skotadi are doing something important that no one knows about, and the Inspectors might be able to find out. These are things that can't be done quickly, but could definitely be made into a set of missions.

You can also work by breaking down the Transcendentals' long-term goals in ways that make sense to you. The method for reaching the Desired Future should be different for every game — how will it happen in your game world? What do the Transcendentals need in place before they can help others reach their level of consciousness? Why are each of the current civilizations so useful or important? Break it down into a step-by-step process.

Mid-term goals are useful because of the tremendous rate at which characters in this game can chew through plot. It's definitely possible that the first time you run a game of Sufficiently Advanced, the players will eat up what you thought would be 2-3 sessions worth of storyline and ask what you brought for dessert. If you have a few mid-term goals mapped out, you'll have a good answer for them.

Finally, if you're really stuck for goals, do what any good GM would do: make it up after the fact. The Transcendentals have pretty inscrutiable motivations; if they say it was really important for that kitten to follow you back to the business office... well, whatever. They must be right; they know the future. You'll be stuck with coming up with the reasons it's all important farther down the line, but at least you know *what* is important, if not *why*.

A Final Story: The Interview

"... so buzz off."
"... No comment."
"... and stick it in your favorite orifice."
"... Shall I reiterate?""

"Er...No. Thank you." I reply, a little nonplussed, as the tall Masquerader turns away. I hadn't really expected him...her?...to give an unguarded response to my question, but I figured it was worth a shot. Only one person so far had stopped to talk about his experiences working in the Patent Office. Wait, here comes another person. I step forward, my recording unit at my shoulder. "Excuse me ma'am. Could I..." She hugs the far wall of the corridor, eyes averted to some "paper"-work, pretending not to notice me.

Did I step in something today? So much for the vaunted openness the Patent Office promised me. Maybe it's time for a break. I've been standing in this hallway of this Office Branch for several hours, and hardly anyone passes down it. Are they avoiding me? No one trusts the Cognitive Union out here. I'm a reporter, damnit! Impartial presentation of the truth is my job, and I enjoy it. Why don't they trust me?

I hear someone coming. I smooth my suit, straighten my tie, and stop short as a large Mechanical turns the corner. It's huge! It nearly brushes the ceiling, and that's a little over three meters from the floor, here; and it's almost half the width of the corridor. It walks bipedally, on legs ending in four-toed, bird-like claws, carrying a torso like a smooth, elongated, rounded lozenge. On the upper torso, between two arms identical to the legs, is a large yellow smiley face on a black background. It pauses momentarily in its gait, (Did it just notice me?) and a large red circle-and-slash fades in over the smiley face. The Mechanical alters its course slightly, to head straight for me.

"Well, well. If it isn't the little Cogwheel every-body's been talking about," he says, as he closes the distance between us. I'm pretty sure it's a "he", now. His voice seems masculine, resounding, sonorous. Like pipe organs in ancient temples, layered under a mellower, lighter, incongruous countertenor. It's evocative, disturbing, like the voice of......lost that train of thought.

"I'd more than half expected you to be gone by now. I'm Seeker," he says, proffering his hand/claw,

his voice seeming to come from his whole being, now that he stands before me. I notice the sigil on his chest is now a yellow face with a horizontal slash for the mouth. I guess he hasn't made up his mind about me, yet.

I take his hand and reply, "I'm Keshan Dafar, an investigative journalist, from the Cognitive Union. Could I ask you some questions? I'm doing a piece on..."

"Yeah, yeah," he interrupts, "Doc Howard filled me in. Besides, everybody's talking about you, re-member. You want to know what it's like to work for the Patent Office. Sure. They all figure you're just go-ing to spin it like we're a bunch of dangerous zealots to please your overlords, but what the hell? If no one talks to you, you'll do that anyway, right?"

"Well, actually, we don't have overlords. And I report the truth, not..."

"Uh, huh," he interrupts, again, crossing his arms and leaning against the wall. Through his arms, I see a flicker of the red circle-slash appear again. "The truth the way you see it. Or the way your mesh interprets it, really. But let's not quibble. Fact is, I've explored Union space several times, and rarely had any trouble from y'all. I, too, wear a mesh, and I don't consider myself a slave to it. I don't hold anything against you, really."

"Okay," I reply, "Then why don't you tell me a little about your experience here? How is the work environment?"

"What's it like working for the Ts, you mean? You're really digging for dirt on them, right?"

"I...well...Of course, our readers will be quite interested in any insights you can offer."

"Uh, huh." He pauses for a moment, and the visible parts of his sigil fluctuate, as though he's considering things with mixed emotion. Perhaps he holds something against the Union, after all. "Alright. I admit, working here can be a little disconcerting. For instance, right now, I'm late for a briefing. But that's okay. When I get there, they won't mind, and I won't have to apologize. They already pretty much know I'm going to be late, and why. But, other than the little oddities that come from dealing with tran-stemporal intelligences, it's a pretty good gig. We get to travel a lot — I was an explorer before getting

hired here, so that's pretty cool for me — and work with lots of people from different cultures. We get a lot of autonomy in how we handle situations, which is great. I've even had assignments like 'Go to this place at this time and wait a little while for something interesting to happen. You'll know what to do.'" He chuckles, an incongruous sound when the laugher's chest doesn't move. I notice that his voice has slowly changed, too. He's lost much of the crashing-wave, booming undertones, and sounds much more human now.

"Don't you find that kind of management, er, demoralizing?"

"Demoralizing?! Hell, no. It's great for morale." He steps away from the wall, now, pacing, talking with his arms and hands, his yellow smiley beaming. "Look, we're out there, looking out for the best interests of an entire network of societies, making sure the wheels stay greased, not the palms, if you know what I mean. Maybe we need to slap some whiz-kid on the wrist who figures out how to bypass replicator interlocks, or maybe we need to put the smack-down on some mastermind who's training an army of these whiz-kids. Who knows what? But we've got to be the ones who make the decisions. Sure, we get ample guidance, but in the end, it's our call. And that's just so liberating, so humane."

"Anyway," he says, becoming less agitated, "I really should get to that briefing, you know. But this has been fun."

"Thank you," I reply. "You've been quite illuminating. I really appreciate your time."

"No problem," he says. "Tell you what. If you're up to it, I'll find you later. I'll buy you a latte and we can talk some more." He heads off, walking briskly down the hallway.

I watch him round the corner at the end of the hall and shake my head. Will I ever understand the people outside the Union? Maybe, but I don't think I'll ever suss out the Mechanicans.

Too Good to be True?

Many people who've read this game feel that the Transcendentals come off as too good to be true. Are they really out for the good of mankind? Couldn't an individual GM decide that they're evil, manipulative machines?

Well, yes, of course. An individual GM can do whatever they like, from minor tweaks to stripping out the system and using it in a setting of their own. That doesn't mean we're going to put a lot of effort into supporting those options. In the canonical S.A. game, the Transcendentals are exactly what they say they are, motivated by what we've laid out here. If you want to change that and pit the characters against a foe who can see the future, it's your can of worms.

It's Not Forever

The Transcendentals intend the Patent Office to be temporary. Exactly how temporary should depend on the individual GM, of course, but *nothing* in this game should be an eternal edifice. The civilizations, societies, and Transcendentals in this game are full-fledged characters, and every piece of writing advice we've ever read says "Kill your darlings."

CHARACTER CREATION

Here's where the mechanics of the game begin; where we start getting into the rules. We'll start with character creation.

Each player in Sufficiently Advanced plays a single character, speaking for him or her (or it) and making important decisions based on that character's personality.

Before you start to make your character, it will help to read through the various civilizations that can be found in the universe (starting on page 10). Every character comes from one of these cultures, and has certain traits that are either inherited or ingrained during childhood. Some people choose to join certain societies as well (see page 58), cross-civilizational groups organized for a particular purpose.

The next place to go is your character's Core Values (starting on the next page). There are very few natural phenomena in the universe that are adequate to stop a fully-enhanced human being. What a person can cause or endure becomes less important than whether he or she chooses to react to it. Most of the conflict in S.A. is driven by other characters, and how your character will react is reflected by Core Value ratings. Core Values are rated on a 1-10 scale, and are described in detail on the next page.

Once you know your character's beliefs and values, the next thing to think about is how he or she fits into the story. What events are likely to happen around your character? Is romance in the future? Are there hidden webs of intrigue? Or does the worst of it simply wash off? These things are represented by Themes, which are described on page 114. Themes are the most powerful tools a player has for driving the story, and we'll be discussing them and their uses in great depth. Each one is rated on a scale of 1-4, though there are ways to temporarily make them more powerful.

Capabilities and Professions are next (on pages 78 and 83, respectively). These describe your character's innate or enhanced abilities, as well as years of training. Each is rated on a scale of 1-10, and each one also comes with points of Reserve attached to it. Capabilities are broader than Professions, but training in a specific area can easily beat raw talent. Capabilities are described on page 78, Professions on page 83, and Reserve on page 88.

Here's a quick checklist for character creation:

1. Choose a Civilization for your character, and optionally, a Society.
2. Note the Core Values you received in step 1. Pick your other Core Values. Most characters have four in total.
3. Pick your Themes, and choose Descriptors for each one you have a ranking in.
4. Based on the level of your Themes, decide on how high you want your Capabilities. You might decide to go back and revise your Themes based on this.
5. Purchase Professions by spending years of your character's life in training.

Other items, such as a name and some background details, can also be useful if you intend to play a fully-realized character rather than just a compilaton of statistics. Some of these things can come out during play, and can even be retroactively created through the use of Themes. Don't be afraid to jump in.

Naming conventions for the various civilizations can be found on page 73. Don't feel restricted to these; people invent new names and borrow from other civilizations all the time.

Some pre-generated characters can be found starting on page 89, in case you want to see some examples of the finished product. There is also a longer list of characters who are complete except for backgrounds and Themes, starting on page 94. Those who are interested in just picking a stereotypical member of a particular civilization might want to look through these.

Core Values

Core Values describe what your character believes in. They prevent others from convincing you of dangerous things, which is important in an age of technology based on social science and psychology. Core Values hold civilizations together, giving them something to rally around and have faith in.

Core Values are most often abstract concepts and causes, such as love, freedom, order, charity, and so forth. More rarely, they can be a person or a place. They are guidelines not only for you as a player, but for your character as well: most characters recognize their own Core Values and will be able to eloquently (or at least stubbornly) defend them. High CV scores make it almost impossible to convince you of things you consider "immoral."

Civilizations with a high number of Core Values are very stable; sometimes overly so. Those with a small number tend to be unstable and fall apart easily. Cross-civilization societies, such as the Hospitalers and Heterolinguists, also give your character a Core Value, replacing one that you would normally choose for yourself.

Your character has four Core Values (unless otherwise noted). Record the core values of your civilization on your character sheet, and then pick two others of your choice. They are rated 0-10, with benchmarks as listed below.

- 0: No connection. You were taught to believe in something, but you don't.
- 2: You will support the rights of others to follow this Core Value, and argue for your own rights.
- 4: You will argue for others' rights, and will organize and suffer jail time for your own.
- 6: You will organize and suffer jail time for others' rights.
- 8: You will die for your own rights and the rights of others.
- 10: Utterly indomitable beliefs. No force can convince you to go against them, no matter how persuasive.

You can choose whatever rating you like — high scores are as much a handicap as an advantage.

Civilization Core Values and Benefits

Civilization	Core Values	Benefits
Masquerade	Anonymity, Identity	Identify anyone you've met
Union	Obedience, Order, and player's choice	Extra CV
Mechanica	Humanity	Machine bodies
Disciples	Worship, Privacy	Stealth 7
Tao	Authenticity, Tradition	+1 Twist per game for Empathy, Romance, or Intrigue
Stardwellers	Freedom, Diversity	Comfort in zero-g, Locality 3
Roamers	Secrecy, Wanderlust	2 Twists per game for Empathy
Independents	Self-Reliance, Teamwork	+1 effectiveness, -1 defense
Replicants	Life, Safety	none (if a player character)
Logicians	Logic, Efficiency	Immune to emotion and the Romance Theme
Stored	Identity, Life	Dataform bodies
Cargo Cults	Ritual, Worship	Practical Technology use at 6
Old-Worlders	Tradition, Simplicity, and player's choice	Extra CV, no low-tech penalties
Spacers	Independence, Diligence	Immune to fear, Spacer 4

When picking your character's personal Core Values (those not determined by his or her civilization), the sky's the limit. People believe in all sorts of things, and you aren't restricted to a fixed list. If you prefer to have a list to draw from, we've provided one below, but you can feel free to make up your own.

Some Sample Core Values

Accountability, Anonymity, Authenticity, Brotherhood, Calm, Carpe Diem, Caution, Charity, Community, Competition, Completeness, Complexity, Concealing Knowledge, Connection, Continuity, Control, Creation, Creativity, Details, Diligence, Discovery, Diversity, Efficiency, Elegance, Entitlement, Excitement, Expansion, Experimentation, Exploration, Expression, Faith, Family, Fellow Officers, Foresight, Freedom, Friendship, Good Breeding, Grand Works, Growing Up Right, Growth, Hierarchy, Home, Honesty, Hospitality, Humanity, Humility, Identity, Immersion, Independence, Individuality, Information, Interconnection, Invention, Knowledge, Law, Life, Logic, My Congregation, My Constituents, My Crew, My Students, My Team, My Town, New Horizons, New Things, Obedience, One Coin One Vote, Order, Peace, Physical Perfection, Pleasure, Power, Privacy, Profit, Property, Protecting Others, Questioning, Rank Has Its Privileges, Reciprocation, Recklessness, Recycling, Responsibility, Ritual, Safety, Sanctity of Mind, Sanity, Secrecy, Security, Serenity, Showmanship, Silence, Simplicity, Solidarity, Stories, Survival of the Fittest, Teamwork, The Body, The Forge Of Battle, The Future, The Horizon, The Law, The Public Good, Tough Luck, Tradition, Travel, Truth, Understanding, Unity, Variety, Wanderlust, Winning, Worship

CVs and Zealotry

High Core Values are typically associated with religious zealots, suicide bombers, and the like. However, this need not be true. People with a Core Value like Charity are not required to live in the gutter after giving all their possessions away, and are certainly under no compulsion to steal from the rich to give to the poor (though they might quietly approve of such things). It is possible to have very strong beliefs and never once become violent because of them. Sadly, the majority of the universe doesn't see it that way.

Naming Conventions

Here's the short, short version of how different civilizations name their children. Many retain names from Old Earth, though myriad variations have slipped in over the years.

Cargo Cults: Any
Disciples: Japanese and Chinese
Independents: Shakespearean
Logicians: Indian
Masquerade: Southern and central Africa
Mechanicans: Model numbers or descriptive names
Old-Worlders: Amish
Replicants: Roman, with ordonymic (pg. 96)
Roamers: Egyptian or Cossack
Spacers: Russian
Stardwellers: Invented and descriptive names
Stored: Italian or Greek
Tao: Depends on their milieu
Union: Hyborean

Dual Citizenship

It is theoretically possible to start the game with your character really and truly belonging to two cultures at once, believing in and drawing strength from both. Certain combinations are unlikely, but few are totally impossible. After all, human beings fill their minds with contradictions all the time.

Characters with dual citizenship should have all the Core Values required by both civilizations, with a nonzero rating in each. They gain the special benefits of both civilizations.

When you choose a Core Value you'll need to have an interpretation of it in mind. You might want to write it down, so that your GM can understand better where your character is coming from, or so you can remember it yourself. Sample CV descriptions can be found at the end of each civilization's writeup (they start on page 10). Different people can interpret the same CV differently; check out the Replicants and Stored for different interpretations of the "Life" CV, for example.

Society Membership

Some characters will have membership in a Society (see page 58) as well as being part of a civilization. To have your character be part of a Society at character creation, simply have one of his or her Core Values be the CV that the Society endorses. All Hospitalers believe in Charity, all Heterolinguists believe in Sanctity of Mind, and so forth. The CV may be rated at any level above zero.

Joining a Society later on requires both a roleplaying component and a game-mechanics component. The roleplaying component simply means making friendly contact with that society — going to a High Society ball and schmoozing, making contact with a Darwinian cell, and so forth. In game terms, characters must have one of their Core Values devoted to the same CV the Society believes in, rated at more than zero.

Some civilizations have CVs that overlap with Society CVs. For instance, the Logicians believe in Efficiency, and so do the Hyperevolutes. Characters from such civilizations can join those Societies quite easily, and they don't lose or waste a Core Value when they do.

It is possible to belong to more than one Society, as long as you have enough Core Values to devote.

Dealing With Abusive Core Values

Some Core Values have a definite potential for abuse. Even those that appear in the game's setting, such as the Masquerade's "Identity" CV, can be used to justify a wide range of behaviors. A CV that protects all of your other CVs from change is a powerful one indeed. However, character-created values can be even harder to deal with.

Let's say that someone comes up with a Core Value of "self-preservation." This is a perfectly reasonable value to have; it could stem from a sense of self-importance, or just general cowardice, but you can certainly see someone having it. It would add its full value against attempt to persuade the character to commit suicide, harm himself or herself, install an unknown Lens, and so forth. However, by the rules, it should also be adding +1 or +2 to every single defensive action the character takes. That's a pretty powerful effect.

Whether this is abusive or not depends on other facets of the character and how he or she is being played. For someone being played as a coward, someone with Stringtech 3 who avoids fights and runs or hides when they start, this is perfectly ok. However, if this character has a Stringtech of 10, and is constantly jumping into dangerous situations and starting gunfights, it's time to have a talk with the player. Core Values are meant to protect characters from the more heinous forms of metatech manipulation. If they're used to provide a blanket bonus to a character's most common actions, there should be some severe drawback (as per the Cargo Cults' Ritual CV).

You can even rule that some Core Values are in direct conflict with each other, and disallow them. This should be rare in the extreme — human beings hold contradictory values all the time. However, if a character with Self-Preservation as a value wants to also have The Glory of Battle, it's hard to make those work together.

Remember that complex actions or philosophies are not suitable Core Values. "War" is a bad choice; that's an action, not an ideal. "Buddhism" is likewise a bad choice (as are almost all religions) because there are too many facets to it. Encourage the players to choose specific aspects of a religion instead of the faith as a whole. The generic "Worship" CV may also be an appropriate pick, though you'll have to work with the player to define exactly where and when it applies.

Twists and Themes

Themes are the bread and butter of this game. They allow players to manipulate the game in ways that are appropriate to their characters, in exchange for suffering setbacks of one kind or another.

Your character is created with a rating in each of the six Themes below (Plot Immunity, Intrigue, Empathy, Magnetism, Comprehension, and Romance). The higher your rating, the more you can accomplish by spending a Twist.

Your total in all your Themes is called your Import, as it measures how important your character is to the plot. Characters with higher Capabilities have lower Import. Use the table below to find out what your total Import is, and then distribute that into the individual Themes.

Import Table

Highest Capability	Import
1-3	9
4-5	8
6-7	7
8-10	5

For instance, a Taoist whose highest score is Metatech 5 would have a total Import of 8. She could then distribute that to Romance 4, Intrigue 2, and Plot Immunity 2. Once chosen, a character's Themes are fixed for the remainder of the game, and only use of Twists can change that.

No Theme can be rated higher than 4. There are level-5 effects available, but they are so powerful that you *must* take a Complication (see below) to achieve them.

In addition to their ratings each Theme must have a Descriptor, which tells when it can be used. A few sample descriptors are listed for each Theme. Twists can only be spent through a Score whose descriptors match what you're trying to do. For instance, the Taoist above might have Plot Immunity (Allies). She could use this to have a particularly tough friend take a bullet for her. She could not use it to shrug off a wound she had already taken. However, the reverse would be true for a Spacer with Plot Immunity (Tough as Nails).

Each game session your character starts with one Twist, which can be spent "through" one of the six Themes. You can get more Twists by taking complications: you describe problems that your character must overcome. Generally, only rough descriptions are necessary. Your GM will fill in the rest. The higher your Import, the less dangerous your Complication will be.

The following section gives a quick once-over of each Theme, telling you what you'll need to create your character. More details and advice for how to use all of this can be found starting on page 114.

Plot Immunity

Plot Immunity is your way of telling the GM that you're not interested in a particular storyline, or that you'd like the current events to be over and done with so you can get back to other parts of the game. Many times the problems you'd take care of with Plot Immunity can be solved by your party anyway, given a little legwork and perhaps some trading favors... but Plot Immunity does it all in a minute of game time instead of an hour. It's just a question of how much you enjoy that particular problem.

Plot Immunity Scores

1. Evade likely off-screen death.
2. Evade minor problems with an obvious solution. Evade certain off-screen death.
3. Evade major problems that have an obvious solution, or minor one without any obvious solution. Evade likely on-screen death.
4. Evade major problems with no clear solution. Evade certain on-screen death.
5. Have events off-screen make the current catastrophe simply go away. Note that for dealing with a single problem, this is a great way to utterly write yourself out of the plot and have no fun. However, it's a good way to handle multiple crises at once. Just step off-screen.

The player must state any "obvious solutions," and the GM must agree with them. A note to GMs: players without Plot Immunity should *not* be treated as if they have a "kick me" sign on their back.

Descriptors:

Tough as Nails, Allies, Badass, Overlooked, Resilient, Invisible, Too Insane, Support Network, Family Ties, Deus Ex Machina, Redshirt Sacrifice, Overconfident Foes

Intrigue

Perhaps the most dangerous Theme, Intrigue embroils your character in politics, intelligence work, and all manner of unethical activities. Admittedly, there are such things as clean politics, and spying for a good cause... but in reality, such things are so rare as to be unheard-of. Each use of Intrigue pulls your character farther and farther into webs of deception and subterfuge, and as they say, once you're in you can never really get out. Buying Intrigue for your character is a sign to the GM that you're interested in cloak-and-dagger stories, with vast conspiracies where layers of truth and falsehood become almost indistinguishable.

Intrigue Scores

1. Gain knowledge which, while not exactly secret, is not publicly known either.
2. Obtain secret information.
3. Obtain highly classified and protected information. Have a few low-placed spies.
4. Have many spies in areas of low and middle importance. Obtain information whose very existence is classified.
5. Secretly direct a major civilization's spy network to your own aims.

Descriptors:

Eavesdropper, Pillow Talk, Digital, Political, Instant Insider, Stumble Upon, Psychohistorical, Spy, Government Newsfeed

Empathy

People trust you and confide in you. Empathy differs from Romance and Intrigue mostly in flavor, rather than in effect. All three connect you with other characters in the game, making them willing to help you or talk to you. Empathy does it through personal insight and sharing feelings. Buying Empathy tells the GM that you want to have NPCs that you can really connect with one-on-on, either for friendship or so you can exploit them.

Empathy Scores

1. Gain an unimportant NPC as a friend. Hear gossip of varying veracity.
2. Help people through emotional trauma.
3. Befriend an important NPC. Hear highly reliable gossip.
4. Befriend major foes or their henchmen.
5. Get someone to start spilling their deepest secrets to you for no good reason.

Descriptors:

Reluctant, Bad News, Matters of Love, Trusting Fools, Shoulder to Cry On, Good News, Day-to-Day, Problems, Digital

Magnetism

People flock to your banner, whether it's ideological, religious, political, or other. Those around you want to be seen with you, or to do things for you. This is the Theme of fame and adulation. Buying this Theme tells the GM that your character is going to be the center of attention.

Magnetism Scores

1. Attract the immediate attention of those around you.
2. Impress groups of people. Gain an unimportant bystander as a devoted admirer.
3. Build a strong but not fanatical following.
4. Attract long-term attention and celebrity. Attract the personal attention of those in high office, and impress them.
5. Attract fanatical attention from thousands locally, or millions across the universe. Gain a high official as a devoted admirer.

Descriptors:

Fame, Friendship, Political, Ideological, Physical, Convincing, Memetic, Cult, Pheromonic, Religious, Bullshit Artist, specific cultures or kinds of people

Comprehension

You have a deep understanding of a particular phenomenon, whether it's part of the human mind or a branch of science. Buying this Theme might tell the GM that you like solving riddles, or it might say that your character will do that for you. Either way, they're coming at you.

Comprehension Scores

1. Learn how to make something perform one of its basic functions. Solve annoying riddles or puzzles.
2. Learn the basic principles on which something is based. Guess a person's Core Values correctly (but not their rankings).
3. Learn all of a device's functions as if you had the user's manual. Correctly guess events in a person's past.
4. Invent new uses for an existing device. See the cause and motivation for someone's behavior.
5. Predict a person's behavior accurately. Break a code or cipher by instinct.

Descriptors:

Intuitive, Logical, Emotional, Forced Monologuing, Explanations Ex Machina, Methods Behind the Madness, Invention, Religious, specific branches of technology, specific profession

Romance

You have a knack for falling in love, and other people fall in love with you easily. It should be noted that the intended uses of the Romance Theme are often difficult to distinguish from romantic Complications! Buying this Theme will tell the GM that you want to be involved in stories of romance, love, and passionate relationships.

Romance Scores

1. Flirt successfully. Reject unwanted romantic advances.
2. Play matchmaker successfully. Find a one-night stand. Make a unimportant NPC fall in love with you.
3. Start a good long-term relationship. Stun someone with your mere presence. Ruin someone's relationship.
4. Find someone worth falling in love with. Get one of the major villains to fall in love with you.
5. Get someone to fall madly in love with you after merely catching your eyes from across the room.

Descriptors:

Long-term, Short-term, Hopeless, Unexpected, Tragic, Legendary, Sexual, One-Night Stands, Devoted, Manipulative, Loving, specific types of people

More on Themes

The Game Mechanics chapter has more detailed descriptions of each Theme, starting on page 114. It also gives advice for GMs trying to adjudicate Complications and deal with a rapidly shifting storyline.

Capabilities

Your character has five Capability scores, each based on one type of technology. These describe your inherited abilities, technological implants, and generalized training. This section describes your Capabilities and gives examples of what you can do with a certain score.

When making your character you may choose any Capabilities you like, as long as you fall inside your civilization's allowed range (see the chart below). You don't need to spend points or roll dice to figure out your character's capabilities; just choose a number in that range.

The higher your strongest Capability is, the lower your total Import will be, and the more difficult it will be to garner Twists. See page 114 for more information on this, and page 170 for some discussion of why Capabilities and Import are balanced in this way. Remember that only the highest Capability matters.

During character creation it is worthwhile to note that level 5 is a "breakpoint" for many Capabilities, offering a significant gain over level 4.

Normal, unenhanced humans will have all their Capabilities between 1 and 3. A Capability of 10 is the highest that is currently possible, but the future will make higher scores possible.

Personal technology is often acquired in a somewhat sporadic manner. There is no guarantee that a particular supporting character will have all of the enhancements listed for a certain level of Capability. For the player characters, however, you can assume that they've filled out their list of enhancements completely.

Selling Out

Your Capabilities *can* increase beyond the levels imposed by your Civilization. You can do this at character creation, or through Twist use, or simply by purchasing the appropriate enhancements with money. If you do, this, however, you've essentially sold your character's heritage for power. Your total Import decreases by one, and always stays one lower than it would normally be. You can choose which Theme decreases.

Civilization Capability Table

Civilization	Bio	Cog	Meta	Nano	String
Masquerade	1–9	1–6	1–8	1–8	1–6
Union	2–7	2–8	1–10	1–8	1–8
Mechanica	1–4	2–5	1–4	4–8	6–10
Disciples	1–5	1–5	1–4	1–6	1–5
Tao	1–8	2–8	4–10	2–8	1–4
Stardwellers	1–10	1–8	1–8	2–10	1–8
Roamers	1–6	2–6	2–8	1–8	1–4
Independents	1–5	1–6	1–6	1–6	1–9
Replicants	1–9	1–7	1–5	1–7	1–8
Logicians	1–7	2–6	1–2	1–8	1–6
Stored	n/a	6–10	2–8	1–6	1–6
Cargo Cults	1–5	1–4	1–4	1–6	1–6
Old-Worlders	1–3	1–3	1–3	1–3	1–3
Spacers	2–7	1–6	1–6	2–7	1–6

Biotech

Derived from biology, biotech relates to living creatures and the systems that bind them together. Your character's Biotech scores represents fitness, strength, endurance, and internal energy stores.
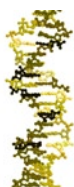
Biotech is unique in that it's the only the Capability that fully passes on to your descendents. While certain items might require implantation (e.g. a pathogenesis organ, page 144), the vast majority of Biotech is written into your character's DNA before birth. High-Biotech civilizations like the Stardwellers know effective ways to make major changes after conception — see page 138 for genetic modification techniques.

1. Sickly and weak
2. Regular person in good health
3. Athlete, contortionist, dancer
4. Yogi. Turn off your senses, hold your breath for 10 minutes.
5. Regenerate nerves and muscles. Lift half a ton. Run a marathon without preparation. Biofeedback.
6. Regenerate your bones and limbs, hold your breath for an hour, lift a ton.
7. Skydive without a parachute, take only bruises from small bullets.
8. Regenerate eyes and ears, stay awake for a month without physical problems. Generate certain virii and microbes internally.
9. Take a handgun shot to the body without severe injury. Purge any poison from your body. Ignore radiation sickness.
10. Breathe water with your lungs, lift three tons.

Biofeedback becomes available at Biotech 5, giving characters total control over the systems of their body. Anyone can control their breathing; this level of sensitivity lets a character know exactly what is happening with every single organ, and regulate it if need be. Such characters will know immediately if they catch a disease, and what areas it affects. They can also enter a state of hybernation or suspended animation, seeming dead to those with Nanotech scores of 4 or lower.

Your character's expected lifespan can be found on the table below. This is important primarily because your Professions are purchased by aging your character. The Medical Care column uses the maximum Biotech of your character's home civilization. To avoid possible complications from aging, you should keep your character's age less than twenty years below the maximum. Beyond that, one's Biotech, Cognitech, and Nanotech scores tend to drop.

For example, a Stardweller (max biotech 10) with Biotech 4 will live about 320 years, while one with Biotech 8 will live about 500. Someone from the Tao (max biotech 8) with the same scores would live 220 or 400 years, respectively. The Stored use their Cognitech instead of Biotech.

Lifespan Table

Biotech	Natural Lifespan	Medical Care
1	50	+1
2	70	+5
3	100	+10
4	120	+20
5	160	+40
6	200	+60
7	250	+80
8	300	+100
9	400	+150
10	500	+200

Characters with Biotech 8+ can participate in Biowarfare conflicts without the need for a biology laboratory. Their own bodies will produce the necessary agents. They can also participate in Biotech-oriented Research Blitz conflicts without the need for a laboratory, though they do take a -2 penalty for not having any research assistants.

Cognitech

The study of cognitive science has given birth to cognitech: techniques and devices that influence one's own mind. Cognitech describes your character's logical ability, quality of thought, memory, and speed of learning.

Playing a character with a high Cognitech score can be challenging. You will, to a certain extent, want to rely on the dice rather than your own mental capabilities as a player. It's perfectly reasonable to say "I want to come up with a plan to trap our opponents" and then roll the dice, rather than trying to come up with a "foolproof" plan on your own.

1 A dull, uninventive, slow mind
2 The average human mind, unaided
3 Rocket scientist
4 Savants in their field of expertise, perfectly clear minds. Learn in 75% the normal time, take mental and physical actions simultaneously.
5 Infinite patience, access to Lenses. This level and above must use some variety of nanowire mesh (see page 70). Constant infosphere access.
6 Perfect memory, review old perceptions for new details, learn in half the normal time
7 Alter personal time sense up to 10x, take two mental actions at once.
8 Learn in 25% the normal time. Never hesitate or freeze up.
9 Memorize multiple DNA sequences, break 20th century encryption in your head
10 Calculate wormhole coordinates in your head, alter your personal time sense up to 100x

Meshes and Lenses becomes available at Cognitech 5. More on these revolutionary devices can be found in the Technology chapter on page 143.

Metatech

Social science is a hard science in this day and age, as strongly grounded in mathematics as astronomy or biology. Its techniques, devices, and methods are referred to as Metatechnology. Your character's Metatech score represents charisma, charm, savvy, force of will, and perfect inflection.

Unlike the other attributes, it is almost pointless to list what you can do with a particular Metatech rating. Your effectiveness depends on the scores of those you interact with. Below we describe what you can do with certain *differences* in Metatech scores. Subtract your target's Metatech from yours, and look at the chart below.

This table assumes that whomever you're talking to starts with no real reason to go along with what you're saying. If they agree with you already, then obviously you don't need to convince them.

-2 You're an ineffective communicator. People only go along with what you say if you actually make good point, and they stay long enough to listen.
-1 Get someone to like you after a year
±0 Normal interpersonal interactions. Discern someone's Core Values after a week of interacting with them.
+1 Befriend someone in a week. Talk your way into a secure area after a month of effort.
+2 Pass a law by normal processes in a month. Instantly get someone to loan you a small amount of money.
+3 Befriend someone in an hour. Instantly convince the average soldier to take mercy on you. Discern someone's Core Values after just ten minutes of talking to them.
+4 Brainwash someone in a week, given proper tools. Instantly convince someone to hear you out on a particular topic.
+5 Break up a happy marriage in an hour.
+6 Talk your way out of jail in a day. Instantly convince your nemesis to take mercy on you. Discern someone's Core Values by observing their dress, bearing, and gait.
+7 Convince someone to commit suicide in a week. Instantly convince someone you're attacking to stand there and take it.

Characters

To reduce the time required, move down the chart. Each step speeds things up with this progression: year ➔ month ➔ week ➔ day ➔ hour ➔ 10 minutes ➔ minutes ➔ 10 seconds. ("Instantly" on the table above means in 10 seconds or less.) If you have a lower score, it makes you less convincing, and you must move up the chart and take more time to achieve the same goal.

Core Values are key to resisting Metatech influences. Even those with a rock-bottom Metatech score can resist people who tell them to betray what they believe in. Add the appropriate Core Value to your Metatech score when resisting influences that go directly against that CV.

To discern someone else's Core Values without error requires Metatech 5 or greater. It only works if your Metatech is no lower than your target's. Targets whose Metatech is two or more points above yours can feed you false CVs, making you believe that they care about different things.

Inexact Capabilities

Capabilities are a tricky thing to pin down. Circumstances, assistance, the use of Reserve, and more can all influence just how effective a character is. The tables in this section are intended as a rough guide for the GM, not the be-all and end-all of what a particular character is capable of. As in every game, no matter how detailed, there will be some times when a player wants her character to do something that doesn't quite appear on these tables. Don't spend all day deliberating — just take your best guess and get on with the game.

Nanotech

Nanotechnology is the application of physics, engineering, and chemistry to objects built on extremely small scales: a few billionths of a meter. Your character's personal Nanotech score represents precision, perception, hand-eye coordination, and stealth.
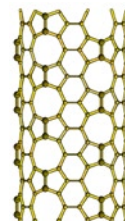
Nanotech allows for very detailed examination of an object or area — down to the microscopic level at Nanotech 5, or the molecular level at Nanotech 7. However, such examination is not fast, nor is it automatic. Scrutinizing a crime scene ten feet across can take hours at the microscopic level, and days or even weeks at the molecular level. Once you find what you're looking for (say, a skin flake that might be from the criminal), there's some more waiting to do before you can complete the DNA scan.

Knowing what you're looking for is a great advantage, as are high Cognitech scores, Familiars (see page 139), and an investigation-related Profession (such as Police).

1   A clumsy person, or one not paying attention to their surroundings

2   The average person paying careful attention

3   A surgeon or Secret Service agent

4   Sherlock Holmes, or the precision of most 20th century machines

5   Add IR, UV, and radio senses, microscopic vision, dermal microbots, and perfect proprioception

6   Add electric and magnetic field sensors, telescopic vision, a quantum-dot laser array, and the ability to see and hear with your whole body

7   Add the ability to see microwaves, X-rays, and gamma rays, a built-in spectrometer, nanowire "feelers" and manipulators in your fingers, and a DNA sequencer.

8   Add a gravity wave sensor, and an atomic force microscope in the fingers

9   Add a dark-matter sensor, nanite fabrication unit, and airflow calmers

10 You can identify starships in orbit. Your touch has nanometer precision.

Characters with a Nanotech score of 5 or greater can "scan" others to determine their Capabilities to within a point or two. This only works for Biotech, Nanotech, and Stringtech, and only if your Nanotech is not lower than your target's. Those whose Nanotech outstrips yours by two or more points can feed you false values, pretending to have higher or lower Capabilities than they truly do. People at lower Capabilities can do this as well, but only to determine someone's Biotech score, and only in the 1-3 range. You can think of this as "sizing someone up," looking for muscle tone and general health.

Characters with Nanotech 7+ can run a Manhunt conflict without suffering a penalty for being in the conflict alone. Characters with Nanotech 9+ can participate in Nanowarfare conflicts without the need for a nanotech research lab. Their own implants will produce the necessary microbots.

Stringtech

Based on string theory (a contender for the "ultimate theory" of physics), stringtech applies physical forces to the world with varying degrees of power and sophistication. Your character's Stringtech represents raw physical power, both offensive and defensive, provided by devices built into your body. You can apply force equivalent to your own Stringtech score, and (with countermeasures active), avoid injury from forces less than your own score.

Characters can choose, if they so desire, to have only the defensive aspect of Stringtech. There is no particular gameplay advantage to this, but if others scan you with Nanotech, you can assure them truthfully that you have no concealed weapons.

Some regions prohibit high Stringtech ratings for legal and safety reasons, the assumption being that someone who built a powerful weapon into themselves didn't do it just for home defense. This is usually a fair assumption. For this reason, characters may "peace bond" their Stringtech, making it difficult to restart (takes one minute), and other characters with level 5 or better Nanotech will be able to verify this. Patent officers often have legal status, and thus generally have the equivalent of a concealed weapons license in most civilizations, so this usually isn't necessary.

Many Stringtech weapons have various descriptors attached (see page 132) that come into play during combat. The chart below indicates not only the rough amount of force your character can bring to bear, but also when certain descriptors typically become available. Characters with built-in weapons and a Stringtech below 5 have weapons without any descriptors. After Stringtech 5, any number of available descriptors may be used at once.

1. Fists, kicks, brass knuckles. All countermeasures have the Energy-Transparent descriptor at this stage.
2. Knives, two-by-fours, carpentry hammers
3. Trained martial artists, small handguns, sharp weapons with leverage (e.g. swords, axes)
4. Rifles, large handguns, tasers, mild explosives (e.g. grenades), 20th century riot gear.
5. Tank guns, high explosives, high-power lasers, railguns, nanoweave greatcoats. Near-c and Energy descriptors available. Countermeasures stop having the Energy-Transparent descriptor.
6. Conventional bombs, hydrofluoric acid, compression beams, tank armor
7. Dissociation beams, type I nanophages. Supersymmetric descriptor available.
8. Lightning strikes, the surface of the sun, fuel-air explosions, decay-induction fields
9. Inversion beams, nuclear blasts, type II nanophages
10. Core of the sun, fission-fusion beam, vortex sinks

See page 132 for details on all descriptors.

Characters with a Stringtech score of 5 or higher can participate in Open Warfare conflicts as if they were an army of a thousand people. Their opponents always receive the +3 bonus for outnumbering the character badly.

Characters with Stringtech 8 or higher always inflict an extra point of Reserve damage when their attacks are successful. This typically represents a wide-area attack or broad-spectrum weapon, both of which are difficult to counteract.

Professions

All characters have one or more Professions. Each Profession allows your character to do a particular job, and indicates that you've been employed in this capacity in the past.

A Profession represents a narrower focus than a Capability. Cognitech, for example, covers nearly everything to do with the brain — careful thought, creativity, quick response, problem-solving, memory, and more. Professions instead deal with a more specific area of human ability or knowledge. Professions like Engineer, Explorer, and Finance all draw heavily on Cognitech, but they put its raw power to use in very different ways.

Despite their narrowness, all the Professions include *all* of the skills necessary to do them well. For instance, the Crisis Control profession includes firefighting, riot control, paramedic, and nanophage response training, as well as the ability to remain calm under fire and react quickly to danger. The Artist profession includes not only the ability to create art, but skill at incorporating memetic techniques in your work, presenting it for sale, publicizing your work, and handling your finances.

If your character has only ever worked in a single industry or field, you probably only need one Profession. However, it's not uncommon for characters to have half a dozen Professions. Many people work multiple jobs as they get older. Locality, in particular, will be a very common Profession — everyone starts with it, and all those who've traveled and worked outside their home civilization will have some degree of Locality for their host civilization.

Professions are rated on a 1-10 scale. The higher your rating, the more years you've spent training, practicing, working, and occasionally teaching your Profession. If you ever wonder, "Exactly how good is someone with Medical 6?", the answer can be found on the table to the right: they're a doctor with 56 years of experience.

Advancing in a Profession only takes time. There is no other cost to your character. This means that your Professions set a minimum age for your character. You begin at 10 years old, and add the years required to learn all of your Professions.

The table below shows how long you have to practice (in total) to attain a particular level in a profession.

Profession Learning Time

Level	Total Years
1	1
2	4
3	10
4	20
5	35
6	56
7	84
8	120
9	165
10	220

High Cognitech scores allow you to learn things more quickly. Having a Cognitech score of 4 or 5 reduces the time required by 25%, Cognitech 6-7 reduces it by 50%, and Cognitech 8 or higher reduces it by 75%. As an example, someone with a Cognitech score of 5 can learn Athlete 6 in 42 years, instead of the normal 56 years. Characters like the Stored, with very high Cognitech scores and long lifespans, will often pick up a dozen Professions.

The Locality profession is special. You can learn Locality professions while learning other Professions, so unless you learn a great number of Localities, they will not increase your character's starting age.

Free Professions

All characters start with the Locality profession for their home region at level 5. They also have basic literacy and mathematics skills, and a minimum technological competency (unless they're an Old-Worlder). All characters start out being 10 years old before adding on the time spent gaining Professions.

Math nerds take note: the time required for Professions is the third diagonal on Pascal's Triangle.

Special Situations

Concentrations

Some Professions require concentration in a specific area. Artist and Engineer are good examples. Sculptors can't necessarily write poetry, nor can psychohistorians build bridges. Treat these concentrations as completely different Professions.

Specialized Tasks

There are some things that untrained people just can't do. Each Profession gives some examples of specialized tasks. You can't even attempt a specialized task unless you have the right Profession. You still roll both Profession and Capability, but your total roll is limited to your Profession's maximum result. Competence lenses *do* give characters the ability to do specialized tasks, because they give you an effective rating in their Profession.

Relevant Experience

If you have a Profession that's closely related to another one you want to use, you can substitute your Profession by spending a point of Reserve. An example would be holding a press conference using Political instead of Media, or using Police instead of Legal to understand the implications of a new law. You still can't do specialized tasks.

No Experience

To use a Profession you don't have, or a different concentration within the same Profession, you must spend a point of Reserve and take a -2 penalty to your roll. You can't attempt any specialized tasks this way.

No Tech

All Professions are technology-dependent, even apparently simple ones like Farmer. Characters who find themselves in a low-tech environment (Tech levels below 3) can't use Reserve to boost their rolls, though they can still use it to re-roll. The Old-Worlder civilization benefit removes this penalty.

Profession List

The professions below each list the Capability most commonly associated with them. The GM may agree that a different Capability is more important under certain circumstances. For instance, Athletes typically access Biotech to play their sport, but use Metatech during contract negotiations. Policemen would use Stringtech rather than Nanotech when involved in a gunfight. Professions are intended to be pretty broad, and there are often many different ways to employ them.

Artist (two specific arts) {Metatech}

Artist concentrations include playing an instrument, novel writing, sculpture, singing, dancing, painting, infosphere design, and any other sort of aesthetic endeavour. Since most artists have more than a single talent, those who pick the Artist Profession can choose two specialties, such as singing and playing the guitar.

Good artists will also know how best to arrange and sell their wares, incorporate memetic techniques, critique the works of others, and have good networking skills.

All tasks for this Profession are considered highly specialized. Someone without any levels in this Profession is stuck drawing stick figures.

Athlete (specific sport) {Biotech}

Good athletes can not only play their sport of choice, they can promote themselves, work up crowds, and analyze other teams' strategies.

There are two specialized tasks for Athletes: coaching, and recalling obscure or rarely-used rules such as baseball's infield fly rule.

Missing Professions

Need a Profession that's not here? Make it up! As long as it doesn't completely subsume two or more existing Professions, you can assume that just about any job in the world would be appropriate to put on your character sheet. If you want a Profession that *does* do everything that two other Professions do (warrior-poet, perhaps?), you should either take both of those, or perhaps work out a Society with your GM that could have access to that Profession as a benefit.

Courtesan {Metatech}

Courtesan is rarely a character's only Profession. It's the art of attracting people of your preferred gender(s), having a good time out on the town with them, and perhaps taking them home for some snuggling. Many people pick up a point or two of Courtesan, but only prostitutes and "escorts" do it for a living.

There are no specialized tasks for Courtesans that we're allowed to put in print.

Criminal {Metatech}

Criminals know how to break the incredibly effective security measures found in the lower-technology civilizations, and how to run numbers or confidence scams that circumvent them in the high-tech civilizations. They know other criminals, can critique law-enforcement and security methods, and can sneak around to evade capture.

Almost all Criminal tasks are specialized. Running a simple scam like three-card monte is not, but such things are unlikely to fool anyone in this age.

Special Note: This Profession is only available at character creation to those who belong to the Organized Crime Society. Others must purchase it during the game, through trial and error (imprisonment).

Crisis Control {Nanotech}

Crisis Control includes firefighting, riot control, paramedic, and nanophage response training, as well as the ability to remain calm under fire and react quickly to danger. Crisis Control specialists are essential in any city, and can easily find work.

Responding to any sort of life-threatening event is a specialized task. In other words, if you really *need* Crisis Control, you'd better have it.

Engineer (specific tech) {Cognitech}

Concentrations for this Profession are the five major technologies: Biotech, Cognitech, Metatech, Nanotech, and Stringtech.

Engineers do practical things with their technology of choice. All engineers can create and critique the designs for devices or procedures that fall under their concentration. Biotech engineers make living organisms or apply them to a given problem. Cognitech engineers make Lenses. Metatech engineers are active psychohistorians or culture designers. Nanotech engineers work with construction, from bridges to nanophages. Stringtech engineers make weapons, power plants, and starships.

All tasks for this Profession are considered specialized.

Explorer {Cognitech}

You have some expertise in dealing with new planets. You can determine whether the world's conditions, flora, and fauna are dangerous to human life. You have a good eye for placing settlements, are experienced with global positioning systems, and know basic surveying and orienteering techniques. You can do most of this without an infosphere in place, and suffer no low-tech penalties for operating without one. You still take such penalties if you are bereft of your other tools.

Orienteering (finding your way in a wilderness without an infosphere) can be performed untrained. All other tasks are specialized.

Farmer {Cognitech}

This Profession covers everything you need to live off the land: when to plant and harvest, how to interpret (or make) weather predictions, how to sell your crops to the public or a distributor, how to handle livestock, irrigation and hydroponics techniques, and a basic understanding of genetic engineering.

All tasks for this Profession are considered specialized, except for basic planting and harvesting.

Financial {Cognitech}

You can buy and sell goods, to the public or to distributors. You can make reliable predictions of the stock markets, use and resist memetic sales techniques, create complex business plans, and ensure that your own company is properly run. You have a good head for administration.

Only market prediction and business planning are specialized tasks.

Legal {Cognitech}

Despite the fresh start the Diaspora gave, many civilizations' legal systems are exceptionally complicated. You have every law and its interpretation at your fingertips, and can accurately guess whether new actions would be considered legal. You can also argue your case in court, or draft new laws for a specific effect.

In civilizations with infospheres, only courtroom argumentation (if it still exists) is a specialized task. In other locales, nearly the entire profession is considered specialized. Most Old-Worlder settlements do not have this Profession.

Locality (specific civilization) {Metatech}

You must concentrate in a particular Civilization when choosing this Profession.

This Profession represents familiarity with a civilization, its subcultures, languages, beliefs, geography, politics, well-known laws, and more. You can understand natives of your chosen civilization without translation.

All tasks for this Profession are considered specialized. All characters receive this Profession for their home civilization at level 5. Some characters will increase it as they grow older; others will be content with the areas and people they know.

Media {Metatech}

Media specialists can put together advertising campaigns, do some minor writing and editing work, spread or squash rumors, hold press conferences, create effective memetic devices, and generally play the infosphere like an instrument. This Profession also covers investigative reporting and some general information gathering.

Spreading credible rumors and creating memetic devices are specialized tasks.

Medical {Cognitech}

Medical professionals range from nurses to surgeons to general practitioners to paramedics. Even specialists in cybernetics and symbiotics would use this Profession. Medical research falls under the Researcher (Biotech) profession.

Any Medical task beyond stopping someone from bleeding or delivering CPR is considered specialized.

Outdoorsman {Biotech}

To survive outdoors, with nothing but a tent and some rations, requires experience that most people in the modern age simply don't have. You can hike, swim, scale cliffs, spelunk, kayak, hunt your own food, and generally make your way across the wilderness.

With access to modern technology, any task from this Profession can be considered non-specialized. Without it, consider any task more complex than hiking to be specialized. As with most low-tech penalties, this does not apply to Old-Worlders.

Police {Nanotech}

This Profession covers all aspects of law enforcement: investigation, surveillance, forensics, shaking down informants, keeping an angry crowd from rioting, subduing dangerous criminals, and more. Some legal knowledge is included, especially in the areas of human rights and criminal rights.

All Police tasks are specialized, except for combat and some commonly-known legal matters.

Political {Metatech}

Politicians know how to work a crowd, get legislation passed, lobby for changes in laws, cut through red tape (or snare others in it), recognize psychohistorical manipulation, and perhaps engage in some themselves. They can behave properly in high society, negotiate treaties, and write legislation.

Most Political tasks are considered specialized, not necessarily because of a need for specific information or training, but because only an insider gets anything done.

Programmer {Cognitech}

Programmers write and update the code that runs everything in the universe outside of the Old World. They also know how to make programs easier to use, upload or present their programs for sale, and understand data encryption.

Most tasks in this Profession are specialized. Those with Meshes are an exception; they can use their computer interface to create very simple programs with only a few logical steps.

Religious {Metatech}

Religious figures know their doctrine, and often the doctrine of other religions as well. They can communicate effectively to large groups, and know how to recruit new members. They are familiar with memetic techniques and know how to recognize them.

The memetic aspects of this Profession, and deeper aspects of the religious doctrine, are considered specialized tasks.

Researcher (specific tech) {Cognitech}

Concentrations for this Profession are the five major technologies: Biotech, Cognitech, Metatech, Nanotech, and Stringtech.

Researchers not only pull on existing information, they can create reasonable hypotheses and the experiments needed to test them. They can also contact other researchers in their field and they can inspect others' theories for flaws.

Looking up existing information is not a specialized task; all other tasks are.

Soldier {Stringtech}

Soldiers can not only shoot accurately and keep their head in battle, they have a working knowledge of tactics and strategy, can deploy countermeasures for the best effect, can recognize existing strategies and the flaws inherent in them, and can endure significant physical trauma.

Merely shooting a gun or being in a fight is not a specialized task. Keeping one's cool or organizing a strategy are.

Spacer {Nanotech}

Spacers can maneuver in zero-g, operate spaceships, and keep their cool during emergencies such as fire and oxygen leaks. Those with this Profession also have the know-how to use their other Professions in zero-gravity situations. Stardwellers do not need this Profession to operate in zero-g, but they still need it for other purposes.

All Spacer tasks are specialized.

Spy {Metatech}

Spies can analyze and prepare reports, sneak around unnoticed, disguise themselves, conduct surveillance, and infiltrate closed organizations.

All elements of this Profession are considered specialized.

Teacher {Metatech}

Teachers instruct others in the use of a particular Profession (or, occasionally, a Capability). Modern teaching methods are relatively general, so one need not specialize within this Profession.

There are no specialized tasks for this Profession, though one should remember that teaching without this Profession costs a point of Reserve each time and can be very draining.

Reserve

Each Profession and Capability has a Reserve rating associated with it. Capability Reserve is equal to the Capability's rating. For instance, a Nanotech rating of 6 also gives you 6 points of Nanotech Reserve. A Profession's Reserve rating is equal to *twice* the rating of the Profession. For instance, a rating of 4 in the Spy profession gives you 8 points of Spy Reserve.

Reserve allows you to push your limits. See page 100 for more on spending Reserve, and page 83 for some specific situations related to Professions that can require its use.

Profession Reserve is restored completely each morning after your character eats and sleeps, unless you're in a long-term conflict (see sidebar). All you really need is some decent rest.

Capability Reserve comes back to a maximum level of 5 with a good meal and a night of rest. However, characters with high Capabilities will find that ordinary rest is not enough for them. To return their Reserves to their full ratings requires something extra.

Biotech: Your character's body doesn't run at full effectiveness on regular food. You need specially made high-efficiency food, which can be found in any civilization whose maximum Biotech is 6 or higher. Every day that you eat this food your Biotech reserve returns fully over the following night.

Cognitech: Your character's dreams are significantly more complex than normal, and you remember them with greater accuracy. To avoid being preoccupied with them during the day, you must upload them to a rêvetech service on the infosphere. The memories will be returned to you in a more manageable format. This service is cheap, but requires infosphere access (normally not a problem). Without this service, you effectively spend the extra points of reserve you would have gotten back worrying about your dreams.

Metatech: To avoid seeing everyone as nothing more than a set of social patterns to manipulate (which both ruins your effectiveness and alienates your friends) you need some friendly one-on-one interaction for about an hour. It's simple, but it's not always easy to find if you're a professional diplomat with a packed schedule. A standard tactic in hostile negotiations is to make sure that you can find time to do this and your opponent cannot.

Nanotech: Nanotech is the exception to the rule. Its reserve fills completely as long as you give your microbots and sensors an hour to rest and self-repair. You can typically do this while you sleep. Your Nanotech rating drops to 3 for this time, so if you have reason to suspect a nighttime ambush, you may wish to have another high-Nanotech character watch you during this time.

Stringtech: You need electricity, plain and simple. Plug into a wall jack for ten minutes per point of Reserve, and the capacitors built into your bones will store the energy for you. All of your stringtech implants are offline during this time, reducing you to Stringtech 3 (though you can unplug and be ready in about 10 seconds). Any civilization with a Stringtech rating of 5 or higher will have the right type of current available. In lower-tech societies you may need to arrange to plug directly into an electrical substation. Solar cells just aren't enough.

Reserve in Extended Conflicts

During an extended conflict (see page 88), spending and recovering Reserve becomes problematic. If the timescale for your conflict is more than one day, and you wish to spend your *personal* reserve on that conflict, you *must* spend the declared amount every day of that timeslice. You still regain Reserve normally; you just spend some of it right away. If you don't or can't spend that Reserve, then you have to make your rolls for the long-term conflict without the Reserve. Missing even one day can be ruinous.

If you are spending a civilization's Reserve rather than your own (perhaps you are in a position of authority?), that Reserve does not come back until the conflict is over and one additional timeslice has passed. For instance, a civilization engaged in a cold war will likely find its Finance Reserve depleted for a year afterwards.

Sample Characters

ere are some sample characters for use in your games. The first few are fleshed out, with plot hooks and Themes included, for use as pregenerated main characters. The end of the chapter has several dozen "stat blocks," as it were, for the GM to use as supporting characters.

Wang Yung-tze

Civilization: Disciples of the Void
Society: Hyperevolutes
Core Values: Efficiency 2, Worship 5, Privacy 7, Discovery 4
Themes: Plot Immunity (easily overlooked) 3, Intrigue (eavesdropper) 2, Empathy (reluctant) 3.
Capabilities: Biotech 5, Cognitech 5, Metatech 3, Nanotech 5, Stringtech 2
Professions: Crisis Control 2, Locality (Disciples) 5, Religious 4, Programmer 2, Locality (Replicant) 2, total age: 38 years (expected lifespan 200 years)
Special Benefits: Stealth 7, maximum Biotech and Cognitech 6

Notes

Wang's real name is not spoken; it's signed in Disciple sign language. He is a Hyperevolute because his grandparents were; while he believes in Efficiency, he won't be sacrificing anything major for it. Though most people naturally ignore his meek presence, others seek him out to talk to him about their problems and their lives. He doesn't really want to hear all that, but is too polite to say anything about it, and often ends up giving them some advice just so they'll be quiet. Unlike most Disciple pilgrims, he went to the Universe of Noise because he wanted to. Wang is eternally curious (thus his Discovery CV), and will often be examining his surroundings while his friends use their weird mouth-talking. He currently lives in Replicant space.

Plot Hooks

As a pregenerated PC, Wang makes an excellent choice for anyone who wants to discover the world as they play. His inquisitive nature should get him into a little trouble, but Plot Immunity should get him back out, and he can use Empathy and Stealth to surreptitiously gather massive amounts of personal information. If used as an NPC (stripping off his Themes), Wang makes a good unwitting dupe for less ethical people. He's used to believing things that authority figures tell him, and he's still pretty intimidated by the world outside his Anchorage. His "natural" stealth ability should let him tail the PCs successfully for quite a while.

Linh Hung Phuong

Civilization: The Tao of History
Society: none
Core Values: Authenticity 6, Tradition 5, Friendship 6, Honesty 3
Themes: Plot Immunity (Old Friends) 1, Empathy (Good News) 1, Romance (Short-term) 3
Capabilities: Biotech 7, Cognitech 6, Metatech 10, Nanotech 6, Stringtech 3
Professions: Courtesan 4, Media 6, Engineer (Metatech) 7, Locality (Tao) 5, Locality (Masqerade) 5, Locality (Stardwellers) 5, total age: 90 years (expected lifespan 350 years)
Special Benefits: Receives one extra Twist per game, to be spent on Romance, Empathy, or Intrigue.

Notes

Linh plays the role of a foreign courtier come to the ancient Chinese court during the Han dynasty. While she does not play the main role (that of the ambassador), she is a popular supporting character, giving her both ample money and time to pursue her own interests. Her ninety years in the Tao have taught her the importance of being a supporting character, and how to make the most of her time on-screen. During her off-time (explained on-screen as visits home to the pre-Vietnam peninsula), she has visited the Masquerade and the Stardwellers, and learned much from them about creating more modern societies. She keeps two martial arts Lenses (one Artist 4, the other Soldier 3) in her library in case of danger, but rarely needs to use them for anything but demonstration.

Plot Hooks

For those seeking the aid of the Tao, Linh can be a great asset (either as an NPC or pregenerated character). Befriending her is a good first step into the Han court, one of the larger and more influential Tao milieus, and she's always looking to make new friends.

Breath-of-Mist

Civilization: Stardwellers
Society: Group-Mind
Core Values: Freedom 7, Diversity 3, Carpe Diem 6, Unity 4
Themes: Comprehension (systems dynamics) 3, Romance (bad ideas) 2
Capabilities: Biotech 10, Cognitech 6, Metatech 4, Nanotech 10, Stringtech 4
Professions: Crisis Control 7, Engineer (Biotech) 5, Engineer (Nanotech) 5, Legal 4, Police 6, Programmer 3, Spy 6, Locality (Stardweller) 5, Locality (Logicians) 3, Locality (Tao) 5, Locality (Replicant) 3, Locality (Masquerade) 4, Locality (Mechanica) 5, Locality (Independents) 2. Total age: 198 years. (expected lifespan: 700 years)
Special Benefits: Suffers no penalties in zero-g environments. Maximum Biotech and Nanotech are 11.

Notes

Breath has worked for most of his life as a security consultant — the kind that tries to break into your building to make sure it's secure. He loves his work, and honestly doesn't look forward to the day when his personal tech and ingenuity can't keep up with improving security measures. Breath has four bodies in his group: three humans (all male, with their own features and odd enhancements), and one crawling insectoid shape. Breath is not, by nature, a bad person, but he has many skills that would make people very dubious of his intentions. He also quite enjoys throwing his fate to the wind and taking a chance on someone who might turn out to be bad for him. Breath's biotech and nanotech scores include low-level fabrication facilities, allowing him to breathe out diseases and sweat nanophages.

Plot Hooks

As an NPC, Breath of Mist is a great red herring and "swing" character. You never know what he's going to do next, and whether it'll be a good idea. He can tell the absolute truth about why he's hanging around a building, and still leave people wondering whether he's using a spy mesh. As a PC, he's an excellent infiltration specialist, and is familiar with half a dozen different civilizations. He's also likely to be an occasional pain in the butt for his group, and to get himself into giant heaps of trouble. Of all the sample characters, Breath is the most likely to come home with an attractive member of the opposition. Note that his Romance descriptor is "bad idea," not "lucky break" — it never really works out well in the end, but it might be fun while it lasts.

Diantha

Civilization: Stored
Society: Hospitalers
Core Values: Life 8, Identity 3, Charity 6, Community 4
Themes: Magnetism (reputation) 2, Plot Immunity (allies) 1, Comprehension (medical) 2
Capabilities: Biotech n/a, Cognitech 10, Metatech 8, Nanotech 4, Stringtech 4
Professions: Medical 9, Programmer 7, Researcher (Biotech) 6, Crisis Control 4, Teacher 4, Locality (Stored) 5, Locality (Stardweller) 5, Locality (Tao) 4, Total age: 95 years. (expected lifespan: 700 years)
Special Benefits: Info-body, +2 Metatech for convincing others of trustworthiness and sincerity.

Notes

Diantha owns half a dozen remotes, typically rated at Nanotech 7, Stringtech 1. The one she uses most often is shaped like a box on wheels, and contains many pieces of medical biotech and nanotech along with its sensors and manipulators. It has enough processing power and battery life to carry her into areas without infospheres, at least for a few days. She occasionally operates several remotes at once thanks to her high Cognitech score. Diantha's "reputation" descriptor for Magnetism refers to the fact that she is one of the most highly recognized and well-known surgeons in Stored space, and indeed in the medical profession in general. Her Medical Profession works equally well on Stored and regular humans, though some of the younger Stored who have meddled with their genetic/computer codes need her Programming expertise as well. Her primary server rests on an "uninhabitable" planet in a solar system shared with the Tao of History.

Plot Hooks

Diantha genuinely cares about helping people, especially protecting those who can't help themselves. She is one of the genuinely good people in the universe. As a PC, she will be a very effective team player, but may have trouble reconciling the Transcendentals' goals with individual missions. Logical understanding of their reasoning is one thing, but taking medical technology away from those who need it isn't something she's willing to do. In fact,

that may be one of the reasons the Transcendentals recruited her: to do what local laws prevent them from doing. As an NPC, Diantha makes for an excellent ally or enemy. Her high morals and belief in the sanctity of life could lead her to infringe on intellectual property laws very easily, and she's not the sort of person the group can afford to just beat up. Remember that her high Life and Charity CVs make it more difficult to use Twists to convince her to abandon a cause.

Deni Eshakal

Civilization: Rationalist League
Society: none
Core Values: Logic 6, Efficiency 4, Peace 9, Foresight 3
Themes: Intrigue (government newsfeed) 4, Magnetism (convincing) 4
Capabilities: Biotech 2[3], Cognitech 3[5], Metatech 1, Nanotech 4, Stringtech 2
Professions: Locality (Logicians) 5, Locality (Independents) 3, [Locality (Roamers) 5], Political 3, Spy 2[5], Total age: 35 years. (expected lifespan: 180 years)
Special Benefits: Immune to emotional appeals. Immune to the Romance Theme.

Notes

Several of Deni's statistics are in brackets. This is because he is almost always under the influence of a spy mesh. The bracketed statistics represent his actual scores; unbracketed ones represent the levels he is forced to operate at while the mesh is active. While pretending to be a cultural advisor for a Logician ambassador (to Independent space), Deni is actually a contact person for the Roamers, contracting them to perform various surveillance work. The Spy Mesh persona can be dropped at any time his real personality desires, but he rarely does so. His Foresight CV gives him a slight bonus on planning actions, and prevents others from convincing him to act rashly or move quickly when he doesn't see the necessity.

Plot Hooks

As a PC or NPC, Deni is a character with a lot to hide. If used as a pregenerated character, we suggest that players make extensive use of his Themes, focusing Magnetism on high-ranking people who also have a lot to hide. The key is to keep the facade up for as long as possible, keeping the other characters (not necessarily the players) from figuring out

what's going on. He makes a terrifying back-room negotiator, especially given his perfectly logical approach and somewhat split personality. As an NPC, Deni works best if the players never actually see him. Any Roamer or Logician surveillance in a campaign might eventually be traced back to Deni, but he's the sort of person whose existence you deduce through use of the Comprehension Theme, not someone you see in action directly. His Peace CV fits in perfectly with what he does: he believes that if everyone was a Logician, there would be no war. If he knew that some in the Logician hierarchy were considering a move away from pure logic, he would likely become conflicted and seek the advice of a psychohistorian — perhaps one in the PC group?

Astina of the Sun-Circlers

Civilization: Cargo Cults
Society: None
Core Values: Ritual 6, Worship 2, Property 7, Freedom 5
Themes: Plot Immunity (too insane) 4, Magnetism (bullshit artist) 1, Comprehension (explosives) 3
Capabilities: Biotech 3, Cognitech 3, Metatech 2, Nanotech 5, Stringtech 4
Professions: Soldier 4, Locality (Cargo Cults) 5, Total age: 30 years. (expected lifespan: 110 years)
Special Benefits: Use practical pieces of technology with effective skill 6 (no reserve).

Notes

Astina's home Cult shares a planet unhappily with another. Her Cult (correctly) believes that the planet circles its sun, while the other Cult believes that everything outside the planet is an illusion. Her Property CV comes from the super-capitalist nature of her Cult. Astina's Capabilities are at the upper edge of her cult's ranges; she was considered a highly promising government agent. Her built-in Stringtech is in the form of obvious cybernetic enhancements, but she carries around weapons she's picked up elsewhere as well. Her Nanotech score gives her dermal microbots, but they're "wild" and won't respond to most outside communications. Astina is very jittery; the attempt to upgrade her Cognitech and Metatech didn't work as well as was hoped, and she's been pushed closer to the edge by her recuitment.

Plot Hooks

Astina is always chomping at the bit and ready to go. Her soldier's training gives her discipline enough

to wait for an order, but once it's given she's already in the fray. As a PC she primarily fills a comic relief role ("Can I blow up the building now, sir?"), and can help her team out of situations where force is required. As an NPC, she works best as someone's overly twitchy pawn, always jumping the gun and setting off bombs before it's time. She's not always at an emotional extreme, but it might seem that way sometimes.

Famulus Sunday Falsach

Civilization: Spacers and Independents
Society: none
Core Values: Independence 8, Diligence 10, Teamwork 16, Self-Reliance 6
Themes: Comprehension (I love it when a plan comes together) 3, Intrigue (old Spacers' network) 2, Magnetism (trusted leader) 2
Capabilities: Biotech 7, Cognitech 6, Metatech 6, Nanotech 7, Stringtech 6
Professions: Spacer 7, Explorer 3, Crisis Control 3, Soldier 2, Locality (Spacers) 5, Locality (Independents) 5, Total age: 54 years. (expected lifespan: 330 years)
Special Benefits: Immune to fear. Technology acts at +1 effectiveness on offensive measures, but -1 on defensive measures.

Notes

The ship Famulus comes from is a joint venture, run by a group of Independents so impressed by the Spacer ethic that they decided to join whether the Spacers wanted them or not. After a few dozen years the other Spacers grudgingly relented. Famulus' Comprehension score is used to leave parts of a plan undefined until a later time. For instance, he might leave a powerful member of the group behind on a dangerous mission, only to spend a Twist later and have him come bursting through the walls at exactly the right moment.

Plot Hooks

Famulus does best when he's the rock-solid and charismatic leader of a group. He secretly wishes he could take care of entire missions on his own, but is actually happier when he's leading a team. As a pregenerated PC, his role is obvious. As an NPC, he could be the leader of another group of Inspectors, or could be working his way towards becoming the captain of his home ship. He works best as a rival, rather than an ally or enemy — someone the group

can vie with for status or accolades, who won't stab them in the back, but might edge them out if they don't keep on their toes.

Abraham Ezekiel Driver

Civilization: Old-Worlders
Society: none
Core Values: Tradition 8, Simplicity 4, Worship 6, Humility 7, Family 4
Themes: Comprehension (Emotional) 4, Plot Immunity (Stall for Time) 3, Romance 2 (Matchmaker)
Capabilities: Biotech 2, Cognitech 2, Metatech 2, Nanotech 2, Stringtech 2
Professions: Locality (old-worlder) 5, Farmer 5, Outdoorsman 2, Religious 1. Total age: 50 years. (expected lifespan: 80 years)
Special Benefits: Suffers no low-tech penalties when using the Farmer and Outdoorsman professions.

Notes

Abraham (Abe to his friends) is a more-than-middle-aged Old-Worlder. In his youth he spent a few years away from his hometown, traveling around Earth and seeing the museums and blasted battlefields left as a reminder. He returned much more sober than he left, and has been a humble farmer ever since. Though he would never admit it, he is one of the emotional centers of his town, and many come to him for advice. His wife, children, and new grandchildren all look up to him. He is, quite simply, a good person, and in a world where so much can change instantly, that still counts for a lot. Abe's Worship CV refers to Christianity, as he believes honestly in God and Jesus (perhaps a little more in God). Abe uses this CV to prevent others from attracting him to their religions or cults, to reinforce his Humility and Family CVs, to speak convincingly to other Christians, or to study the Bible.

Plot Hooks

As a pregenerated PC, Abe will be oblivious to some of what's going on around him — he lacks dermal microbots, a mesh, and the ability to realistically defend himself against nearly any attack. However, his understanding of what drives people's emotions, and the essential core of humanity, give him a key to understanding the group's enemies and allies. As an NPC, Abe could either be another Inspector (making the players perhaps wonder what he contributes and why the Transcendentals chose him), or just the

quiet farmer he used to be. Either way, he should be portrayed as a compelling and memorable character rather than merely an anachronism lost in the modern world.

Seeker

Civilization: The United Worlds of Mechanica
Society: none
Core Values: Humanity 2; Wanderlust 6; Independence 8
Themes: Comprehension (Intuitive) 3; Comprehension (Explorer) 3
Capabilities: Biotech 4; Cognitech 5; Metatech 4; Nanotech 8; Stringtech 10
Professions: Locality (Mechanica) 5; Explorer 6; Engineer (Stringtech) 4, Total age: 67 years. (expected lifespan:
Special Benefits: Substitutes Stringtech for Biotech, except when dealing with ageing, poison or disease.

Notes

Like most Mechanicans, Seeker is a brain in a can, and proud of it. His body is a quadrupedal, elongated and streamlined lozenge, about two meters long and 1.3m wide, with multi-jointed limbs. Each sausage-sized digit can telescope to ever finer sizes, allowing for nanoscale manipulation or sensing.

Seeker carries with him some of everything he needs to survive — air, water, nutrients, machine oil, power — in internal storage compartments linked into his vital systems. There is even space left over for a cargo compartment. In an anaerobic environment, he has enough internal air to keep his brain functioning for two hours. He is equally at home on land or in water, in a gravity well or out, but he cannot maneuver in open space. Seeker's body is covered in a programmable surface, which he uses to "go chameleoid", blending into his surroundings with smart camouflage, though he prefers basic black or shiny silver.

In physical combat he uses no particular martial arts skills, relying on his Nanotech and Stringtech to brute-force his way through a fight. Nestled beneath his surface in pop-up turrets are a laser, a rail gun, an inversion beam gun, and a compression beam gun. Seeker believes in watching out for trouble.

Seeker gets along well with most members of the other civilizations. His views on what constitutes "humanity" are very liberal. He doesn't really understand why the Stored want to live in simulations when the real world is interesting enough, and though he tries to give the impression that the Cognitive Union doesn't bother him, they really get under his skin with their pseudo-freedom. While not strictly atheist, he ascribes to no organized religion, and firmly believes there is no afterlife. Consequently, he believes in protecting himself adequately.

Plot Hooks

As an NPC, Seeker would act as a highly independent Inspector, preferring a minimum amount of input from the Transcendentals. He prefers to act, then make a report, rather than request guidance first. Seeker is first and foremost an explorer, driven not so much by curiosity as by itchy feet.

Seeker tends to dive headfirst into dangerous situations, trusting to his high Stringtech score to protect him. He is straightforward in his solutions to problems, and isn't above cracking skulls together when it's effective. But he can also be a very methodical and tenacious tracker and detective, utilizing his Nanotech capabilities to their utmost potential.

Stat Block NPCs

The sample characters below are intended primarily as NPCs, to make the GM's life easier and to show some of the more important roles one can have in various civilizations. However, there's no reason an enterprising player couldn't take one, customize it, and slap on some Themes to create a fullly fledged main character.

Masqueraders

Diplomat

Bio 6, Cog 5, Meta 8, Nano 5, String 3
CVs: Identity 4, Anonymity 2, Peace 6, Connection 4
Professions: Political 8, Spy 3, Locality (Masquerade) 5, Locality (three other civilizations) 5

Scientist

Bio 5, Cog 6, Meta 3, Nano 8, String 3
CVs: Identity 6, Anonymity 7, Logic 4, Elegance 6
Professions: Biotech Researcher 8, Teacher 4, Locality (Masquerade) 5, Locality (one other) 3

Entertainer

Bio 9, Cog 5, Meta 7, Nano 5, String 5
CVs: Identity 4, Anonymity 3, Excitement 4, Independence 2
Professions: Artist (dancer, singer) 7, Courtesan 4, Media 5, Locality (Masquerade) 7

Maskmaker

Bio 5, Cog 3 Meta 6, Nano 6, String 2
CVs: Identity 4, Anonymity 10, Creation 6, Complexity 4
Professions: Nanotech Engineer 7, Programmer 5, Locality (Masquerade) 6

Unionists

Cognitechnician

Bio 6, Cog 8, Meta 5, Nano 5, String 2

CVs: Order 10, Obedience 10, Efficiency 10, Caution 3, Grand Works 4
Professions: Cognitech Engineer 8, Metatech Engineer 6, Programmer 6, Locality (Union) 5

Societal Researcher

Bio 6, Cog 7, Meta 9, Nano 5, String 2
CVs: Order 10, Obedience 10, Discovery 10, Charity 6, The Public Good 3
Professions: Metatech Researcher 9, Locality (Union) 9, Locality (everyone else) 3

External Security

Bio 7, Cog 5, Meta 6, Nano 8, String 8
CVs: Order 10, Obedience 10, Protecting Others 10, Teamwork 6, Identity 4
Professions: Soldier 8, Police 5, Crisis Control 5, Locality (Union) 5

Sleeper Agent

Bio 5, Cog 6, Meta 6, Nano 5, String 4
CVs: Order 10, Obedience 10, Secrecy 10, Travel 4, Anonymity 2
Professions: Spy 7, {Cover profession} 5, Locality (Union) 5, Locality (other) 6

Mechanicans

Police Officer

Bio 3, Cog 3, Meta 2, Nano 7, String 8
CVs: Humanity 4, The Law 7, Fellow Officers 5
Professions: Police 4, Locality (Mechanica) 6

Rebel

Bio 2, Cog 2, Meta 3, Nano 2, String 2
CVs: Humanity 8, The Body 8, Freedom 6
Professions: Outdoorsman 2, Farmer 3, Locality (Mechanica) 4

Plutocrat

Bio 3, Cog 3, Meta 4, Nano 5, String 5
CVs: Humanity 5, Order 4, One Coin One Vote 6
Professions: Financial 3, Politics 4, Locality (Mechanica) 5

Athlete

Bio 4, Cog 2, Meta 3, Nano 8, String 9
CVs: Humanity 3, Competition 4, My Team 6
Professions: Athletics 4, Locality (Mechanica) 5

Disciples

Priest

Bio 3, Cog 4, Meta 4, Nano 5, String 3
CVs: Worship 8, Privacy 6, Silence 6, Concealing Knowledge 2
Professions: Locality (Disciple) 5

Chef

Bio 4, Cog 3, Meta 2, Nano 5, String 2
CVs: Worship 4, Privacy 5, Experimentation 3, Carpe Diem 7
Professions: Locality (Disciple) 5

Pilgrim

Bio 5, Cog 5, Meta 3, Nano 5, String 4
CVs: Worship 4, Privacy 6, Discovery 6, Questioning 8
Professions: Locality (Disciple) 5

Botanist

Bio 4, Cog 5, Meta 2, Nano 6, String 2
CVs: Worship 4, Privacy 2, Life 8, Control 3
Professions: Locality (Disciple) 5

Taoists

Explorer

Bio 7, Cog 6, Meta 6, Nano 8, String 2
CVs: Authenticity 7, Tradition 3, New Horizons 4, My Crew 4
Professions: Explorer 8, Media 2, Locality (Tao of History) 5

Noble

Bio 6, Cog 7, Meta 10, Nano 5, String 3
CVs: Authenticity 4, Tradition 7, Good Breeding 6, Rank Has Its Privileges 3
Professions: Political 9, Locality (Tao of History) 5, Locality (one other) 4

Writer/Producer

Bio 5, Cog 6, Meta 8, Nano 5, String 2
CVs: Authenticity 8, Tradition 2, Stories 4, Continuity 6
Professions: Media 7, Metatech Engineer 7, Locality (Tao of History) 7

Courtesan

Bio 8, Cog 5, Meta 9, Nano 8, String 3
CVs: Authenticity 6, Tradition 3, Secrecy 7, Pleasure 4
Professions: Courtesan 6, Athlete 2, Spy 3, Locality (Tao of History) 5

Stardwellers

Traveler

Bio 8, Cog 5, Meta 6, Nano 10, String 6
CVs: Freedom 7, Diversity 6, Wanderlust 6, Discovery 8
Professions: Explorer 7, Outdoorsman 3, Courtesan 4, Locality (Stardweller) 5, Locality (Cargo Cults) 4

Neophile

Bio 10, Cog 7, Meta 5, Nano 10, String 8
CVs: Freedom 4, Diversity 7, New Things 8, Experimentation 4
Professions: Nanotech Engineer 8, Stringtech Researcher 4, Biotech Engineer 6, Crisis Control 6, Locality (Stardweller) 5

Mainstay

Bio 6, Cog 6, Meta 5, Nano 8, String 7
CVs: Freedom 5, Diversity 6, Home 4, Community 6
Professions: Spacer 5, Nanotech Engineer 4, Crisis Control 5, Teacher 7, Locality (Stardweller) 6, Locality (Spacer) 4

Financier

Bio 7, Cog 8, Meta 7, Nano 5, String 5
CVs: Freedom 4, Diversity 3, Responsibility 6, Accountability 7
Professions: Financial 9, Metatech Engineer 8, Metatech Researcher 8, Locality (Stardweller) 5

Tao street scene by Samuel Lloyd, in public domain

Roamers

Con Man
Bio 4, Cog 5, Meta 7, Nano 5, String 2

CVs: Secrecy 6, Wanderlust 8, Freedom 4, Solidarity 6

Professions: Criminal 5, Locality (Roamer) 5, Locality (two others) 3

Spymaster
Bio 5, Cog 6, Meta 8, Nano 6, String 2

CVs: Secrecy 10, Wanderlust 2, Information 5, Reciprocation 6

Professions: Spy 7, Locality (Roamer) 5, Locality (one other) 5

Ringmaster
Bio 4, Cog 5, Meta 7, Nano 5, String 3

CVs: Secrecy 3, Wanderlust 4, Profit 7, Showmanship 8

Professions: Political 3, Media 5, Locality (Roamer) 6

Bouncer
Bio 6, Cog 4, Meta 5, Nano 8, String 4

CVs: Secrecy 4, Wanderlust 5, Security 8, Tough Luck 3

Professions: Police 6, Locality (Roamer) 5

Independents

Possibly Mad Scientist
Bio 3, Cog 6, Meta 2, Nano 5, String 8

CVs: Independence 7, Teamwork 1, Invention 10, Entitlement 4

Professions: Stringtech Research 4, Stringtech Engineer 7, Locality (Independent) 5

Politician
Bio 3, Cog 5, Meta 6, Nano 3, String 2

CVs: Independence 6, Teamwork 8, Peace 3, My Constituents 4

Professions: Political 6, Locality (Independent) 5

Public Safety
Bio 4, Cog 4, Meta 4, Nano 5, String 7

CVs: Independence 3, Teamwork 7, Security 4, Community 2

Professions: Police 6, Locality (Independent) 5

Designer
Bio 3, Cog 5, Meta 5, Nano 4, String 3

CVs: Independence 6, Teamwork 4, Expression 7, Freedom 5

Professions: Artist 5 (clothing and murals), Locality (Independent) 5

Replicants

Outdoorsman
Bio 9, Cog 5, Meta 3, Nano 5, String 7

CVs: Life 6, Safety 2, Exploration 7, Serenity 3

Professions: Outdoorsman 7, Medical 5, Explorer 2, Locality (Replicants) 5

Therapist
Bio 6, Cog 6, Meta 5, Nano 5, String 2

CVs: Life 5, Safety 2, Sanity 7, Understanding 8

Professions: Metatech Engineer 7, Metatech Researcher 6, Legal 2, Locality (Replicants) 5

Nanotechnician
Bio 7, Cog 7, Meta 2, Nano 7, String 5

CVs: Life 4, Safety 6, Creation 8, Competition 3

Professions: Nanotech Engineer 9, Nanotech Researcher 4, Legal 4, Crisis Control 3, Locality (Replicants) 5
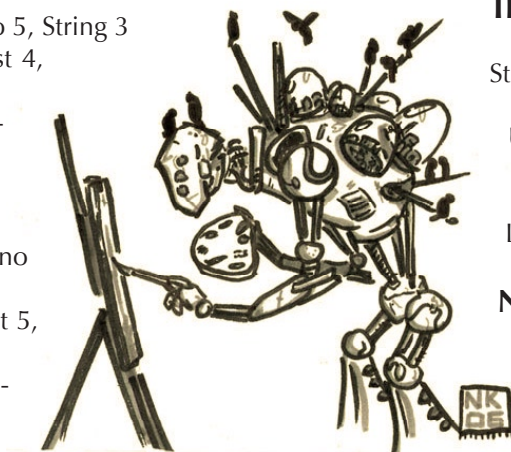
Ordonymics

The Replicants use special names — ordonymics, literally "order names" — to distinguish between various instances of themselves. Here are the ordonymics, starting with one and counting up:

Primus, secundus, tertius, quartus, quintus, sextus, septimus, octavus, nonus, decimus, undecimus, duodecimus, tertius decimus, quartus decimus ... vicesimus (20), vicesimus primus (21) ... tricesimus (30). Anyone with more than 30 duplicates running around is one rich bastard.

Mechanican painting © 2007 Trey Palmer

Judge

Bio 8, Cog 7, Meta 5, Nano 5, String 3

CVs: Life 6, Safety 7, Law 6, Logic 2

Professions: Legal 9, Political 8, Locality (Replicants) 5

Professional Bloodcrosse Player

Bio 9, Cog 5, Meta 5, Nano 5, String 4

CVs: Life 8, Safety 3, Winning 6, Physical Perfection 9

Professions: Athlete 8, Legal 2, Courtesan 4, Police 1, Locality (Replicants) 7

Logicians

Security Officer

Bio 5, Cog 3, Meta 1, Nano 8, String 6

CVs: Logic 2, Efficiency 4, Law 8, Calm 3

Professions: Police 6, Locality (Logicians) 5

Mathematician

Bio 4, Cog 6, Meta 1, Nano 5, String 2

CVs: Logic 10, Efficiency 7, Exploration 4, Completeness 5

Professions: Cognitech Researcher 7, Programmer 4, Locality (Logicians) 5

City Planner

Bio 5, Cog 5, Meta 1, Nano 2, String 2

CVs: Logic 6, Efficiency 7, Expansion 4, Details 5

Professions: Metatech Engineer 5, Locality (Logicians) 7

Minor Lord

Bio 7, Cog 5, Meta 2, Nano 5, String 2

CVs: Logic 4, Efficiency 6, Good Breeding 4, Heirarchy 8

Professions: Political 6, Legal 6, Locality (Logicians) 5

Stored

Polymath

Bio n/a, Cog 10, Meta 5, Nano 5, String 5

CVs: Life 4, Identity 3, Knowledge 10, Responsibility 3

Professions: Artist 4, Courtesan 5, Crisis Control 6, Engineer (all of them) 5, Explorer 4, Farmer 2, Financial 6, Legal 5, Media 4, Medical 6, Outdoorsman 2, Police 4, Political 2, Programmer 6, Religious 2, Researcher (all of them) 6, Soldier 5, Spacer 2, Spy 5, Teacher 8, Locality (Stored) 8, Locality (all others) 5

Programmer

Bio n/a, Cog 9, Meta 4, Nano 6, String 2

CVs: Life 6, Identity 2, Efficiency 4, Variety 5

Professions: Programmer 10, Cognitech Researcher 4, Cognitech Engineer 6, Locality (Stored) 5, Locality (Tao) 4

Artist

Bio n/a, Cog 7, Meta 8, Nano 3, String 2

CVs: Life 4, Identity 7, Creation 6, Immersion 8

Professions: Artist (VR and music) 10, Media 6, Locality (Stored) 5, Locality (Masquerade) 5, Locality (Stardwellers) 4

Reporter

Bio n/a, Cog 7, Meta 6, Nano 5, String 3

CVs: Life 3, Identity 5, Truth 7, Interconnection 6

Professions: Police 4, Media 9, Spy 5, Locality (Stored) 5, Metatech Engineer 2, Locality (Tao) 3, Locality (Independents) 4

Old-Worlders

Farmer

Bio 2, Cog 2, Meta 2, Nano 2, String 2

CVs: Tradition 3, Simplicity 4, Growth 7, Worship 4, Family 6

Professions: Farmer 5, Locality (Old-Worlder) 5

Explorer

Bio 3, Cog 2, Meta 2, Nano 2, String 3

CVs: Tradition 3, Simplicity 4, The Horizon 8, Friendship 7, Wanderlust 7

Professions: Outdoorsman 3, Locality (Old-worlders) 5

Mayor

Bio 2, Cog 2, Meta 3, Nano 2, String 2

CVs: Tradition 8, Simplicity 4, My Town 6, Hospitality 2, Faith 6

Professions: Political 6, Locality (Old-worlders) 6

Teacher

Bio 2, Cog 3, Meta 2, Nano 3, String 2

CVs: Tradition 4, Simplicity 7, Growing Up Right 8, Knowledge 5, My Students 4

Professions: Teacher 5, Locality (Old-worlders) 5

Spacers

Security

Bio 7, Cog 5, Meta 2, Nano 5, String 6

CVs: Independence 3, Diligence 8, Order 6, Caution 4

Professions: Soldier 6, Crisis Control 6, Spacer 4, Locality (Spacer) 5

Captain

Bio 6, Cog 5, Meta 6, Nano 5, String 4

CVs: Independence 6, Diligence 4, Unity 8, Tradition 4

Professions: Political 7, Soldier 5, Spacer 5, Locality (Spacer) 6

Engineer

Bio 5, Cog 6, Meta 3, Nano 7, String 4

CVs: Independence 7, Diligence 8, Creativity 6, Recycling 3

Professions: Nanotech Engineer 6, Stringtech Engineer 6, Spacer 4, Locality (Spacer) 5

Mission Specialist

Bio 6, Cog 5, Meta 3, Nano 5, String 2

CVs: Independence 6, Diligence 5, Teamwork 3, Knowledge 4

Professions: Spacer 4, Locality (Spacer) 5, and pick one of the following: Medical 7, Programmer 7, Researcher (one) 7, Spy 7, Spacer 8, or Farmer 7.

Cargo Cultists

Ritual Leader

Bio 2, Cog 2, Meta 4, Nano 2, String 2

CVs: Ritual 8, Worship 7, Power 9, My Congregation 3

Professions: Religious 5, Locality (Cargo Cult) 5

Cult Soldier

Bio 4, Cog 2, Meta 2, Nano 5, String 5

CVs: Ritual 7, Worship 2, The Forge Of Battle 6, Brotherhood 6

Professions: Soldier 3 Locality (Cargo Cult) 5

Cult Criminal

Bio 2, Cog 3, Meta 3, Nano 3, String 4

CVs: Ritual 4, Worship 6, Solidarity 7, Independence 7

Professions: Criminal 4, Locality (Cargo Cult) 5

Cult Experimenter

Bio 2, Cog 3, Meta 2, Nano 2, String 2

CVs: Ritual 7, Worship 2, Recklessness 4, The Future 6

Professions: Religious 3, Stringtech Engineer 3, Locality (Cargo Cult) 5

Character Development

Characters in Sufficiently Advanced do not necessarily gain significant amounts of expertise or prowess as the game continues. Most characters already have decades of experience under their belts, and some have centuries. However, there are some ways in which you can play a character who becomes more powerful as the game progresses.

The first, and easiest, method is to simply not give your character everything he or she could have at the start of the game. Pick Capabilities at levels below what your Import allows. Later in the game, use your Themes to pick up various advantages. You might use Comprehension (Emotions) to justify an increase in Metatech, or Intrigue (Superspy) to justify some new Nanotech implants. As long as you don't increase your Capabilities past the level that your Import sets, you'll be fine. You can also reverse this: keep low Attributes, but keep a low Import at first and don't pick up your Themes until later. As the game progresses, you can add levels to your existing Themes until your Import reaches the right amount.

Another possibility is to play a character who starts the game under the influence of a spy mesh or other kind of artificial persona. He or she has significant capabilities and loads of experience, but doesn't remember it — it's all hidden behind a veil of false memories. You should create your character as normal, and then "wall off" some of your levels in Professions and Capabilities, to be revealed when you decide. Your Import changes if your Capabilities increase beyond the usual amounts listed on page 75.

For characters whose Capabilities are maxed out, there's usually the option of defecting to a higher-tech civilization, where you can obtain more powerful implants. Your Import might suffer if you increase your Capabilities too far, but at least you won't suffer the one-point Import penalty for going above your Civ's normal maximum (see page 78).

Increasing your Professions just takes practice and time. Unfortunately, spare time is often in short supply. Themes such as Plot Immunity (Buy Some Time) and Intrigue (Timetables) can free up time for research and practice. We also recommend that there be a certain amount of "downtime" for Inspectors between important missions; times when the vast majority of their work is boring and easy, and they have plenty of time to do other things and take up hobbies. Having a month or two between major missions (the ones you actually play out in your gaming sessions) is not unreasonable.

Finally, you can simply talk to the GM at the beginning of the game. Characters who start off as novices and grow quickly in power are staples of all kinds of literature, from young hotshot pilots to initially incompetent wizards to rookie cops. They may not make it to the "seasoned veteran" level by the end of the story, but everyone can see they've got potential and lots of raw talent. GMs may be willing to hand out levels in Professions more quickly to those who have this kind of character story, starting them at 1-2 and slowing them down when they get into the 5-6 range. Some people seem like they're just born to do certain jobs, after all.

Changing Core Values is easier than changing other attributes. You can intentionally change one of your character's Core Values by one point per month. Once it reaches zero, you can build up a different one in its place, at roughly the same rate. If your character has a neural mesh, halve these times.

Brainwashing can change Core Values, too. Repeated memetic assaults, torture, mesh tampering, even a Lens can help others to break down your CVs and replace them with others. This can work as fast as one point per week if those brainwashing you are competent (and let's face it — they usually are). In some rare cases, your character can lose points in a Core Value very quickly — for instance, if you have a CV that specifically supports a particular institution, and you find it to be corrupt and unsalvageable, your CV might drop suddenly. Alternatively, you might decide to rebuild the institution. It depends on the rest of your character's personality. Using Twists is a good way to go about this.

If any of a character's civilization-derived Core Values fall to zero, he or she loses one level from a Theme of the player's choice.

For the more experienced roleplayers in the crowd: yes, this game has no XP. There's no standard way to make your character more and more powerful as time goes on. This also means there's no reason not to start as powerful as you want to be.

GAME MECHANICS

There are two basic ways for your characters to affect the world around them. The first is through the use of their Capabilities and Professions. All characters have this option, whether controlled by a player or the GM. The second is through the use of Themes and Twists, which are available only to the players' characters. The first part of this chapter deals with the more mundane method, rolling dice and using Capabilities and Professions. The second part deals with Twists and Themes, and that starts on page 114.

Not every interaction needs to be mediated in one of these ways. Most day-to-day tasks need no roll or intervention whatsoever, and even "day-to-day" actions can be quite impressive for those with high Capabilities.

Basic Dice Rolling

Sufficiently Advanced uses ten-sided dice. If you have dice with zeroes, read the zero as a ten. Make sure you have dice of different colors, so you can tell them apart.

When you roll you'll typically have two scores involved: a Capability and a Profession. Roll one die for each score, and *multiply* your roll by your score. Take the higher result.

For instance, let's say you're playing football. You would roll on Biotech & Athletics. If you have Bio 4 and Athletics 3, and rolled a 7 and a 4, you would have scores of (4x7) 28 and (3x4) 12. Ignore the twelve; your final result is 28.

Modifiers in this game almost always refer to your die roll. If the GM tells you that you have a +1 modifier to the roll above, you would have a (4x8) 32, not a 29. Occasionally you will modify your Capability during a roll, but we'll always clearly tell you when this happens. This most often comes into play with Core Values, which increase Metatech or a Profession directly when someone is trying to work against your

CV. If you see a rule that says "+2 bonus", assume it applies to the number you roll on the die.

Spending Reserve

Because putting 100% effort into everything you do would be very tiring, you don't normally get the full potential of your scores. You conserve your strength, pace yourself, and take your chances. Reserve lets you put more effort and care into your work, letting you do your best but tiring you out.

Spending one point of Reserve from an appropriate Capability or Profession allows you to re-roll the die for that score. You can also use points of Reserve to add +1 to your roll for each point spent. You cannot add more points than your base score in this way.

In our example, the football player above couldn't add more than +4 to his Biotech roll, or +3 to his Athletics roll. He could still re-roll as many times as he wanted.

When you're rolling on more than one score (as is usually the case), you can spend Reserve from either score to reroll either die. In the football example, the player could spend from Biotech Reserve to reroll the Athletics die, or vice-versa.

When you're out of Reserve, your character is tired and can't exert as much energy. In addition to simply being out of Reserve, you're at -1 on all rolls involving that particular score. You also become very vulnerable to any kind of extended conflict involving that score.

It's appropriate to spend Reserve in nearly any situation, as long as your character (or a part of her) is conscious. Sleeping or knocked out characters can't spend Reserve to hear someone sneaking into their room, for instance. However, someone with a sufficiently high Cognitech might run a Lens that keeps a small portion of her awareness active throughout the night, allowing her to spend Reserve for such occasions. Likewise, characters might succumb to mesh-hacking or metatech assaults that leave them unable or unwilling to spend Reserve, due to mental blocks or severe depression.

Modifiers to scores (such as the bonus to Metatech from Core Values) never provide extra Reserve.

Conflicts

There will come a time in your game when the interests of your group or your character don't mesh with the way things are going. If you want to change what happens in the game, you have two options. You can either activate one of your Themes, as described on page 60, or use your character's Capabilities and Professions.

To use your character's abilities, you'll be making a roll as described earlier. You can use Reserve at any time (so long as you're conscious), or can decide to use Twists instead at any time.

Simple Rolls

Sometimes a single roll will be enough — the GM will set a minimum number for your roll, and if you roll equal to or higher than that number, things go your way. This is useful for situations that pit your character against a static environment in a single instant — jumping a chasm is a good example. For mental situations, remembering a minor detail would fall into this category, presuming you don't have perfect memory.

Here's who can usually achieve a particular minimum roll, assuming they spend a little Reserve:

10	Even the untrained and unenhanced can do this most days.
20	Those with a small amount of either training or luck.
40	People with a little of both, or highly enhanced folks having a bad day. This is about the best that unenhanced characters can usually expect.
60	A moderately trained character with excellent luck, or an exceptional one with a modicum of work.
80	The well-trained, with luck or effort.
100	The highly enhanced with the best luck they can get.
125	That, plus a modicum of effort.
150	Major efforts from some of the best folks in the universe.
200	Only the very best, on their best days or with significant assistance.

Other times you can settle things easily with a contested roll: all sides roll off, and whoever rolls the highest wins. This works for very quick events where the contestants aren't really interacting with each other, they're just trying to do their best and hoping that it's better than everyone else's. A race is the perfect example. Ties can be settled by a re-roll.

Extended Conflict

When you're interacting with other sentient beings, especially in an prolonged event with significant variability, a single opposed roll gives no feeling of the back-and-forth interaction that the people involved see. There's no sense of flow or drama to a single roll. Instead, we use a slightly more complicated process when you're involved in such events, all based off the standard roll-and-reserve system.

The chart on page 104 will be particularly useful for this section, as it summarizes what can be rolled for various purposes. Other Professions can often be substituted by spending a point of Reserve or taking -1 to the roll on both dice.

When you want to initiate some sort of conflict, just pick up the dice and roll. The first person to declare that there's going to be conflict is the first person to roll. Whoever swings first, swings first. Someone else might duck the punch and come back fast, but they didn't initiate the conflict. If it's important to know what order people go in after the first guy, use Offense scores (see below) to figure it out — the highest combined score goes first.

Conflicts are divided into timeslices. Each timeslice takes about as long as the Timescale listed for your kind of conflict (see page 104). In each timeslice you get to make one offensive action against a single target. You can describe whatever actions you like in each timeslice. You should try to keep it reasonable, of course, but there is no benefit or penalty for taking multiple actions. For instance, in physical combat you might describe an all-out assault, an acrobatic maneuver, a cunning feint, or a purely defensive attempt to wear the other guy out. No matter what you do, the only "real" effect from a successful roll is that your opponent loses reserve.

Each timeslice, when you act, follow this sequence:

1. Roll the Offense rating listed in the chart on page 104. Your target rolls the Defense rating listed.

2. Both sides spend Reserve as normal, with the outcome determined after both sides are done spending.

3a. If the defender's roll is higher, nothing happens.

3b. If the attacker's roll is higher, the defender loses *two* points of Reserve. They can choose to lose this from either of their defensive scores.

You can only ever lose Reserve when you are the defender. You might *spend* Reserve when you're the attacker, but no matter how badly you fail as an attacker, you'll never lose Reserve for it.

The following conditions cost the defender more Reserve:

+1 The attacker's roll is twice or more the defender's. Add another +1 for each multiple (3x, 4x, and so on.)

+1 The attacker's Force score is three points or more above the defender's Force score (see boldface items on the table).

+x The attacker's weapon specifies that "x extra Reserve is lost."

These conditions allow the defender to lose *less* Reserve:

-1 The defender's Force score is three points or more above the attacker's Force score (see table).

-1 You are in a subtle contest (see sidebar).

The Force score is shown in bold on the conflict chart. It changes from one kind of conflict to another, depending on which Capability counts as "raw force" for that sort of conflict, letting you overpower others' countermeasures or natural defenses.

A target that is out of Reserve is said to be "at your mercy." If you win a roll against a target with no Reserve, you can take whatever sort of victory is appropriate for the conflict you were in.

You can also decide to "fold," allowing your opponent to choose their victory condition and retaining your Reserve for later use. Folding is also a good way to let your opponent know that you're not serious about the fight. For instance, if someone's interrogat-

ing you, and you fold after the first timeslice, they can choose the victory condition "tell me the truth," and you'd have to do so. If you want to tell them the truth in the first place, folding might be exactly what you want to do.

Core Values in Conflicts

When someone attempts to convince your character to agree with something that you feel goes against your Core Values, add your rating in the appropriate CV to your score (*not* your roll!) on either Metatech or a Profession for the purposes of resisting. You can spend points of reserve as usual to increase your roll.

When someone attempts to convince you of something that *is* consistent with your Core Values, they have +1 to their effective Metatech score, or +2 if your CV is 5 or higher.

When attempting actions with strong connections to your Core Values, you receive a +1 to the attempt, or +2 if your CV is 5 or higher. The GM must agree that the link is strong enough to warrant this bonus; it should not be used for actions that are only tangentially related to the character's CV. This bonus applies whether you're in a conflict or just making a roll to accomplish something.

A bonus to Metatech from a CV does *not* change the timescale for a Metatech-based conflict.
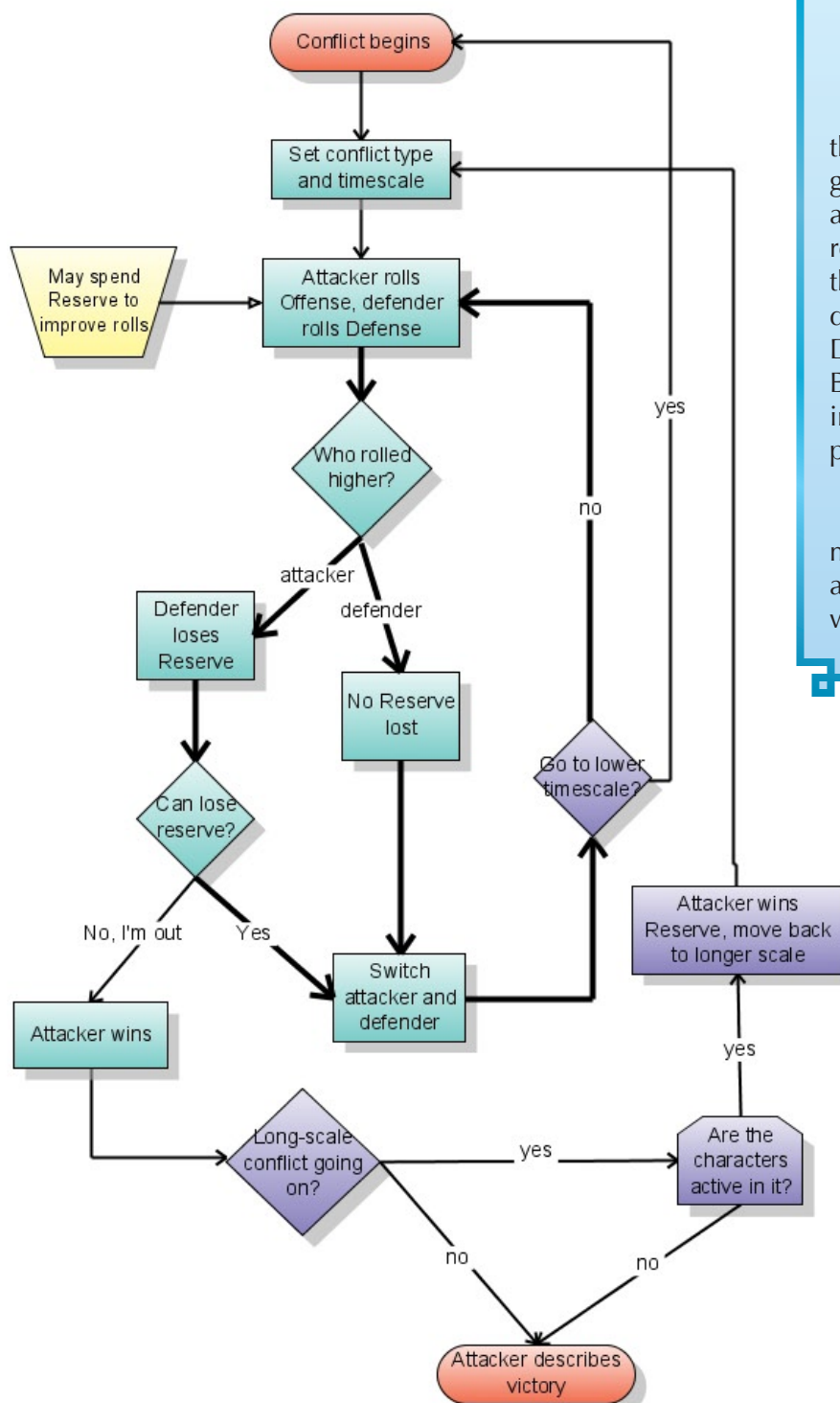
Escaping Conflict

You may want to escape conflict before you're at someone's mercy. To do this, instead of rolling for defense, roll to escape. You have to spend one Reserve. Your opponent rolls an offensive action as usual, and if they lose, you can get away. If they win, you lose Reserve as normal.

Conflict Flowchart

Conflict begins

Set conflict type and timescale

May spend Reserve to improve rolls

Attacker rolls Offense, defender rolls Defense

Who rolled higher?

— attacker → Defender loses Reserve

— defender → No Reserve lost

Can lose reserve?

— No, I'm out → Attacker wins

— Yes → Switch attacker and defender

Go to lower timescale?
— yes
— no

Attacker wins Reserve, move back to longer scale

Long-scale conflict going on?
— yes → Are the characters active in it?
— no
— yes
— no

Attacker describes victory

Conflict Flowchart

This flowchart shows the steps of a conflict in graphical form. Starting and ending points are the red rounded rectangles at the top and bottom. Ordinary steps are squares. Decisions are diamonds. Events related to changing timescales are shaded purple rather than green.

There's no *new* information on this chart, just a visual representation of what we've already said.

Game Rules

Conflict Table

Conflict Type	Offense	Defense	Escape	Timescale
Physical Combat	Nanotechtech & Soldier, Police	**Stringtech** & Soldier, Police	Nanotech & Stealth, Criminal	Seconds
Mesh-Hacking	**Cognitech** & Programmer, Cognitech Engineer	Cognitech & Programmer, Cognitech Engineer	Metatech & Programmer	Seconds
Fast Argument	**Metatech** & Politics, Media, Courtesan	Metatech & Media, Politics, Courtesan	Cognitech & Politics, Courtesan	10 Seconds
Hide and Seek	**Nanotech** & Spy, Locality	Nanotech & Spy, Criminal, Stealth, Locality	stand up and yell	Minutes
Memetic Assault	**Metatech** & Politics, Media, Courtesan	Metatech & Media, Politics, Courtesan	Cognitech & Media, Courtesan	Minutes
Nanotech Bloom	**Nanotech** & Nanotech Engineer, Soldier	Cognitech & Crisis Control	Biotech & Athletics	Minutes
Card Games	**Cognitech** & Locality	Cognitech & Locality	walk away	Minutes
Political Debate	**Metatech** & Politics	Cognitech & Media	walk away	10 Minutes
Baseball	**Biotech** & Athletics	Biotech & Athletics, Spy	walk away	Hours
Manhunt	**Nanotech** & Police	Nanotech & Criminal, Stealth	Biotech & Athletics, Stealth	Hours
Ad Campaign	**Metatech** & Media	Cognitech & Media, Spy, Political	Cognitech & Legal	Days
Interrogation	**Metatech** & Police	Metatech & Criminal	Nanotech & Criminal	Days
Biowarfare	**Cognitech** & Biotech Engineer, Medical, Spy	Cognitech & Medical, Crisis Control, Biotech Engineer	Metatech & Politics	Days
Nanowarfare	**Nanotech** & Nanotech Engineer, Spy	Cognitech & Crisis Control	Cognitech & Locality	Weeks
Research Blitz	**Cognitech** & Research	Metatech & Spy	Metatech & Media	Weeks
Political Campaign	**Metatech** & Politics, Media	Metatech & Politics, Media	Metatech & Finance	Months
Open Warfare	Stringtech & Soldier	**Nanotech** & Soldier	Metatech & Politics	Months
Cold War	**Metatech** & Finance	Nanotech & Spy	Metatech & Politics	Years
Psychohistory	**Metatech** & Metatech Engineer	Cognitech & Politics, Metatech Engineer	Metatech & Locality	Years

Items in boldface on Offense or Defense are the "Force" score for that kind of conlict.

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Instant Kill, Not Instant Fight

Almost all weapons and techniques in S.A. are capable of doing what they need to in a single stroke. An unprotected and unprepared person, or one caught by surprise, will fall almost instantaneously before the weapons brought to bear in high-tech combat. The loss of Reserve during conflict does not indicate someone taking multiple hits from a devastating attack; rather, it is used to represent a target avoiding that attack in one way or another, and being fatigued and worn down by the effort of doing so. Only when unable to spend Reserve — as a result of unconsciousness or an empty Reserve tank — are people actually "hit" by an attack. Keep that in mind when describing your character's actions.

Themes Uber Alles

Remember that complications and Twists automatically trump all other measures, regardless of the relative difference in rolls. A character with a reasonable amount of Plot Immunity can easily escape unharmed against massively superior opposition. Meanwhile, one with a pending "serious wound" complication *will* somehow be wounded, regardless of what countermeasures are employed.

Carry-Over Bonus

Those in long-scale conflicts may want to initiate smaller-scale conflicts to help out their longer-scale ones. For instance, a city losing a biowarfare conflict might initiate a Metatech assault on their enemies in order to induce sympathy for the population. Such actions give the short-scale winner four points of Reserve back. If unspent, this extra reserve goes away at the end of the conflict.

Changing Timescales

You can initiate a shorter-timescale conflict at any time just by saying so — it breaks into the current conflict. If you start a shorter-scale extended conflict for the purpose of aiding a longer-scale one, you can opt to get four points of Reserve back as a victory condition. For example, someone involved in a baseball game (timescale of hours) might start a shouting match with another player (timescale of minutes), who might throw a punch (timescale of seconds). The fight gets resolved first, after which the players could go back to trash-talking, after which the game would continue. One of the sides would gain some Reserve from winning the argument or the brawl.

You can initiate a longer-timescale conflict by escaping the one you're currently in. For instance, if you run away from physical combat (timescale of seconds), your opponents might try to do a Metatech assault (timescale of minutes) while you can still hear them. If you start winning that, they might try to evade your memetic prowess and start a manhunt (timescale hours) to track you down, after which, if successful, they'd start hitting you again (back to seconds).

Conflict types with the same timescale are compatible. If someone in front of you is mesh-hacking you, and you'd prefer to punch him in the face, you can do that: your Offense rolls will be based on physical combat, and your Defense rolls will be the ones for mesh-hacking. Your opponent will have it the other way around.

The Effects of Surprise

Those attacked entirely by surprise must spend two points of Reserve *before they even roll* to defend themselves, and may lose more Reserve if their roll fails. While surprise can be difficult to achieve in a high-tech environment, the results are quite worthwhile.

Subtle Conflicts

In many types of conflict it is possible to act so subtlely that your opponent has no idea that he or she has even been attacked. Metatech campaigns are a good example. To do this, the attacker takes a three-point penalty on both the Capability and the Profession being used for offense. This is a penalty on the scores, not on the rolls, and so may end up changing the timescale for Metatech or Cognitech conflicts. The target in a subtle conflict still rolls an "attack" during his or her action, each timeslice, with the unspoken intent of wearing the attacker down.

The target will eventually realize that he or she is actually in danger. When either side loses half of their defensive Reserve (use combined reserve for both Profession and Capability), signs of exhaustion have set in. Something strange is obviously happening, even if it's not immediately obvious who's doing it. If the attacker successfully retreats on his or her next defensive action the target might never realize what happened; however, if the attack is pressed there will be no doubt.

There are some types of conflict for which this is impossible. Sporting events are a good example, as they rely on the open willingness of both sides from the beginning. However, even physical combat can be performed this way with some high-tech weapons. Microwave beams are a good example — they cook the target from the inside, and because the beams are invisible those with a low enough Nanotech might not realize they're being attacked until it's too late.

Note that in any kind of conflict, subtle or not, the players and GM still know what's going on. It is the defender who doesn't know what's going on. Any use of the Comprehension plot score, regardless of descriptor, can be used to inform a character that a subtle conflict is going on.

The Instant Death Cutscene Rule

There are many, many things in this game that can instantly kill your character without warning. Inversion beams, warlike nanobots hidden in his brain, supernovae, suicide Lenses, and more are real dangers in this game setting.

Whenever the GM is about to set something utterly deadly against the PCs, she is *obligated and required* to describe a short scene detailing the hazard. The characters have Themes, after all, and can often find ways to avoid certain death. The players should not "metagame" a way out of this, using knowledge their characters could not have, but are highly encouraged to use Twists to good effect.

Large-Group Conflicts

When dealing with conflict on the order of ten to ten thousand people, roll once for each side and use the average Capability and Profession for all involved. Sporting events, small to medium-scale military engagements, and small-scale Nanotech and Biotech assaults typically fall into this category.

For conflicts on the order of a hundred thousand or more people, there will typically be a smaller group that speaks for or defends this population. Use the Capabilities and Professions of that subgroup rather than the scores of the masses. Large-scale nano and bio assaults, psychohistorical maneuvering, full-scale warfare, and other such conflicts fall into this category. For conflicts that involve a sizeable percentage of a civilization (such as an entire continent), you can assume that the maximum listed Capabilities for a civilization are the Capabilities possessed by this small group, and that they have appropriate Professions in the 7-10 range.

Types of Conflict

Here we present the many different types of conflict that can be found in this game. Each one gives a quick description of what's involved, as well as repeating the information from the table on the last page. When we list what can be rolled for offense, defense, or escape, you can consider these to just be guidelines. Rther, related Professions may be appropriate to use as well.

Since different kinds of conflict benefit from different situations, we've listed a number of modifiers for each conflict type. You can use these as guidelines when unusual situations arise in your own games. There are also various victory conditions listed, which may be inflicted on those who are out of Reserve.

Some modifiers stack, and some don't. Usually it's easy to tell: if there are several modifiers in a row that talk about the same thing getting better or worse (e.g. the range modifiers in combat, or the population modifiers in psychohistory), they don't stack. Just use the strongest one. Otherwise, you can assume that all the modifiers in this section are cumulative.

Remember that technology Descriptors (page 132) can often influence conflict. Know your tools.

Physical Combat

Physical combat can cover fistfights, duels, firefights, and other events where the point is to seriously injure your opponents. It can also handle sparring matches, where the point is just to show off your skills

> **Offense:** Nanotech & (Police or Soldier)
> **Defense:** Stringtech & (Police or Soldier)
> **Escape:** Nanotech & (Stealth or Criminal)
> **Timescale:** Seconds

- +1 Combat drugs
- +1 Led by someone with higher Soldier profession (only applies to those who already have the Solder profession)
- +1 Car-sized target
- +2 House-sized target
- +3 Airplane-sized target
- +4 Starship-sized target
- -1 Typical environmental penalty (mud, rain, hail, fog)
- -1 Distractions

- -1 Attempt to disarm, trip, or other trick shot
- -1 Book-sized target
- -2 Finger-sized target
- -3 Insect-sized target
- -4 Microscopic target (Min. Nanotech 5)
- -1 Target over 10 km away*
- -2 Target over 20 km away*
- -3 Target over 40 km away*
- -4 Target over 80 km away*

* Only modern weapons use these ranges.

Victories: death, unconsciousness, flesh wound, scar, various forms of dismemberment

Mesh-Hacking

Mesh-hacking is an attempt to force access to another person's neural mesh. It is exceptionally difficult, and not at all subtle, using massive amounts of data to overload the mind and slip control codes into the mesh unnoticed.

Despite its primarily mental nature, Core Values do *not* modify this kind of conflict. The goal in mesh-hacking is to lay someone's entire mind bare, not to convince them of one particular thing.

> **Offense:** Cognitech & (Programmer or Cognitech Engineer)
> **Defense:** Same, but, with +3 on the dice roll
> **Escape:** Metatech & Programmer
> **Timescale:** Seconds

- +1 One or more successful previous hacks on same person (not cumulative)
- +2 Assistance from a Familiar (see page 68)
- -3 No levels of Programmer Profession
- -1 On a different planet, or in orbit
- -2 In a different civilization
- -4 On a nearby planet in the same solar system. Actions "arrive" at least one timeslice after they are taken.

Victories: Access to the target's mind.

Losing Control

It's completely possible for a successful mesh-hacker to install a Lens that takes over someone entirely and/or makes them into your willing slave. It's also very noticable. Most people will go for a lesser approach: leaving a "back door" in their target's mind, with the person still 99% in control until a particular moment arrives. The Lens prevents the hapless victim from figuring out what's going on, or even remembering that the hack happened in the first place.

The in-game reason for this is twofold: first, that it is more difficult to notice, and second, that it provides the possibility of arguing for a reduced legal sentence if one is caught. You can say, "well, at least I didn't make him my slave." The out-of-game reason is that it really sucks to completely lose control of your character. Death is one thing; to have someone else dictating your actions is worse for most gamers. Not everyone has Plot Immunity to draw on when things like this happen, and even if you don't remember the event at first, there's at least a chance that you'll be able to figure out what's going on.

For more inspiration, see John C. Wright's "Golden Age" trilogy.

Fast Argument

A fast argument is typically used to convince someone to take a particular short-term action. The classic example is talking your way past a security guard, but conning someone out of a few dollars or getting someone to help you out briefly are both good examples as well.

To accomplish more meaningful or long-term effects, you'll need to either attain a higher Metatech rating or take more time. Increasing the Timescale of the argument will allow you to use more effective results from the Metatech table on page 80.

Core Values can modify this kind of conflict. See page 72 for details.

Offense: Metatech & (Political, Media, Criminal, or Courtesan)

Defense: Same

Escape: Cognitech & (Political or Courtesan)

Timescale: 10 Seconds

+1 Blackmail material

+1 Very familiar with your target's home region (Locality Profession at 7+)

+2 Favor to call in

+2 Typical memetic tool. Works against single target only.

+4 Exceptional memetic tool. Works against single target only.

-2 Unfamiliar with their home region (Locality 0-2)

-3 Assault can easily be ignored (for instance, by closing a door on the attacker).

-3 Their job depends on resisting

-4 Already hostile to you

-5 Their life depends on resisting

Victories: See the Metatech table on page 80, comparing your Metatech rating to your opponent's as normal. Pick any "instantly" result you are capable of achieving.

Hide and Seek

The classic children's game. Also useful for trying to find someone on a shorter timescale than a fully fledged manhunt. Successful "defense" in this case means staying hidden; when you run someone else out of Reserve they have no chance to find you. The "escape" below means leaving the conflict willingly — in other words, giving up.

Offense: Nanotech & (Spy or Locality)

Defense: Nanotech & (Spy, Criminal, Stealth, or Locality)

Escape: Come out of hiding

Timescale: Minutes

+1 Played with this person before

+1 Familiar with area

+1 Significantly faster than opponent

+2 Grew up in this area

-1 No Locality profession for this civilization

Victories: You find the target, or you frustrate the seeker.

Memetic Assault

A memetic assault is an attempt to influence a target by bombarding them with a series of memes, seeing which seem to resonate with them, and then working towards a particular end result using a progression of "reasonable" memes from that point. It's noticeable if you're trained; to those without much social savvy it may seem like just a particularly odd and disjointed conversation. This type of conflict is obviously very similar to the "fast argument," but takes more time to achieve greater effects.

Core Values can modify this kind of conflict. See page 72 for details.

Offense: Metatech & (Political, Media, or Courtesan)
Defense: Same
Escape: Cognitech & (Media or Courtesan)
Timescale: Minutes

+1 Blackmail material
+1 Very familiar with your target's or audience's home region (Locality Profession at 7+)
+1 Favor to call in
+2 Typical memetic tool. Works against single target only.
+4 Exceptional memetic tool. Works against single target only.
-2 Already hostile to you
-2 Unfamiliar with their home region (Locality 0-2)
-3 Assault can easily be turned off (for instance, assaults conducted over the television or other mass media)
-2 Their job depends on resisting
-4 Their life depends on resisting

Victories: See the Metatech table on page 80, comparing your Metatech rating to your opponent's as normal. Pick any result you are capable of achieving in roughly 10 minutes.

Nanotech Bloom

A nanotech bloom is the technical term for the use of nanophages (see page 143) against human settlements. A nanophage not stopped in the first few seconds will typically undergo rapid, almost explosive growth before slowing down and getting into the serious business of eating everything around it.

All these modifiers apply to the bloom rather than the defender. Offensive rolls are made by the bloom's creator; the bloom itself has no Professions.

Offense: Nanotech & (Nanotech Engineer or Soldier)
Defense: Cognitech & Crisis Control
Escape: Biotech & Athletics
Timescale: Minutes

+1 Dusty area
+1 Aquatic environment
+1 Occasional gusts of wind
+2 Jungle or deep forest environment
-1 Arctic region or other extreme environment
-1 Significant precipitation
-1 Constant heavy winds
-1 Virtually unlit area

Victories: Destroy particular structures, "mine out" certain materials, kill everyone, kill all the cyborgs, defeat the bloom.

Political Debate

At first blush this looks similar to the Fast Argument and Memetic Assault, but the intention here is not to convince your political rival of anything. The idea is to convince the *audience*.

The audience's Core Values can modify this kind of conflict. See page 72 for details.

Offense: Metatech & Policical
Defense: Cognitech & Media
Escape: Just walk away
Timescale: 10 minutes

+1 Very familiar with your target's or audience's home region (Locality Profession at 7+)
+1 Appropriately groomed and dressed for the occasion
+1 Typical memetic tool. Must be tailored to demographic.*
+2 Exceptional memetic tool. Must be tailored to demographic.*

-1 Audience follows different party

-2 Unfamiliar with their home region (Locality 0-2)

-3 Audience will lose their jobs if you win

* Scandal-type information about your opponent falls into these categories, with an extra +1 if your opponent doesn't know you have the info.

Victories: Make your opponent look incompetent or evil. Debates are typically used to regain Reserve for political campaigns, via the "Changing Timescales" rule on page 105.

Baseball

This could be adapted to other sports as well, such as the incredibly violent Replicant sport of Bloodcrosse. The Spy profession can be used for defense to represent watching the other team carefully and learning their signals, or stealing their playbook.

Offense: Biotech & Athletics

Defense: Biotech & (Athletics or Spy)

Escape: Just walk away and forfeit

Timescale: Hours

+1 Using loaded bats or other various cheating measures

+1 Hometown umpires

-1 Windy day

Victories: Win the game, impress the scouts.

Manhunt

Manhunts are large, organized searches for a single individual or small group. They are typically conducted by police organizations, though some criminal groups have them occasionally as well. They fill in the gap between hide-and-seek and tracking someone across multiple planets.

Offense: Nanotech & Police

Defense: Nanotech & (Criminal or Stealth)

Escape: Biotech & (Athletics or Stealth)

Timescale: Hours

+1 Familiar with area

+1 Public transportation is common (applies to runner)

+1 Isolated location (applies to hunter)

+2 Grew up in this area

-2 No Locality profession for this civilization

-2 Trying to find a single person on your own — manhunts are typically conducted with the aid of a large number of assistants.

Victories: Find your target, or frustrate those seeking you. Getting away, in this case, is done through the "Escape" option that can be used in all conflicts, not by winning the manhunt!

Ad Campaign

An ad campaign is essentially a Fast Argument, conducted many times, across an entire region or civilization. It relies on large-number statistics to determine what your audience would most like to associate with themselves, and then asociating that with your product, truthfully or not. "Escape," in this conflict, means forcing a stop to the campaign.

The audience's Core Values can modify this kind of conflict. See page 72 for details.

Offense: Metatech & Media

Defense: Cognitech & (Media, Spy, or Political)

Escape: Cognitech & Legal

Timescale: Days

+1 Very familiar with your target's or audience's home region (Locality Profession at 7+)

+1 Typical memetic tool. Must be tailored to demographic.

+2 Exceptional memetic tool. Must be tailored to demographic.

+3 Captive audience

-2 Unfamiliar with their home region (Locality 0-2)

-2 Product linked to cancer or other diseases

-3 Product is of margainal legality

Victories: Get people to buy your product. The faster you beat them, the better it works.

Interrogation

Interrogation is the oftentimes brutal art of extracting truthful information from someone who doesn't want to give it up. This is not used for the quick, threatening sort of interrogation; this is for longer attempts where the target is typically locked up. Torture is covered under this kind of conflict, though it can easily yield false information.

Core Values can modify this kind of conflict, and often do in the case of spies. See page 72 for details.

Offense: Metatech & (Police or Criminal)
Defense: Metatech & (Criminal or Spy)
Escape: Nanotech & Criminal
Timescale: Days

+1   Implements of torture
+1   Possibility of imprisonment raised
+2   Typical memetic tool. Works against single target only.
+4   Excellent memetic tool. Works against single target only.
-2   Target can simply leave
-2   Job depends on resisting
-4   Life depends on resisting

Victories: Obtain information, or restore Reserve for a longer-scale conflict (like a war or cold war).

Biowarfare

Biowarfare pits fast-acting diseases against a populace with the intent of causing major damage or panic. It is often part of a larger strategy.

Offense: Cognitech & (Biotech Engineer, Spy, or Medical)
Defense: Cognitech & (Medical, Crisis Control, or Biotech Engineer)
Escape: Metatech & Political
Timescale: Days

+1   Highly homogeneous target group (a single family, most Cargo Cults)
+2   A typical biowarfare weapon*
+1   Sides intermingle occasionally**

+2   Sides intermingle constantly**
-1   Major preexisting economic problems
-1   Highly diverse target group (e.g. Stardwellers, Tao)
-1   Trade embargo against one party**
-2   Preexisting quarantine **
-2   No direct wormhole connections, and not on same planet**
-3   Trade embargo against both parties
-1   Known disease
-2   Common disease
-3   Each previous assault with same disease

*   Must be tailored to a particular genetically similar group, such as a family or everyone evidencing certain physical traits (e.g. eye color).
**   Applies to both sides

Victories: Infect all your targets with a particular disease and have it run its course. Diseases typically kill, cripple, or disable their targets.

Nanowarfare

Nanowarfare is not the use of nanophages — that's a Nanotech Bloom (see page 109). Nanowarfare uses microbots with nanotech devices installed to penetrate the bodies of particular targets and cause major medical problems, including strokes and heart attacks. The Nanotech War that ended the era of the superpowers on Earth was this sort of conflict. Escape means successfully hiding those who are the targets of this war from the opposite side's nanites.

Offense: Nanotech & (Nanotech Engineer or Spy)
Defense: Cognitech & (Crisis Control or Medical)
Escape: Cognitech & Locality
Timescale: Weeks

+1   Sides intermingle occasionally**
+2   A typical nanowarfare weapon*
+2   Sides intermingle constantly**
-2   Target takes paranoid precautions, like only breathing purified air.
-2   No direct wormhole connections, and not on same planet**

-1   Known phage
-2   Common pahge
-3   Each previous assault with same phage

*   Must be tailored to a particular physically similar group, such as everyone evidencing certain physical traits (for example, eye color or heart murmurs).

**   Applies to both sides

Victories: Kill specific targets, or leave micro-scale robots in place to kill them on command (can be removed on a one-by-one basis). Often used to regain Reserve for a war or cold war.

Research Blitz

There are many times where a single innovation can change the tide of history. Such times are difficult to predict, and almost any innocuous-seeming invention might prove to be important some day. If you want to ensure that your side makes the invention first, and thus retains the rights to it, you engage in a Research Blitz.

Offense: Cognitech & Researcher
Defense: Metatech & Spy
Escape: Metatech & Media
Timescale: Weeks

+1   Wealthier than opponent
+1   Better reputation than opponent *
-1   Working outside your civilization's normal technology levels
-2   Solo researcher with no assistants
-3   No access to tech databases

*   This item assumes that the side in question is free to recruit additional help — your reputation will help bring better-quality researchers to your side.

Victories: Figure it out before your opponents do. Research blitzes can be enhanced by various black-ops missions, mesh-hacking, memetic assaults, and so forth.

Political Campaign

You want to occupy a high office? You want your bill passed in the legislature? Need to drum up public support for an unpopular act? This is your kind of conflict.

Your constituents' Core Values can modify this kind of conflict. See page 72 for details.

Offense: Metatech & (Politics or Media)
Defense: Same
Escape: Metatech & Finance
Timescale: Months

+1   Wealthier than opponent
+1   Part of a popular political legacy
+1   Typical memetic tool*
+2   Excellent memetic tool*
-1   Part of an unpopular political legacy
-2   Second or later run for same office after an initial failed run.

*   Scandal-type information about your opponent falls into these categories, with an extra +1 if your opponent doesn't know you have the info.

Victories: Win political office, pass major legislation, discredit your opponents, accomplish other standard political goals. Political campaigns are often aided by debates, and are in turn used to aid psychohistorical maneuvering.

Open Warfare

Rarely used, but still considered an option by many civilizations, open warfare combines many of the more violent conflict types into a single contest. Use this when you just want to resolve the war quickly without playing out the whole thing.

Offense: Stringtech & Soldier
Defense: Nanotech & Soldier
Escape: Metatech & Politics
Timescale: Months

+1   Wealthier than opponent
+1   Fanatically loyal populace

+1 War targets a disliked minority

+1 Minor (2-3x) population advantage

+2 Significant (4x or more) population advantage

+3 Overwhelming (10x or more) population advantage

-1 Opponent lives in unusual or unfamiliar territory*

-1 Poor morale amongst your troops

-2 Unreliable supply lines*

-2 Opponent is Stored or other dataform

*   Double this in a war that does not involve spaceborne units.

Victories: Destroy troops, destroy infrastructure, take territory, occupy land, remove invaders.

Cold War

For those who'd rather slowly choke their enemies rather than see thousands die on the battlefields, a cold war may be preferrable to open warfare. It's not quick, and it's rarely pretty, but it will work eventually.

Core Values can modify this kind of conflict. See page 72 for details.

Offense: Metatech & Finance
Defense: Nanotech & Spy
Escape: Metatech & Politics
Timescale: Years

+2 High-placed operatives in opponent's power structure

+1 Wealthier than opponent

+1 Fanatically loyal populace

-1 Target does not have an open economy

-2 Target has no need to trade with others

-3 Target never trades with others

Victories: Wreck economy, force political change, promulgate your civilization's ideology. Cold wars differ from psychohistorical maneuvering in that they are openly acknowledged by both sides.

Psychohistorical Maneuvering

The king of conflicts. Nearly every civilization in the universe is engaged in psychohistorical maneuvering at some level. Most civilizations are conducting psychohistorical maneuvers against their own citizens, in fact, to keep themselves more stable and assure that certain goals are accomplished. Escaping means hiding from others on a political level; the Disciples have accomplished this relatively well.

A civilization's Core Values can modify this kind of conflict. See page 72 for details.

Offense: Metatech & Metatech Engineer
Defense: Cognitech & (Metatech Engineer or Political)
Escape: Metatech & Locality
Timescale: Years

+1 Target's population over one billion

+1 Highly homogeneous target group

+1 Examining Logicians or other rational targets

+2 High-placed operatives in opponent's power structure

-1 Target's population under ten million

-1 Highly diverse target group (such as the Stardwellers)

-2 Target is a Cargo Cult

-2 Target's population under one million

-3 Target's population under 100 thousand

-4 Target's population under ten thousand

Victories: Splinter groups off existing civilizations, calm dissenters, ensure stability, enhance or reduce economies. Destroying a civilization is outside the realm of even this level of conflict. Multiple victories, over the course of decades or even centuries, are required to accomplish such a feat.

Using Themes

While Capabilities and Professions are certainly powerful, they're only half of the game. Player characters also have Themes, which they can activate by using a Twist. These alter the world around your character, bringing certain story elements into play. Whereas Capabilities and Professions have fairly narrow purviews and well-defined results, Themes take a little more interpretation in their use.

Each game session your character starts with one Twist, which can be spent through one of the six Themes to alter the story. The higher your rating in the Theme, the more impact you'll get by using your Twist, as the tables later on will show. There are extensive guidelines and examples on the next few pages.

In the event that a Theme isn't directly applicable to your current situation, you can still gain some slight benefit (+2 to any roll) by being creative. For instance, say you're dealing with someone's emotional troubles. You don't have an appropriate Profession, and the only Theme you have is Intrigue (Political). By spending a Twist through Intrigue, you could say that you once obtained blackmail material on a person with the same problems, and found out how he dealt with them, thus giving you a +2 bonus to your Metatech roll to help this poor guy out.

You can spend multiple Twists to achieve a higher-level effect. Each extra Twist spent increases the effective level of your Theme by one. For example, If your Romance is 2, and you really need a Ro-

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Conversational "Undo"

The second level of any social Theme (Empathy, Intrigue, Magnetism, or Romance) can be used as an "undo button" for conversations appropriate to the Theme and your Descriptor for it. For instance, if you're speaking at a political rally and you accidentally admit your allegiance to the opposite party, you can spend a Twist through Magnetism (Political) to take back what you've said and say something else. You never said that, it didn't happen, and everything's smooth sailing again.

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mance 4 effect, you can spend three twists instead of one: one to activate Romance, and two more to bump up your effective level by two. However, you can never spend any points through a Theme with a zero rating, even if you take Complications.

Complications

You can get more Twists by taking Complications: you, the player, describe problems that your character must overcome. Generally, only rough descriptions are necessary. Your GM will fill in the rest.

When you take a Complication, you do not need to spend the associated Twist immediately. You may "bank" it, if you so desire, until the end of the current session of play.

The table below gives examples of Complications you can accept in order to get a Twist, based on your Import. As your Import goes down, the level of the Complication you must take increases.

Complications

Import	Level	Examples
9	1	Light wounds, some of your foes escape unharmed, public embarrassment, your friends are annoyed with you, your position or goals are revealed to the enemy
8	2	Moderate wounds, unconsciousness, major delays, your friends are angry at you, your character befriended by the enemy
7	3	Serious wounds, your character kidnapped, all your foes escape unharmed, your property destroyed, money lost, deluded by the enemy, friends lost
5	4	Critical wounds, friends turned against you, projects ruined, reputations altered, your character brainwashed

If you want more Twists, you can take a more serious Complication, and get extra Twists equal to the difference. You can also take multiple Complications at once, which may be necessary if your Import is low.

The Emergency Stash

Sometimes campaigns "go nuclear," changing in one brief instant from business as usual to a meltdown of epic proportions. The Transcendentals become unreachable, or the Union and Stardwellers go to war, or a dozen other dangerous possibilities. For these times, we recommend that the GM hand out an "emergency stash" of Twists, perhaps 2-4 of them depending on the level of the emergency. Unlike normal Twists, these don't vanish at the end of a session: they stick around until the players use them up.

An emergency stash is the GM's way of saying, "The universe is going to be playing hardball now. Anyone who doesn't want to get hit with a bat, here's your way out."

Changing Descriptors

Anyone can use a Twist to change a Descriptor on one of their Themes. The change is instantaneous and permanent, until another Twist is used to change it again. For the sake of character believability, we suggest not doing this too often, but sometimes a major change of character makes a lot of sense.

Twists vs. Other Abilities

When comparing the effects of Twists against the use of Capabilities or Professions, Twists win. Period. The effects of Twists last until counteracted by player actions, so characters who use Plot Immunity to avoid a fight cannot end up back in the fight just because the bad guys are chasing them. They might end up in *other* fights, or return to the fight of their own accord, but the bad guys on their own can't restart the fight.

A character with a Core Value rated at 6 or higher has some resistance to the effect of Twists. Players wishing to make such people act against their Core Values must spend two Twists rather than one.

Most Complications are intended to be nearly immediate, and of relatively short duration or personal scope. They can rarely affect anything beyond the character. However, Complications can also be used by the GM to create or alter Story Triggers (see page 160). Stronger Complications can influence powerful Story Triggers that have farther-reaching effects on the game.

The GM is encouraged to remember that, while Complications are meant to be a bad thing, they are also meant to be overcome. Even the worst complications should be overcome in two or three game sessions of serious work, and most should be over by the end of the session.

What follows is a more detailed description of each of the Themes and their intended uses. For convenience, we'll repeat the tables that show what each level of the score can do.

Plot Immunity

Plot Immunity, at its core, gives you control over what happens to your own character. Plot Immunity is your way of telling the GM that you're not interested in a particular storyline, or that you'd like the current events to be over and done with so you can get back to other parts of the game. Many times the problems you'd take care of with Plot Immunity can be solved by your party anyway, given a little legwork and perhaps some trading favors… but Plot Immunity does it all in a minute of game time instead of an hour. It's just a question of how much you enjoy that particular problem.

Plot Immunity is also a way of telling the GM, "You can do bad things to me. I'll be ok." S.A. is the kind of game where weak-willed characters can be convinced to kill themselves, and where someone with the right targeting system can shoot you from beyond the horizon with "bullets" moving near the speed of light. It's not an inherently dangerous world, but when things do escalate to violence, they can really escalate. If you have four levels of Plot Immunity, you can be held up against a wall by someone twice as strong as you, with a gun to your head, while you're unconscious, and still have some way to get out of it. You can be trapped in jail with a Union mesh already implanted in your head and get away scot-free. Not all Descriptors work in all situations, but the more inventive you are the more versatile the score becomes. If you have Plot Immunity, be

prepared to be the party's punching bag — you can take it.

Like the other Scores, Plot Immunity serves to show something about your character every time you use it. When your tough-as-nails Old-Worlder struggles stoically through a freezing snowstorm, it gives your gaming group a particular mental image. When your Tao courtesan's former lovers keep saving him from certain death, it lets the group know about his past and the kind of love he inspires.

Taking Complications to use Plot Immunity might seem a bit bizarre. Isn't the purpose of P.I. to *retain* control over your character? Consider this: if your highest capability is 5 (at which level you can still use Meshes and Dermal Nanobots), and you have P.I. 3, you can escape from a supernova blast (certain on-screen death) with nothing worse than a drained bank account or a serious wound. Worthwhile? I think so. If you're not actually in the scene, you can get to safety with only a moderate wound. How? Just walk on-screen later (when the GM allows it) and say something like, "Wow guys, you had to be there."

Let's say the danger is less severe: an annoying secretary is stonewalling your proposal. You could take time to sweet-talk her, but you're in a rush. (In game terms: minor problem, obvious solution, requires P.I. 2.) You walk into the room, close the door behind you, and take the "befriended by the enemy" complication. Fifteen minutes later the door opens, you leave with a smile on your face, and the secretary smiles as she calls up Mister Big to tell him she's infiltrated your group. Your character might not know, but you do, and you've just handed the GM a part of the plot. GMs like it when players do that kind of thing.

Taking a complication doesn't make your character's life unpredictable, it makes it *more* predictable. You *know* that you have a betrayal headed your way, or a wound, or public ridicule. You, as the player, can consider beforehand what your character might do in response to these.

The on/off screen rules lead to a bizarre effect in which characters are slightly less effective when the camera is on them. That's all part of the genre. When someone unexpectedly brings two dozen Mechanican air calvary to a battle, and explains by saying, "Oh, I just called in an old favor," everyone should accept it and move on. If you don't like that

effect, simply make all of the off-screen effects cost as much as the on-screen ones.

Plot Immunity Scores
1. Evade likely off-screen death.
2. Evade minor problems with an obvious solution. Evade certain off-screen death.
3. Evade major problems that have an obvious solution, or minor one without any obvious solution. Evade likely on-screen death.
4. Evade major problems with no clear solution. Evade certain on-screen death.
5. Have events off-screen make the current catastrophe simply go away. Note that for dealing with a single problem, this is a great way to utterly write yourself out of the plot and have no fun. However, it's a good way to handle multiple crises at once. Just step off-screen.

The player must state, and GM must agree with, any "obvious solutions." A note to GMs: players without Plot Immunity should *not* be treated as if they have a "kick me" sign on their back.

Descriptors:
Tough as Nails, Allies, Badass, Overlooked, Resilient, Invisible, Too Insane, Support Network, Family Ties, Deus Ex Machina, Redshirt Sacrifice, Overconfident Foes

Examples:
A Roamer with Plot Immunity 2 (Sudden Windfalls) and one Twist is thrown a hundred yards through the air by an angry Taoist. He flies out of sight. This counts as "likely off-screen death," so he spends his Twist for a P.I. 1 effect. How fortunate that there was a haystack behind that barn!

Our hero has been imprisoned without cause, and he has to pay a ridiculous fine or stay in jail. Clearly someone out there hates him. His player, not interested in this sideplot, has no Twists available, but has Plot Immunity 3 (Support Network). He takes a Complication to get a Twist, and spends it for a P.I. 2 effect. This minor problem, with an obvious solution (money), goes away as he calls a friend and raises the money in less than an hour.

A Union patrol sweeps past our heroine as she hides. They are about to detect her with their nanobot cloud. She has Plot Immunity 3 (Deus Ex Machina)

and one Twist. Her player takes a Complication to get a second Twist, and spends both of them for a P.I. 4 effect: this major problem goes away. Their nanites fail to report her thanks to a computer virus introduced last week by a malicious Stored hacker. Our heroine, unaware of why she wasn't discovered, says a mental prayer and goes on her way.

A Replicant character and his many duplicates are combing a crime scene for clues. The criminal wants to ensure that no one can find him, so he shoots them all with an Inversion Beam from 30 kilometers away. This invokes the Instant Death Cutscene Rule (see page 106), giving the player a chance to respond. He invokes Plot Immunity 4 (Send In The Clones), evading certain on-screen death. That wasn't really his original self in that room; his original was elsewhere and is pretty mad that so many instances just got vaporized.

Intrigue

Intrigue is primarily oriented towards obtaining information for your character. The information you find isn't necessarily difficult to figure out or understand (one uses Comprehension for that), it's just hidden. Higher levels of Intrigue let you discover facts more deeply hidden. If you prefer a more active approach, you can also use it to spread disinformation to existing spy networks, with higher Intrigue ratings lending more believability and a deeper level of penetration to your false intel.

A significant portion of spy work is, to be honest, rather boring. Most of it is done by mesh-enhanced analysts reading a thousand newsfeeds at once, automated programs combing the infosphere, and people with "desk jobs." Even people doing "human intelligence" — that is, actually spying in person — spend 99% of their time with their heads down and without any significant danger. The other 1% of the time, they're running for home because someone might have found out who they were. Luckily, the Intrigue Theme assumes that all of that happens in the background. Your character is either doing the interesting end of spy work (and thus hearing things directly), or the guy in charge (and thus reading nicely-formatted and well-written reports from whatever agency you're part of). All the boring stuff happens behind the scenes.

Intrigue can also get your character involved in politics. You can choose to work legitimately (for example, a senator might hire you as an aide) or through less savory methods (you might blackmail a senator into endorsing you for a position). It can get you the ear of important government officials, a very useful thing for a Patent Inspector whose life or job are in danger. It can get you into closed sessions of a governing body, or get you access to a copy of the "deleted" transcripts from such sessions. If you want to get elected and make some changes, Magnetism is a better way to go. However, if you only want to lurk around the edges of the existing power structure, go with Intrigue. It's not any safer or more effective, but it keeps you out of the public eye.

One thing you can't do with Intrigue is change a piece of information the GM has given you. For instance, let's say you spend Intrigue and find out something you don't like. You can't then say "I'm going to dig deeper and find the real truth behind what's going on," and expect the GM to alter the plot for you. Intrigue, like all Themes, is a trump card. Once the GM tells you what's going on, it's final. This isn't to say that there's no deeper layer of truth... but your level of Intrigue is insufficient to discover it, and that's that. If you want to dig deeper, you'll need to spend more than one Twist at a time.

If you want to be a movie-inspired superspy, you'll be better off with Romance and Plot Immunity; a point or two of Intrigue is all you'll need. Intrigue is designed for more realistic spy work, more subtle and somewhat more dangerous. Intrigue and Comprehension together will get you just about any information you could hope for. Intrigue and Magnetism make for a very well-informed leader. Intrigue and Empathy is perhaps the most compassionate combination — people just come to you and talk about their problems, and you put together the pieces yourself.

Intrigue Scores
1. Gain knowledge which, while not exactly secret, is not publicly known either.
2. Obtain secret information.
3. Obtain highly classified and protected information. Have a few low-placed spies.
4. Have many spies in areas of low and middle importance. Obtain information whose very existence is classified.
5. Secretly direct a major civilization's spy network to your own aims.

Descriptors:

Eavesdropper, Pillow Talk, Digital, Political, Instant Insider, Stumble Upon, Psychohistorical, Spy, Government Newsfeed

Examples:

Our group has been attacked at a fancy dress ball, ruining the event. The spymaster can't figure out what's going on after a few rolls, and so a Disciple of the Void spends a Twist through his Intrigue 3 (Eavesdropper) score. He overhears the security detail muttering about the low-tech fabrics the attackers wore, and how only Roamers and Old-Worlders make that kind of thing. There's a Roamer encampment not far from here — the chase is on!

One of our heroes seeks government office, but has little chance in the closely-packed Replicant political scene. He uses his Intrigue 2 (Instant Insider) score and a Twist to find some good blackmail material on his least favorite politician. Suddenly there's an open spot in the race.

A Tao undercover agent is attempting to listen in on a conversation, to no effect — surveillance countermeasures prevent him from hearing what's going on. He uses Intrigue 4 (Stumble Upon), and sure enough it turns out someone *else* has the room bugged already, and he can bargain for a copy of the tape.

Empathy

Empathy straddles the line between the active, interpersonal Themes (Magnetism and Romance) and the passive, informational scores (Comprehension and Intrigue). While it won't push around extras and supporting characters the way the more active scores will, it can still make people confide in you when they normally wouldn't.

The higher your Empathy rating, the more reliable and personal information you receive. Empathy 1 might give you a brief, shaky glimpse into a friend's mind. Higher levels also let you "reach" important characters who are more distant from you, befriending them or helping them with their problems. Empathy 5, under the right circumstances, can help your worst foe overcome his sociopathic tendencies — and isn't that worth just about any Complication?

Empathy can be used to calm or counsel other player characters, which is very helpful when you're trying to keep a party together. If the player consents, you can use Empathy 2 to pull someone out of a blind, drug-induced rage, or to refocus a meme-blasted ally. Of course, this all works on supporting characters without anyone's consent, but our point is that Empathy has many helpful aspects, which you can use to support your team as well as manipulating others.

Unlike Romance, Empathy does not work in reverse. You can't use Empathy to get someone to shut up, or to send away an annoying friend. You may want to be careful who you start listening to.

Empathy can even work when your character doesn't really want it to. You can be trying to have a quiet drink in the bar when important people randomly stop by and spill their guts to you (or to their own confidante at the next table over). You can be trying to get some serious work done when one of your friends comes in to confess their involvement in a universe-wide conspiracy. It's all up to you and when you spend your Twist. Whether this actually bothers or slows you down depends on whether you're taking a Complication, and whether your GM wants to invoke the complication immediately.

Empathy and Magnetism allow you to be an excellent leader, both motivating your followers and understanding their problems. Empathy and Intrigue make an excellent combination for an undercover spy. Empathy and Comprehension can work together to give you deeper insights into people and "the human condition." Empathy and Romance are the canonical combination of Themes, giving you both friends and lovers, letting you walk in all social circles.

Empathy Scores

1. Gain an unimportant NPC as a friend. Hear gossip of varying veracity.
2. Help people through emotional trauma.
3. Befriend an important NPC. Hear highly reliable gossip.
4. Befriend major foes or their henchmen.
5. Get someone to start spilling their deepest secrets to you for no good reason.

Descriptors:

Reluctant, Bad News, Matters of Love, Trusting Fools, Shoulder to Cry On, Good News, Day-to-Day, Problems, Digital

Examples:

The team's moral core has just had his world-view shattered by a nasty memetic attack. One of the other characters has Empathy 2 (Shoulder to Cry On). Regardless of whether he chooses to rebuild his Core Values or move on to new ones, she can help him do it.

The party is trying to get a meeting with an important member of the opposition, but they can't risk disrupting the local power structure by using Romance or Magnetism. One of the group has Empathy 4 (Barfly) and spends a Twist to have a few drinks with this fine fellow, befriending him by the end of the night.

One member of the team uses his Empathy 3 (Bad News) as a "crisis antenna." By spending his Twist through it each session, he has his friends from across the universe tell him about all the bad things going on in their neck of the woods. He hands that information over to the group's psychohistorian for further analysis.

Magnetism

Magnetism comes in all sorts of different flavors. An army colonel whose men follow his commands out of loyalty and trust has Magnetism. A statesman who truly represents his constituents has Magnetism. An enlightened religious leader who cares for the souls of his acolytes has Magnetism. However, so do the colonel whose men are brainwashed into believing him, the manipulative politician whose back-room deals ensure his power, and the power-mad cult leader. Like all Themes, Magnetism has no moral weight of its own — but, unfortunately, it's much easier to be a sleazeball leader than an ethical one.

Magnetism starts, at the low levels, with merely attracting immediate attention. As your Magnetism score increases, the attention lasts longer, becomes more widespread, and becomes significantly more intense. You can also reach more important people, though typically only one or two at a time. The more powerful and more influential you want your followers to be (either individually or as a group), the higher Magnetism score you'll need.

One drawback to Magnetism is that your character can easily end up with a half-dozen sidekicks who insist on following you around everywhere. Unlike Romance, which lets you dictate the type of love you get, Magnetism only creates impressed admirers. Not everyone has a strong enough personality to admire from a distance. Such followers can be useful, but are likely going to be in mental and physical danger from time to time, and their presence highlights your own — having a horde of groupies following you around attracts attention.

Then again, sometimes you *want* a horde of groupies attracting attention! Magnetism is a great way to keep peoples' eyes on you, and off the rest of your team. Stealth is very difficult in modern times, but if the guard is distracted by a celebrity, it suddenly becomes much easier. Be sure to treat your groupies well, or you may have to hire some bodyguards to keep yourself safe from stalkers and jilted ex-followers.

Your Magnetism Descriptor outlines your methods, and thus the type of people you can attract. If you're a religious figure, you'll attract those who seek meaning in their lives. If you're a politician, you'll attract those who want power and importance. Musicians attract groupies, actors attract paparazzi, ideologues attract intelligentsia, and so forth. If your Magnetism simulates a pheromone gland, you can attract pretty much anyone around you, but the effect won't last all that long. It doesn't matter whether you actually have what any of these people want; they think you might be able to help them get it, and they'll stick with you until something proves them wrong (typically rather difficult).

Magnetism and Romance let you attract both a cult following and a few people who really love you and look out for you. Magnetism and Empathy lets you hand-pick high-level followers who need what you can offer. Magnetism and Intrigue nets you some very informed followers indeed, putting you in touch with both public and private lives. Magnetism and Comprehension (a rare combination) can give you a devoted following indeed, because you truly appreciate what you're doing and what you're talking about. Your followers would be more accurately called students or disciples, wanting to share in your understanding.

Magnetism Scores

1. Attract the immediate attention of those around you.
2. Impress groups of people. Gain an unimportant bystander as a devoted admirer.
3. Build a strong but not fanatical following.
4. Attract long-term attention and celebrity. Attract the personal attention of those in high office, and impress them.
5. Attract fanatical attention from thousands locally, or millions across the universe. Gain a high official as a devoted admirer.

Descriptors:

Fame, Friendship, Political, Ideological, Physical, Convincing, Memetic, Cult, Pheromonic, Religious, Bullshit Artist, specific cultures or kinds of people

Examples:

The team's quarry is escaping through the city streets on a Mechanican world. The group's leader has with Magnetism 3 (Commanding) and a Twist to spare. He spends it, shouting "Stop that man!" at the bystanders, who instinctively obey, tackling the poor sap to the ground.

The group's spy is trying to sneak into a records room, but there are too many people around. However, one of the group is a famous athlete with Magnetism 4 (Physical). He takes a Complication for a Twist, and spends it for a Magnetism 2 effect: everyone crowds around him, asking for his autograph and checking out his bulging muscles. The spy receives a bonus to his stealth roll.

A Tao ambassador wants to make sure everyone knows she's important. A Twist spent through Magnetism 1 (Political) will get everyone's eyes on her as she enters the room.

Comprehension

Comprehension is a means of obtaining information, from another character's personality traits to the workings of unfamiliar technology. Even insights into religion and enlightenment can be found by using this Theme (though, admittedly, fewer people take Comprehension for that reason).

Comprehension seems, at first, to be a game-breaker. Wouldn't someone with sufficient amounts of Comprehension and a Twist to spare be able to immediately solve any mystery? Surely an insightful Old-Worlder, who can afford to go through Complications like water, would be able to lay bare even the most complex and deeply-buried of plots in one or two games.

Luckily, that's not how it works. To put it concisely, Comprehension is not Plot Immunity. It rarely resolves any problems on its own. Instead, Comprehension is there to point the way to a solution. The greatest benefits from Comprehension come when its results are placed in the hands of a high-Cognitech character (or a creative player) who can figure out how to best apply such revelations.

Let's say, for instance, that the characters are investigating a case where a possession Lens (one that allows someone to take over its user) was "accidentally" distributed in place of a beneficial Lens. Someone with the Criminal or Political Professions can guess as to what government or group might have set this up. A good roll and some Reserve will let them see through the smokescreen that the instigator put up to cover their tracks. Comprehension, as a Theme, is more powerful: level 4 could let someone immediately figure out who did it. But then what? If it's someone powerful, how are you going to stop them? And if you use Comprehension to figure that out, you still need to actually do it, to bring other resources to bear on the problem. Before you do any of that though, you'll need to convince others that you're right about what's really going on. Comprehension gives only knowledge, not proof.

Because of this, Comprehension enhances any other Theme. It can tell you the best place to spend your Twists, the most effective way to affect your world. Sure, it slows things down, but the trade-off is knowing that you'll never need fear wasting a Twist on the wrong target. Alternatively, you can use your Magnetism or Romance scores to convince others to

believe you when you reveal the true mastermind's identity.

The Complication rules mean that someone with a lot of Comprehension will either have occasional flashes of great insight, or will be a beleaguered genius constantly plagued with outside problems. Both are great archetypes to play.

Comprehension Scores

1. Learn how to make something perform one of its basic functions. Solve annoying riddles or puzzles.
2. Learn the basic principles on which something is based. Guess a person's Core Values correctly (but not their rankings).
3. Learn all of a device's functions as if you had the user's manual. Correctly guess events in a person's past.
4. Invent new uses for an existing device. See the cause and motivation for someone's behavior.
5. Predict a person's behavior accurately. Break a code or cipher by instinct.

Descriptors:

Intuitive, Logical, Emotional, Forced Monologuing, Explanations Ex Machina, Methods Behind the Madness, Invention, Religious, specific branches of technology, specific profession

Examples:

This guy you're chasing; is he really at the top of the power structure? Or should you be barking up a different tree? Comprehension 4 (Forced Monologuing) will let you figure it out, as he blathers on incessantly about his incredible plan.

This strange device you're examining could be just about anything — in fact, it could very well be a bomb. Comprehension 1 (Stringtech) will let you guess basically what it does, though without any Stringtech Engineer skill, you may not be able to back up your guess when talking to others.

This guy we're talking to... is he really working for who he says he is? Comprehension 2 (Emotional) will tell you his Core Values, and thus whether he's part of a particular civilization or society.

Romance

The basic use of Romance is to ensure that your character is loved, and has good people to love in return. That, alone, is worth its weight in gold. A few levels in Romance and you'll never have to worry about your lover betraying you, never have to put up with an abusive or unfulfilling relationship, and (if you like) never have to spend the night alone. If we all had this Theme in real life, the world would be a much happier place.

Of course, you don't have to use your Romance score to make everything happy. If you prefer stories about unrequited love and tragic Shakespearean romance, or if you prefer to be a manipulative bastard, you can do that too. You can use it as a shield, as well: if all you want to do is keep the GM from entangling your character in some stupid lovey-dovey subplot that you don't care about, buying a single level of Romance will do it. It's much cheaper than purchasing enough Plot Immunity to keep the consequences away, and longer-lasting too.

Romance can easily be the most entertaining Theme, partially because its complications and its results are often the same thing (or at least reciprocations). You effectively get to tell two parts of the story at once. Let's say you use a Twist to make one of the campaign's major antagonists fall in love with you and let your group escape from a death trap while he or she stands there staring in awe. There are abundant possible complications: kidnappings, stalker-like activity, even jealous rage when the antagonist discovers your existing lover. Whether the resulting events are humorous or serious is completely up to you — you dictate your own Complications, and the GM decides where and when they should appear.

When used in combination with Magnetism, Romance can be absolutely devastating. Want to become the idol of millions? A sex symbol for a whole subculture, or even an entire civilization? Careful combination of these two Themes can yield the fame and fortune of your wildest dreams. Plus, the rest of your group will thank you for it: you can get the negotiators into any venue, you draw attention away from the sneaks and investigators, and you give the goon in the group someone to guard. Everyone wins. Romance and Intrigue make you a movie superspy, Romance and Empathy make you everyone's friend, Romance and Comprehension let you cut someone to shreds emotionally — or find their greatest

strengths. Romance combines well with almost every other Theme.

Use of Romance on others is useful as well. Someone in the party is lonely? You're an excellent matchmaker. Someone in the Senate is being a jerk to you? Whisper in the right ears, and suddenly he'll have to take so much time mending the cracks in his relationship that he won't be able to bother you. Want to put someone in jail? Simple: one Twist to make Person A fall head-over-heels in love with Person B, and a second to make Person B loathe Person A. Person A could end up facing a visit from the police. Take pity on Person B.

Higher levels of Romance don't necessarily have larger effects. Instead, they work more quickly and attract better people (or drive deeper wedges between people). If all you want is a one-night stand, Romance 2 will do it. If you want a one-night stand that starts off the best relationship you could hope for, you'll need Romance 5. If you want a squabble, Romance 2 or 3 will work. If you want an obsession-driven heart-wrenching breakup that ends in a restraining order, it's Romance 5.

Finally, this is an excellent time for a reminder: Twists cannot affect other PCs without the player's consent. You can give a random extra a crush on your teammate, but not the other way around. You can turn the rest of the game into a heart-strewn battlefield as long as you're willing to accept the consequences, but not the main characters.

Romance Scores

1. Flirt successfully. Reject unwanted romantic advances.
2. Play matchmaker successfully. Find a one-night stand. Make an unimportant NPC fall in love with you.
3. Start a good long-term relationship. Stun someone with your mere presence. Ruin someone's relationship.
4. Find someone worth falling in love with. Get one of the major villains to fall in love with you.
5. Get someone to fall madly in love with you after merely catching your eyes from across the room.

Descriptors:

Long-term, Short-term, Hopeless, Unexpected, Tragic, Legendary, Sexual, One-Night Stands, Devoted, Manipulative, Loving, specific types of people

Examples:

A sniper has our hero in his sights from fifteen kilometers away. One shot and our hero's dead. (He knows this because of the GM's obligatory cutscene; see page 58). The player has Romance 2 (Unexpected), and one Twist available. He takes two Complications to get two more Twists, and then spends them all. The sniper raises the gun to his eye, catches sight of the character, and just before he pulls the trigger, the player hits him with a Romance 4 effect. The sniper realizes that after everything he's learned about this target, he loves this man like a brother, and cannot possibly kill him. What he does after that depends on the Complications...

Your character is known as a Casanova, but his one true love is forever out of his reach. You, as the player, use Romance 3 (Hopeless) to involve him in a series of uninspiring relationships while he tries to figure out why his true love doesn't care about him. You plan to eventually use a Twist to change the descriptor to Loving, but right now you think he's a more interesting character this way.

One of the team keeps whining about how he never gets the girls. It's probably because all he talks about is war. Perhaps your Romance 2 (Matchmaker) score will help find him a camp follower to shut him up.

Twist vs. Twist

Once a Twist has been used, it can't be undone, even by the use of another Twist. However, players whose characters have different goals might use several Twists to wrest control of the story back and forth, each describing a particular event or series of events. They can't contradict each other, but they are allowed to bring in *new* elements that mitigate the effects of the previous Twist.

Story Triggers

Story Triggers are an extension of the idea of Twists. They're intended for three purposes: to help GMs plan out their storylines, to involve players more deeply in the game, and to create a framework wherein Twists can affect the game in a long-term way. In some respects they're the Theme equivalent to extended conflicts, but they're intended to be much more cooperative in nature and have no randomness involved.

Each Story Trigger revolves around a possible event, what might cause it to occur, and its immediate reprecussions. The details of the Trigger are visible to the players, though not necessarily all at once. They can decide to involve their characters, who probably know nothing about these things, by taking certain in-game actions. They can also choose to avoid the Trigger entirely, going in a different direction.

Some Triggers will be visible from the beginning of the game, in all their detail. Others ("slow-reveal" Triggers) will be unveiled one piece at a time as the GM puts them together. It might help if you think of Story Triggers as a legal way of bringing out-of-game knowledge into the game. The *players* will know significant portions of the Story Triggers when they are created, but their *characters* don't yet have this knowledge.

Both players and the GM can create Story Triggers. The GM can do it whenever he or she likes, though he can only make one active if the right level of Complication comes up. Players have to use Twists to create their Triggers, but are then able to activate the Triggers much more easily.

GMs shouldn't feel like Story Triggers take all the power away, though. First, it is important to remember that not everything has to be a Story Trigger. GMs can still spring surprises on both the characters and players in the usual way. Second, Story Triggers can be a very useful tool for game control. While they do allow players to steer the story to a great extent, they also allow GMs to create the road map. By creating a Trigger the GM is saying, "Here is where you can go and what you can do. I have planned for these things, at least a little bit." When given the choice between a confusing wilderness of choices and a few specific options, most people go for the specific options.

Player-created Triggers also give you a heads-up on where your group plans on taking the story. It's unlikely that one will be created and activated in the same single session, and that gives you some time to plan for the effect that the players dictate. If you need more time before your players activate a particular Trigger, you can use some of their more severe Complications to switch the effect around, stalling the players until they can switch it back.

Parts of a Trigger

Triggers always have four parts: the Secret, the Reveal, the Lever, and the Effect.

The Secret is just that: an important fact that few people know. Sometimes it's something known only by those in power in a particular civilization or society. Other times it's a piece of scientific knowledge waiting to be discovered, or a seeminly innocuous fact that combines with other truths in unforeseen ways. The important part is that the Secret is not commonly known, and whose revelation would have significant importance for the main characters.

The Reveal is the method by which the *characters* can find out the Secret. This is what makes the Trigger a useful tool for players: *you* as a player can decide whether your character gets involved in a particular story, because you know the Secret and what will uncover it, even if your character doesn't. Activating the Reveal shows characters both the Secret and the Lever, but not the Effect. They have to guess at that on their own, though certain Professions or the Comprehension Theme could certainly be used to figure it out.

The Lever is the part of the Trigger that makes the Effect happen. That's all it's for. Activating the Lever is typically referred to as "pulling" it.

The Effect is what happens when the Lever is pulled. This could be a major event that impacts all of the civilizations, or it could be something specific to the inspectors' current mission. The strength of the Effect will vary from one Trigger to another.

Each element of the Trigger has a level associated with it, from 1-5. This is the level of the Theme needed to *alter or create* it, or the Complication needed to *alter, create, or activate* it. Note that Themes can activate parts of a Trigger without needing the proper Level, while Complications *must* be of a particular strength in order to work. Elements ranked at level 5 can thus only be created or changed by players, and even then they'll have to spend two Twists at once.

Activating Story Triggers

There are three methods for getting your character involved with a Trigger. First, your character could have a particular background or skillset. We call this the "mundane" approach. Second, you can use a Theme. Comprehension is almost always appropriate, but Empathy and Romance also apply. Third, the GM can use one of your Complications to activate or reveal part of a Trigger.

The mundane approach often requires something that you could only reasonably pick up at character creation, such as high standing in a particular Civilization. Sadly, not all Story Triggers are for all characters. Don't worry, your chance to shine will come.

The Theme approach is far more accessible, because you don't have to figure out a good way for your character to sensibly stumble across or reveal a particular piece of information. If you have Themes such as Intrigue (Stumble Across) or Comprehension (Pieces of the Puzzle), you're just one Twist away from a whole lot of different Reveals.

Players will often find that the Complication approach is not the way they prefer. As described in the next section, when players take Complications the GM can use them to create Story Triggers that make life harder for the characters. They won't suffer the usual instantaneous ill effects from that Complication; instead the GM will be creating a kind of Sword of Damocles that hangs over your character, just waiting for the final Complication to bring it into play.

The advantage of the Complication approach is that you don't need the right approach — any Complication of the proper level can activate any part of any Trigger. The down side is that the GM makes the decisions rather than you, and also that Complications can be used to *alter* parts of Triggers. If you've spent a lot of time putting together Story Triggers of your own (see "player-created triggers" below), it can all turn sour when a Complication changes the Effect from beneficial to detrimental.

Story Triggers always lie latent until the characters or players interact with them. They'll never go away or activate on their own. This might seem a little unrealistic — after all, don't other people have an impact on the setting as well? — but the entire idea here is to empower the players and give them a way to "steer" the story. If the GM activates or destroys Story Triggers without player input, it takes that power right back, which feels worse than never having it in the first place.

We want to reiterate that Story Triggers can *never be triggered by GMs, except through the use of Complications*. Only the PCs' actions (or Twists) and the Complications they willingly take can pull a Lever. Levers should never, ever be thrown by NPCs unless the players' characters have the opportunity to stop them.

It is impossible to activate an incomplete Story Trigger. Triggers *must* have all four components visible to the players before the Lever can be thrown. Characters can still make progress towards activating a Trigger mundanely before the players know the Effect, but they can't finish the deed until everything is in place.

Crafting Story Triggers

Creating a good Story Trigger takes a little practice and inspiration. Here are a few methods we suggest for creating interesting Triggers.

Characters' Core Values are always a good place to start. The more you can do that hooks into these, the more you'll be pulling the characters (and thus the players) into the game. Look for high-rated CVs that large-scale events can link into. We're not just talking about threatening the Life CV with a new bio-weapon, but seriously challenging it with a new alien species that might or might not really count as "being alive." Engage the Roamer's Secrecy CV by bringing in a new form of unbreakable encryption. Make characters pick a side and defend it.

Another place to look is Civilizations and Societies. A Story Trigger that threatens, changes, or empowers a particular group will get more attention if that group is one that a character belongs to. Players often get quite attached to their Societies, identifying with them even more than they do with their character's Civilization, so if you're looking to make smaller-scale changes in the setting, Societies are a good place to start. Groups that are the character's enemies — Replicants for the Stored, the Union for the Masquerade, and so forth — also make excellent fodder if the characters are at all vindictive.

Interesting slow-reveal Triggers often have a certain element of surprise to them. Timing the pieces of your triggers is key to making them entertaining. Sometimes the Effect is the first thing you want to make public, making the players wonder what could possibly cause such a thing. Other times it's the Reveal, making players wonder what Secret could be found out by such unusual actions. In general, we suggest going to extremes. Show either the most audacious or most innocuous part of the Story Trigger first, and you'll leave people wanting to hear more.

You can also create Triggers that are contingent on other Triggers. For instance, you could have one Trigger that starts a war between the Stardwellers and Union, with other triggers bringing diffferent civilizations in on different sides. The later Triggers depend on the first one — if there's no war, then there are no sides to join.

Picking the levels for a Trigger is mostly a matter of eyeballing. Is a particular element a low-impact sort of thing? Does it balance on a knife edge? Are you ok with it being easily changed? Then give it a low rating. On the other hand, if there's a particularly high-impact element, or one that seems very stable to you, give it a higher rating. It's not incredibly important.

A lot of our advice has centered around the characters in your game. This isn't to say that those characters should always be at the center of the Story Trigger, but they should always be *in the right place to make a significant change*. If you write an Effect that doesn't significantly impact the characters, that's really ok. It can still make for a good story. However, if you create a Lever that no one in the group can pull, it's sort of a waste.

Player-Created Triggers

Players can use Twists to create Story Triggers of their own. We highly recommend this as a good use for leftover Twists at the end of a session.

Each Twist spent can create a Secret and a Reveal together, create a Lever, or create an Effect. Note that the Effect doesn't actually come into play yet; you just create the possibility for it through your Twist use. Once the entire Trigger is in place, you can activate it through whatever means the Lever allows The strength of the Theme used, and its Descriptor,

should fit the portion of the Trigger that's being created.

Let's use the Trojan War as an example here. The initial Trigger is what makes everyone go to war in the first place. A good way to create the Effect of this Trigger would be using Romance (Incredible Beauty), preferably at level 4 or even 5. The Lever — Helen being taken away to Troy — might be created using either Magnetism or Intrigue, and thrown with one of those or through ordinary gameplay. Comprehension would be a terrible Theme to use for a Trigger that starts the war, regardless of the descriptor. However, Comprehension (Sneaky Tricks) would be an excellent way to create the Secret portion of the Trojan Horse Trigger.

Players should always talk with the GM and other players when they create a Trigger or elements of it. Player-created Triggers aren't intended as a way for one person to railroad the game; they're a way for everyone to influence the plot.

Sample Triggers

Here are a few sample triggers, which you could use as inspiration or bring directly into your own game.

The numbers before each item indicate what level of Complication or Theme are necessary to alter that portion of the Trigger. As mentioned earlier, one needs a proper Theme with an appropriate descriptor to change a Trigger, but any Complication of the right level will do. Remember also that Complications must meet this minimum level to activate a Reveal or Lever, but any level of Theme is sufficient. Note that there are no level-5 Complications, so certain very wide-reaching Triggers can *only* be activated or altered by the players.

One of the elements in each trigger is marked with an asterisk. If you're taking the "gradual reveal" method, showing more and more of the Trigger as Complications are spent, we highly recommend revealing that particular element of the trigger first.

The Logicians Explore Emotion

(2)The Secret: The Logician hierarchy is doubting the effectiveness and efficiency of pure logic, and considering a return to emotion. Some of the nobles are even performing experiments to this end.

(1)The Reveals: Any of the following: One of the characters is a trusted member of the Logician nobility (Civ: Logician, Society: High Society, Profession: Political or Spy). The characters are on missions in Logician space at least three times, and have professions such as Political, Spy, or Metatech Engineer/Researcher. The characters are involved in black-ops missions in Logician headquarters.

(2)The Lever: A powerful and brilliant member of the monarchy makes the matter public, and casts his or her opinion one direction or the other. (Can be accomplished through political means, blackmail, well-reasoned psychohistorical arguments, even impersonation. Empathy, Magnetism, and Intrigue Themes are appropriate.)

(3)The Effects: The Rationalist League fragments, with the majority following a path of slowly returning emotion. A minority of Logicians will refuse this path, becoming a Society dedicated to the value of Logic. They will be particularly common in the Stardwellers and Union. Other fragments will attempt a faster return to emotion, with varying levels of success or disaster.

The Tao Fall Inward

(3)The Secret: The Tao are approaching a critical mass of citizens with DOSD (see page 135), beyond which a sort of sociological "phase change" occurs. A major change in one milieu would be sufficient to tip the balance.

(2)The Reveals: Any of the following: Three missions in Tao space that involve interaction with both actors and stagehands. Standing in the Tao stagehand's union (Tao citizen with Engineering or Media-type skills without any High Society connections or acting skills). Being a spy from one of the Tao's high-Meta enemy or ally civilizations (Spy profession and preferably Intrigue Theme, and from Masquerade, Stardwellers, Roamers, Union, or Replicants). Detailed analysis of Tao society (Metatech Researcher) may pick this up, but not without accurate data.

(3)The Lever: A major disaster in an actor-heavy milieu of Tao space, something sufficient to require nearly all citizens in the area to rely on crisis control lenses. (Stringtech-related disasters are encouraged, since the Tao have less ability to deal with those.)

(3)The Effects: DOSD becomes the norm in Tao space. The civ loses many of its outside ties, and revenue plummets. Actors begin viewing the various levels of DOSD as differing levels of reality, and some even learn how to "switch" between them. The civilization as a whole remains, but becomes much more insular. For those in some stages of DOSD it is more fragmented, while those in other stages see it as more unified than ever. The civilization as a whole switches its focus from portraying the past to exploration of human mental conditions.

Second Contact

(2)The Secret: Many known Cargo Cults are receiving outside aid from the League of Independent Worlds.

(1)The Reveals: Any of the following: Spending a year undercover in a Cargo Cult. High ranking in the Independents' unified military force (Military profession), or on one of the committees that oversees them (Political profession). Contacts with said people (easily achieved through the use of various Themes). Rulership status in an affected Cult.

(2)The Lever: Make the fact public, forcing the Independents to admit their actions. (Almost any Metatech-based profession will work, or the Magnetism Theme.)

(4)The Effects: The Independents grow almost continuously and quickly for the next few hundred years, becoming the largest civilization in terms of number of worlds and citizens. While they will struggle with integrating all these widely varying groups (as everyone else treats them as a Cargo Cult "dumping ground"), their expanded population base will eventually bring them into parity with the Stardwellers and Union as one of the most technologically advanced groups in the universe.

Mechanican Unity

(2)The Secret: Mechanica's psychohistorical instability is coming to a head. Those who lead the it are interested in consolidating their power and need to stabilize the civilization in order to do so. They're going to attempt to add another Core Value to Mechanica: Profit.

(1)The Reveals: Any of the following: One of the characters is a Mechanican high official (Civ: Mechanica, Profession: Political or Financial). One of the characters is in a partially economic struggle against someone high up in Mechanica (Conflict: a Cold War, a Research Blitz, an Ad Campaign, or Psychohistorical Maneuvering.)

(2)The Lever: A character gives a boost to the Mechanicans in question (Using money from High Society, joining them in one of the conflicts above,

or use of the Intrigue, Magnetism, or Comprehension plot scores)

*(2)**The Effects:** The Mechanicans begin to sell their high-level Stringtech to the highest bidders, eventually breaking ties with the Patent Office and becoming a civilization of high-tech traders, engineers, and mercenaries.

Cutting Ties

*(4)**The Secret:** The Union is ready to be done with with the Transcendentals as a whole. It'll only take one more event to send them over the edge.

*(3)**The Reveals:** Any of the following: A detailed Psychohistorical analysis of the Union's relationship with the Patent Office. At least two public missions into Union space with someone trained to read others' reactions (the Media or Political professions are good choices here). One secret, high-profile mission into Union space involving a spy mesh that disguises someone as a Union member.

*(3)**The Lever:** Botch a mission in Union space, in a way that both makes Transcendental involvement obvious and causes loss of life or rebellion.

*(5)**The Effects:** The Union, Logicians, and Replicants sever all diplomatic, economic, and communications ties with the rest of the civilizations. The Union warns the Patent Office that attempting to reestablish communications will be seen as an act of war. Other civilizations are invited to join them in their new set of civilizations, but they must renounce the Patent Office and the influence of the Transcendentals. War with the Transcendentals seems unlikely — the Union is smarter than that — but there may be rumors of it, or even an alliance with the Aia.

Outmaneuvered

*(5)**The Secret:** The Skotadi have their own equivalent to the Transcendentals — a way by which information from the future can be used in the present.

*(3)**The Reveals:** Any of the following: At least three missions involving the Skotadi. Specifically questioning the Transcendentals on the matter. Use of the Intrigue or Comprehension Themes. Psychohistorical analysis of the interaction between Skotadi civilizations.

*(2)**The Lever:** One mission that heavily antagonizes a major faction in the Skotadi, or the creation of a major new weapon that uses or disturbs dark matter as part of its operation.

*(3)**The Effects:** The Skotadi technological singularity and the Transcendentals come into direct conflict, taking both off the scene for a significant amount of time — years or more. During this time the Patent Office will be on its own, without guidance from the future. Which side wins, or whether there is a compromise or merger of some sort, depends on future Triggers.

No Metaplot Here

None of these triggers are "canon," by which we mean that none represent any sort of official future for the game. Some seem more likely than others to us, but whether they officially happen or not depends on whether you decide to use them in your game.

Advice on Themes

Themes form the core of this game. Capabilities, Professions, and even Core Values are secondary to these. Themes tell the GM and other players what sort of role your character has in the story and what sort of plots you're interested in.

Themes define how things happen around your character, and the more severe Complications you take, the better you can use them. If your group is the type that likes to have a very rules-light game, you can almost run the game solely off Twists and interesting, world-changing technology.

A player who takes three or four Complications per game and uses every single Twist to great effect isn't really overusing them. They're simply using a part of their character's abilities as allowed by the game. However, it can make things very difficult for the GM. Here's some advice from us on how to handle all of this.

Believability

Themes are by far the most powerful resources the players have at their disposal. We'll be harping on this a lot, but only because it's true and we feel the need to drive the point home.

A confrontation between a Mechanican NPC built like a steam shovel and a grumpy Old-Worlder player character with a toothpick is over before it starts. Hope you bet on the Old-Worlder. She's a PC, so she has Twists, and that's all that matters. The Mechanican will break down, or lose track of the Old-Worlder, or take pity on her, or end up being convinced by her soliloquy on how important it is to stand up for your beliefs.

When Twists become a problem is when they begin to disrupt the group's suspension of disbelief. The actual on-screen impact of Themes depends on how "realistic" you want your game. Sure, the Old-Worlder's player could use Plot Immunity 5 to narrate a bizarre tale of her running up to the Mechanican, vaulting wuxia-style up his body, and placing the toothpick in his one vital spot, thus preventing him from moving — but it's not very convincing. One's suspension of disbelief becomes strained, to say the least. Shouldn't the Mechanican have been able to shoot the Old-Worlder through the heart with a compression beam a dozen times during that process?

These sorts of problems can often be avoided by simply saying, "Ok, that use of Twists is fine, but your description doesn't make much sense for your character. Can you give me a different take on it?" If you want to keep your game a bit more believable, encourage each other to describe something more low-key. Perhaps a very urgent event calls the Mechanican away, and he leaves the Old-Worlder with just a wound as a reminder. Perhaps the Mechanican receives new orders over his radio, and stands down. Perhaps the Mechanican is in a playful (or sadistic) mood, and chases the Old-Worlder, losing her as she finds a lucky hiding place. Perhaps some of the Old-Worlder's allies show up at just the right time. There are many ways to do things that don't wreck one's suspension of disbelief.

You'll also find that players are pretty good at policing each other this way. After a few sessions in the S.A. universe, they'll have a good idea of what's plausible and what isn't. Most players we've met prefer internal consistency in their game worlds, and are willing to work a little to keep it intact.

Surviving Conflict

Characters can die in fights in this game. They can die very quickly. This is because the weapons being used are exceptionally deadly, far more dangerous than a mere handgun or knife. Characters can be killed by an internal antimatter explosion caused by a rifleman ten kilometers away, or be convinced that no one loves them and they should kill themselves through the use of Metatech. These are serious possibilities in this game.

Encourage your players to use Twists during a fight. Have them use Romance to make an enemy stand dumbfounded in love. Use Intrigue to listen in on enemy transmissions, or Comprehension to notice an upcoming ambush. Plot Immunity will let you walk out of most fights unscathed (even if you have to run away to do it), but the other scores aren't weak either. So they have to take a complication — so what? Someone who can trade in a moderate wound for the ability to steal their foe's followers with an impassioned speech (Magnetism at work) is far more powerful than just a guy with a gun.

GMs should also remember the Instant Death Cutscene Rule (page 106). It is *not* an optional rule, and removing it seriously ruins both the fun of the players and the intended feel of the game.

Stopping Plot Immunity

Let's set up a situation that most GMs will balk at. Your group contains a Roamer who loves freedom more than anything. She's not highly enhanced, and so has several high Themes, and getting more Twists is cheap and easy. She has Plot Immunity at 5. You've set up a situation where she's been thrown into a Cargo Cultist gladiatorial combat, and has to fight to the death against their combat robots. You expect that she'll be able to hold it off, taking heavy wounds, until the other PCs arrive, at which points they execute a dramatic rescue.

Her character, on the other hand, doesn't feel like owing the group anything. She picks up a Twist by taking a Complication (a flesh wound), spends it through her high Plot Immunity (Sheer Luck) score, and declares the fight over as the combat robot malfunctions, ignores her, and tears through the crowd while she escapes in the chaos.

You may be tempted to try to stop this somehow, as she has ruined your plot. Don't.

GMs don't get Twists. They get to control the Transcendentals, NPCs, Patent Office missions, and general environment, but not the PCs or the main line of the plot. Themes are for the players alone.

Instead, roll with it. Hasn't she given you enough things to play around with? The rest of the PCs arrive to find a city in chaos and a rampaging combot to stop. She's ruined the arena and made an enemy of a small civilization. Can the rest of the party even find her? The flesh wound is the least of what's going on here. There's no need to try to "slow down" the characters when they do such a good job of it themselves. Twists are typically used to make interesting plot instead of avoiding it, and that only makes your job easier.

In case you were wondering whether this GM made the right choice in putting someone with Plot Immunity 5 in an arena to begin with, the answer (in our minds) is actually "yes." Players who never get to show off their characters' abilities get bored easily. If someone took Plot Immunity, they probably don't

Optional Rule: Fluctuating Themes

In really long-running stories, people rarely stay the same for the entire time. Those who do are either particularly archetypal, or particularly boring characters — sometimes both. Many people see their whole lives change, and their personalities with them.

If you're running a long-term game, you may want to consider allowing players to change their characters' Themes from time to time. Perhaps they could do this when a particular Story Trigger is activated, or when something major happens in a character's life.

This can be an especially effective technique for creating a "sequel" or "elseworlds" feel — you can play with the same characters, with the same Core Values and other attributes, but a change in their Themes or even just their Descriptors means that different stories will happen around them.

Fluctuating Import

Another option, perfect for games with a more episodic feel, is to allow characters' total Import to change from one game session to the next.

Each session, one character will be the "star." Give that character an extra two points of Import, and reduce everyone else's Import by two. For a stronger effect, give that character extra Twists, or reduce the level of Complication required to purchase a Twist. Change star characters at the start of each session, so that all the players will have a chance for their characters to be the star, with a game that focuses especially on them.

The drawback of this method is that it may leave some folks feeling a little sidelined. This is not for all groups; make sure everyone's ok with playing a sidekick most of the time as long as they get a chance to shine once in a while.

want to just avoid plot — chances are they're looking for a chance to actively make it go away.

Adjudicating Complications

Complications can be one of the toughest parts of the game to handle. Suddenly one of the characters is going to be injured, or kidnapped, or even brainwashed, and you have to work it into the plot.

As the GM, you shoulder the majority of this burden. You can always work an injury into a game (for instance, by saying that one of the characters thoughtlessly walks out into traffic), but a kidnapping is a different matter. Think for a minute about whether it makes sense for the current set of problems to include a kidnapping — if not, it might be time to ask the player to pick a different complication, or to push the consequences off until the next session when a different threat has come along.

There's also the question of what some of these complications actually mean in game terms. The rule system doesn't talk about "severe wounds," it uses reserve levels, because if you actually get hit with a high-tech weapon it'll probably vaporize you. Here's a useful guideline:

Light: Lose 1/4 of the character's reserves from Biotech and Stringtech

Moderate: Lose 1/2 of Bio & String reserves

Serious: Lose 3/4 of Bio & String reserves

Critical: Lose ALL of Bio & String reserves

It's perfectly reasonable for you to say that this reserve won't come back the next day. A good example of a critical wound would be having your leg shot off — it's not terminal, and it's not irreversible, but even with the best technology you can find, it's not going to grow back overnight.

Complications of other types can sometimes reduce Metatech or Cognitech reserves, or reserves from social skills. The "deluded by the enemy" Complication might, for instance, reduce your Metatech and Politician reserves by 3/4, since that Complication is intended to be about on par with a serious wound.

Some Complications don't make sense for some characters, or will need to be tailored appropriately. Someone playing a ninja-like espionage agent would be seriously compromised by the "public embarrassment" Complication, so it should count as more than just a minor stumbling block. Likewise, an unsympathetic character with no friends would not be particularly hurt by the "friends lost" Complication, so it shouldn't count for such a high level. It's best to talk these things over with the players of such characters before it comes up in-game.

Complications aren't intended to be "min-maxed" the way Capabilities are; they're intended to be the balance to those Capabilities. If someone with high Capabilities is abusing a particular Complication over and over again without any trouble coming out of it, you have the right to ask them to stop using that Complication — or to make it more trouble than they were looking for. Again, out-of-game conversation is often the best way to handle these kinds of things.

If you're really unsure as to how you'd like to handle a Complication, sometimes the best way is to dump it into a Story Trigger (see page 160). Use the Complication to change an existing Trigger that the players created, or to create something that you think might cause trouble for them. That way you as the GM don't have to deal with the consequences immediately, and the players might appreciate having more time to work their way out of it as well.

TECHNOLOGY

Technology and its impact on society are the largest and, to us, most important themes in Sufficiently Advanced. This chapter talks about what does and doesn't exist, and gives ideas for how to invent some of your own.

Activation Codes

As its name implies, Sufficiently Advanced is a game about exceptionally powerful technology; technology so advanced that it is (in many cases) indistinguishable from magic. Most characters in S.A. have significant amounts of this technology built into their bodies. When you have the ability to shoot a starship out of orbit, enter suspended animation, or make your anything you say sound more important than the voice of God, that's not something you want to activate accidentally!

Characters with a Cognitech score of 5 or higher are required to have meshes (see page 25), and can use mental triggers for their abilities. Those with Nanotech 5 or higher most likely have dermal microbots, which can track their voice and gestures, and can use those triggers instead. Others have their own means.

To someone who's not acquainted with this level of technology, this all looks like magic or psychic powers. Imagine: someone speaks some strange words, makes a hand gesture, and this bolt of light fires from his hand to destroy a boulder. Black magic! Sorcery! Witchcraft! Even on a world without an infosphere, a high-Cognitech character seems to know the unknowable, like an oracle.

No Reserve From Items

Unless specifically noted otherwise, no piece of technology here gives its wielder any points of Reserve. Using a gun rated at Stringtech 7 doesn't give you 7 points of Stringtech Reserve. Wearing a level 4 Competence Lens doesn't give you 8 points of Reserve in that Profession.

Devices and Procedures

The following pages contain a very short compilation of the technology available to citizens in the current era. All technologies on this list have a Tech Level, Cost, and Descriptors.

Tech Level

A device's "Tech Level" indicates how sophisticated the device is. If a civilization's highest rating in a particular Capability is equal to or higher than the Tech Level listed, then that civilization can build and maintain this technology. For instance, Replicators are TL: Nanotech 6. This means that any culture whose highest Nanotech rating is 5 or lower cannot build or maintain replicators. They might be able to use them, but they can't fix them when they break. Technicians from high-tech civilizations are always in high demand.

For a list of technology according to the tech level required to create them, see page 152.

Cost

A cost of "Low" means that an average person could afford one instance of this technology on a week's paycheck. "Moderate" indicates a similar purchase for an entire town or very rich person, "Expensive" could be bought by a major city, and "Exorbitant" is a week's income for an entire planet.

Some items are listed as "Public Domain," which means they bear no cost except that which a restrictive civilization might levy.

Costs for lower-tech devices often drop as tech levels increase. We leave this to the GM's discretion, but truly dangerous items should always be costly.

Descriptors

Some items on this list have special Descriptors, important characteristics that they share with other technologies. See the sidebar on the next page for detail on what each Descriptor means.

Descriptors

Check here to see what any technology Descriptors mean.

Auxon: This device is self-replicating, and will continue to create more of itself until a predetermined limit is reached.

Dataform: This technology is pure computer code, and exists only on the Infosphere.

Energy: Weapons with this Descriptor fire energy instead of (or in addition to) physical matter. If the target is employing energy-transparent countermeasures, they will be ineffective.

Energy-transparent: Countermeasures with this Descriptor can not defend their targets against Energy weapons.

Inheritable: This enhancement will, in all likelyhood, pass on to any of the character's children born after it is acquired.

Internal: This enhancement is completely internal to the human body. Cursory examination will not reveal its presence; it takes exploratory surgery or a Nanotech score of 6 or more to discover internal enhancements.

Microscopic: This device is impossible to see with the naked eye; it requires a Nanotech score of 5 or higher to detect its presence.

Near-c: Weapons with this Descriptor either fire energy or deliver projectiles at nearly the speed of light. Targets must spend a point of Reserve *before even rolling* to defend themselves, and may lose more Reserve if their roll fails.

Procedure: This is not a device, but a learned and practiced procedure. There is no way to "deactivate" such technology without rendering the user unconscious or employing psychotropic drugs.

Supersymmetric: Weapons with this Descriptor fire particles of dark matter, which pass through ordinary matter and are unaffected by most types of energy. Only defenses with this Descriptor will protect against them. A character's Stringtech score provides this Descriptor starting at level 7.

Low Tech

Some items of technology are so ubiquitous in our time that we don't even think of them as technology - they're just *there*. Most of the stuff from capability levels 1 and 2 fall into this category. (The denizens of the S.A. universe often see computers the same way.) Just to let you know we haven't forgotten them, here's a list of the low-level technologies out there.

Biotech
1. Agriculture and domestication
2. Most drugs and medicines before the 20th century
3. Germ theory, surgery, organ transplants

Cognitech
1. Knowledge of the existence of neurons and nerves
2. Formal logical systems
3. 20th century cognitive science, various "math whiz" tricks

Metatech
1. The Art of War and other light classics
2. 19th century psychology, mass media
3. 20th century psychology, global cultures

Nanotech
1. Tongs, "Waldo" gloves, metals and ceramics
2. Telescopes and microscopes, alloys
3. Electron microscopes, radio antennas

Stringtech
1. Knowledge of forces, the number zero
2. Explosives, the theory of electromagnetism, electrical power
3. Lasers, quantum theory, general relativity

The List

Antimatter Gun

This weapon fires tiny pellets of antimatter in miniature magnetic traps. When the pellets hit an object (or slow down enough), the magnetic field decays, and the antimatter escapes, causing a devastating explosion of gamma rays. The possibility of early containment failure means that very few people use these weapons. When a gunpowder weapon blows up in your face, you could lose an eye. When antimatter blows up in your face, you lose your entire body and the surrounding ten meters of terrain. Antimatter guns deal damage rated at Stringtech 10, and deal an extra two points of Reserve damage because of the explosion.

Tech Level: Stringtech 7 for weapons that generate their own antimatter. Weapons can be built at Stringtech 5 that carry pre-loaded antimatter, but these are tantamount to suicide.

Cost: Moderate

Descriptors: Once the bullet hits, the damage is Energy.

Artificial Gravity

The creation of gravity wells without a large nearby mass is possible, though rare. It's very energy-intensive, and generally considered somewhat wasteful — the sort of thing Stardwellers do when entertaining groundlings. Most such wells are kept very small, both to keep energy costs down and to avoid problems with one's neighbors. Very few starships are built with artificial gravity. All Spacer vessels spin, creating a gravity-like centrifugal force that lets them walk around on board.

Tech Level: Stringtech 6

Cost: Moderate

Descriptors: Energy

Artificial Intelligence

Minor AIs, with fragmentary personalities and specialized mental processes, are exceptionally common. They inhabit nearly every piece of modern technology and make it all easier to use — in fact, in many cases, they're what makes it *possible* to use!

For information on more powerful artificial intelligences, see the Aia on page 63. Rumor has it that all major new AIs are "liberated" by the Aia within hours. Familiars (see page 139) are another common form of AI, much less powerful and more comprehensible.

Tech Level: n/a

Cost: n/a

Descriptors: Dataform, some are Auxons

Awakening Lens

This lens works in conjunction with a mesh-based alarm clock. Just set your lens to wake you up whenever you desire. The lens modifies your REM sleep patterns to ensure a maximally restful sleep and avoid interrupting REM when waking. It also eases you awake cleanly, without the stress of an auditory alarm clock or other irritant. As an added option, the lens can remind you of whatever you need to do that morning.

Tech Level: Cognitech 5

Cost: Low, often public domain

Descriptors: Dataform. People with sufficient Cognitech training can do this without a lens, making this a Procedure.

Beanstalks

This is a catch-all term for various "orbital elevators" that take cargo from ground level to planetary orbit relatively slowly. Civilizations without access to wormholes use these to launch satellites, passengers, and cargo more efficiently and comfortably than with chemical rockets. Beanstalks are typically constructed from nanofiber and reinforced electromagnetically. Beanstalks that are poorly maintained or sabotaged will fail catastrophically.

Tech Level: Stringtech 5+ and Nanotech 4+

Cost: Exorbitant

Descriptors: None

Biofeedback

A general suite of genetic enhancements, this allows conscious control over normally subconscious faculties. Those with these enhancements can hold their breath longer, turn off their senses (including your pain sense), or even enter a state of hibernation. Characters with a Biotech Capability of 5 or higher almost always have this suite built in.

Tech Level: Biotech 5

Cost: Low to your children, Moderate for you.

Descriptors: Inheritable, Internal

Builder Microbots

Actually several dozen different varieties of microscopic robot, these "builders" take care of most modern construction projects. Each type of building material is carried into place by a different species of microbot, with other species bonding materials together or "supervising" the project. Human overseers are still needed, but the physical work is done by billions of tiny robots.

The time required increases with the size of the object. Something fist-sized might be completed in half an hour, while a building might take several squads of microbots all week to finish. The higher the Nanotech level the bots have, the faster they can work.

Tech Level: At least Nanotech 5
Cost: Moderate
Descriptors: Microscopic, Auxon

Cerebral Firewall

These Cognitech devices are designed to protect characters from dataform onslaughts. The cost includes a subscription to an service that updates the firewall with the latest techniques in mesh-hacking defense; without these services the firewall's effectiveness will degrade over time. Everyone with a mesh will have some basic level of these; the paranoid or those who store important data in their brains will have improved models that give +1 or +2 on defensive rolls against Mesh-Hacking.

Tech Level: At least Cognitech 5
Cost: Low to Expensive
Descriptors: Internal, Dataform

Community Planning

From the basics of city planning — traffic patterns, garbage pickup, zoning regulations and more — to the intricacies of creating a new civilization, this procedure improves the way that people work together. A community created with the aid of such procedures gives those seeking to defend it from various hazards two extra points of Reserve.

Tech Level: Metatech 3 for cities, 6 for societies, 9 for civilizations
Cost: Low, Expensive, or Exorbitant, respectively.
Descriptors: Procedure

Competence Lenses

Competence Lenses are a boon to many people, allowing them to benefit from what others have learned in an immediate and direct manner. These lenses effectively give you the accumulated knowledge and experience (and, to a lesser extent, the viewpoint) of a professional in a particular field. They include fast access to hierarchically structured databases and compact mental schema that are used by experts in that field, as well as the feeling that all of this is a natural and normal thing for the lens user — there is no period of disorientation, no learning curve.

Purely mental activities that rely primarily on cognitive horsepower and familiarity with a field are the easiest to encode. The more physical activity or creativity a particular profession requires, the less effective a Competence Lens can be. These Lenses cannot give you physical grace or "muscle memory," nor do they improve any of your more general physical or mental faculties. They merely give you some of the abilities of an expert. Truly high-level experience is difficult to simulate, as it often requires a degree of creativity not seen in novice work. One can be a good computer programmer through brute mental force; to be a great programmer requires inspiration. Other cognitech techniques can and do provide that, but not these Lenses.

The following table shows what level Competence Lens can be created for a particular Profession:

5	Crisis Control, Explorer, Farmer, Financial, Legal, Locality, Programmer, Researcher, and Teacher
4	Courtesan, Criminal, Engineer, Media, Medical, Police, Political, Religious, and Soldier
3	Artist, Spacer, and Spy
2	Athlete and Outdoorsman

Competence Lenses of any level can be created at Cognitech 6 or higher, but treat their Capability rating as 5 + level for the purpose of writing them (as per the invention rules on page 154).

The drawback of a Competence Lens is that people with actual experience in a particular field have seen many different Competence Lenses before, and each one acts in the same way on every person — in other words, they're predictable. This is no drawback when the lens user is working alone, but repetitive actions are a major problem when it comes to a confrontation. Like most pieces of technology, Competence Lenses come with no build-in Reseve.

Tech Level: Cognitech 6
Cost: Moderate to Expensive, though many civs make a level 3 Crisis Control lens available for free.
Descriptors: Near-c, Energy

Digital Overlay Schizophrenic Disorder

Especially common in Tao space, but visible in nearly every Mesh-using culture, is Digital Overlay Schizophrenic Disorder (DOSD). Certain individuals, primarily those whose unaugmented minds are underdeveloped (such as children and the mentally or emotionally ill), construct or obtain digital worlds for themselves that they find far more compelling than their everyday lives. The stereotypical example is that of the Tao "hero Lens", wherein the wearer perceives others' reactions to him to be far more favorable than they actually are, as well as perceiving his own actions to be highly effective and competent. Other examples abound in digital game worlds and daydream interactives.

It is the nature of most of these Lenses to allow some interaction with the analog world. For instance, a young student may use a Lens to perceive vector calculus as a battle against a terrible monster, allowing the memory centers of her mind to retain the formulas and concepts necessary while stimulating her interest with the story. When a teacher asks her a question, her mesh translates it into a deadly sword blow; when she responds with a shield and counterstrike, her mesh translates and allows her to speak an answer.

In most cases, individuals retain the ability to tell fantasy from reality, which leads to periods of reduced Lens use and an eventual return to reality. However, in some cases, individuals find their imposed mental state and perceptions to be so much more favorable that they effectively "leave reality behind." Some of these individuals retreat to a catatonic state, but the majority still interact with the world in some fashion, which can actually be more harmful to their psyche.

Used in a specific context, such Lenses are powerful tools. Used constantly, the wearer's mind retreats farther and farther into the fantasy world, ignoring alarms set to return them to a normal perceptual state. The mesh, left to its own devices, tasks the wearer's brain for what responses he or she might give to situations occuring in real life. A dichotomous mental state then arises, with two psyches in the same body, using the mesh's processing power to run at full speed. The newer personality is often shallow and unresponsive, which is one way to detect DOSD in its intermediate stages.

In the worst cases, DOSD becomes an interative, layered disorder, with the new shell personality becoming a victim of the syndrome as well. Soon the third, fourth, fifth, etc. psyches emerge to handle real-life events. This eventually results in either total mental overload (an aneurism), or in catatonia.

Recovery is difficult at best, since many of these cases are discovered only in the very late stages when the original psyche has been lost entirely.

Inspector Gadgets

Patent Office Inspectors have a generous paycheck, and can afford Low-cost items without really being concerned about it, but still have to save up for Moderate items. Inspectors can often requisition devices that are necessary for their missions, but they should have a backup plan in case their requests are denied.

In general the Office prefers to send its operatives into the field *without* massive world-breaking weapons. Not only is it good for interciv relations, it also improves Inspector success rates. Blasting away at the first person you suspect is often a major mistake. Trying to requisition a half-kilogram of antimatter will probably get you fired. Perhaps a Theme like Plot Immunity (Fast Requisition) would help out.

Compression Beams

These weapons fire a coherent beam of gravitons, crushing anything in their cylinder of fire into a spaghetti-like string. Their damage is rated at Stringtech 6.

Tech Level: Stringtech 6
Cost: Low
Descriptors: Near-c, Energy

Computers

Almost every single item listed in this chapter either depends on computers for use (Lenses, Psychohistory, Memetics) or has one built in (everything else). In general, anything you've heard of a computer doing in real life, the ones in S.A. can do with no delay. If you need a computer, typically all you need to do is talk, and one will respond. If you're from a high-tech culture, they're built into your clothing. If you're in high-tech surroundings, they're integrated into the buildings, roads, and home appliances. They are effectively omnipresent, and the term "infosphere" is used rather than "internet" or "web" because computers and information flow are more like the atmosphere on modern Earth than the computers there.

The average computer is about the size of the last joint on your fingers, and provides more power than all the computers on 21st century Earth. A truly high-end computer would be roughly the size of 20th century desktops, and could hold a Stored or sophisticated AI inside. At high levels of Nanotech, one can build self-assembling, low-end computers into fingernail polish.

Computing power is a public utility in some civilizations (Masquerade, Stardwellers, Union), a private right in others (Tao, Mechanica, most Indie worlds), and still others treat it as a privilege reserved for the wealthy (Cargo Cults). Even if it's not a utility (like water or electricity), one can almost always find companies on the infosphere who are willing to sell computer time to programmers with particularly complex jobs.

The only significant delay when using the infosphere is when information has to be accessed from off-planet, typically via wormhole. Not all information is free, but significant amounts of it are, depending on which civilization you're part of.

Tech Level: n/a
Cost: n/a
Descriptors: Near-c, Energy

Data Ghost

An AI that's a little short on the "I" part. They're very good at pattern recognition, and can respond with certain recorded messages and programs, but they have no real volition or consciousness. The classical data ghost is a program that looks out for particular events on the infosphere, and reports them to a human supervisor. Used by the police, as well as anyone who provides a "storefront" on the infosphere.

Tech Level: Cognitech 4
Cost: Low
Descriptors: Dataform

Decay-Induction Fields

These fields induce normal matter moving above a certain speed to spontaneous decay into weakly interacting dark matter. Any objects moving above the speed of a slow gunshot decay and pass through the target without effect. This defense is rated at Stringtech 8. Note that rooms with this field active will slowly be reduced in temperature and pressure, as all of the high-velocity air molecules disappear.

Tech Level: Stringtech 6
Cost: Low
Descriptors: Supersymmetric, energy-transparent

Dermal Microbots

The swiss army knife of nanotech, dermal microbots are tiny robots that crawl around on one's skin. A base station provides coordination and power. When some of them are destroyed or reach the end of their useful lives, the base station fabricates more in order to maintain their numbers.

The robots can sense their user's position and voice, allow interface with computers, project images onto flat surfaces, communicate with other people's microbots, and even perform minor sterilization and hair maintenance. They can spread wide to act as a telescope lens or parabolic microphone, or cluster to inspect tiny objects. As a side effect, dermal nanobots can use their tiny lasers to clear away dead skin and smooth out wrinkles, making people look younger.

Tech Level: Nanotech 5
Cost: Low
Descriptors: Microscopic, Auxon

Dirty Bomb

Not a true nuclear bomb, just a lot of radioactive crap strapped onto some high explosives. Dirty bombs are still quite dangerous, as cleaning up the radiation can take a long time. The actual explosion is a Stringtech 5 attack, but their primary use is for the fallout, which can be a weapon used in biowarfare. Treat it as an attack with the Medical skill, with an extra three points of Reserve lost on a failed roll. A favorite Darwinian weapon.

Tech Level: Stringtech 3
Cost: Medium
Descriptors: Energy, the fallout is also Microscopic

Dissociation Beam

These beams are electromagnetic waves tuned to a particular molecular bond strength (or, in higher-tech versions, several different bonds at once). The resonance they induce overloads those bonds, and matter literally falls apart at the touch of this beam. When used in combat it can deal damage rated at up to Stringtech 6. Its "tunability" is exceptionally useful against nanophages, since it can strike the bonds holding the phages together without severely damaging human beings. Crisis control personnel armed with these weapons receive a +1 bonus on rolls against nanophage blooms. For this reason, dissociation beams are common police weapons in high-tech societies.

Tech Level: Stringtech 5
Cost: Low
Descriptors: Energy, Near-c

Drugs

Alcohol, LSD, and crack are like sledgehammers to the system. The drugs available in the modern age are significantly more sophisticated. The current state of biotech and nanotech allow drugs to block or overload very specific receptors in the brain, and then wash straight out of the body. Imagine alcohol without the hangover, or morphine without the physical addiction. You can do the reverse, too — imagine LSD that isn't water-soluble, and stays inside your brain for months. An easy guideline is this: think of something a drug (or nearly any sort of biological agent) does today, and either take out the side effects or isolate them and use them, as strong or as weak as you like.

Having a mesh also opens billions more possibilities. Not only can you buy a Lens to simulate your drug of choice perfectly, but you can get another one to get rid of the hangover and a third to help you reinforce your choice to quit (if you even make such a choice). But why stop there? Designer drug Lenses, recorded dreams and fantasies, bizarre hallucinations guaranteed not to make you accidentally throw yourself off the rooftops, satori Lenses (making you feel like you've been enlightened), buying express computer time to make yourself "smarter," and more.

Of course, you have to *choose* to do these things to yourself. No one can do them to you unless you've been foolish enough to install a slave lens. However, there are still dangers. "Trojan horse" Lenses can wreak havoc on your mind and body through your mesh. Even a child knows no one can control you through a neural mesh... but when you run a Lens, you're turning over control to the Lens' programmer.

Civilizations that have freely available or unregulated drugs tend to, by necessity, develop a culture that watches carefully for drug overuse. While most people are unlikely to go on a serious bender, others will end up sliding into a psychotropic stupor unless they have a serious support network.

Tech Level: Bio 2 for most drugs. By Bio 4 you can remove or isolate side effects to your heart's content.
Cost: Typically Low
Descriptors: Typically none, but sometimes Auxon, Dataform, Microscopic, or Procedure

Electric Power Plants

Initially, power plants are hydroelectric or coal-burning. For civilizations who have progressed past that but who are not advanced enough to generate and control antimatter, fusion plants provide the majority of electrical power. They have large startup costs, but are easy to obtain fuel for, and inexpensive to maintain when compared to fission plants. Around Stringtech 7, antimatter becomes available and the cost of electricity drops significantly. One still has to get the electricity from place to place, which is the major cost.

Tech Level: Stringtech 2, 4, or 7
Cost: Exorbitant
Descriptors: None

Emotion Beam

The League of Independent Worlds' low Metatech scores make it difficult for them to induce emotions in their foes, so they worked around the problem by creating these. A typical example of the Independents' bizarre technology, this nonlethal weapon induces particular electrical patterns in a target's brain. Its effect is to induce an overwhelming emotion in the target. Helplessness, fear, and calm are common choices.

In physical combat, treat this as a nonlethal weapon (with Power 7) whose effects are resisted by Metatech or a Metatech-based Profession. In a Metatech assault, treat this as a weapon with a Metatech rating of 7, which uses Nanotech, Police, or Soldier to attack and is resisted normally. In both cases, use the wielder's Stringtech Reserve if Reserve points are desired. This weapon imposes a -2 penalty to hit because of the exceptional precision required. It cannot affect anyone but its target — there is no "collateral emotional damage."

Tech Level: Stringtech 7 and Cognitech 6
Cost: Medium
Descriptors: Near-c, Energy

Environmental Fabrication

Environmental fabrication creates self-contained, self-maintaining ecological environments. It is very useful in the construction of generation ships and space stations, as well as for biological research. This technique is limited by the size of the environment to be created; higher levels of technology relax that limitation. See Terraforming (page 149) for a significantly larger-scale version.

Tech Level: Biotech 7, Nanotech 4, Cognitech 6
Cost: Moderate to Expensive, depending on size.
Descriptors: Procedure

Ethics Lens

These lenses impose a system of ethics on the people who wear them. They do not necessarily force those people to follow said morals; instead the lens points out any actions that go against the chosen ethical model well before events get out of hand. Because such lenses smack of the Union, most civilizations only use these lenses in tightly restricted situations, such as for criminal rehabilitation or law officer training. They are also occasionally found in corporate settings, where those in leadership positions get such meshes and wear them while at work, reducing the risk of corruption and unethical behavior (as well as the company's insurance premiums). The downside is that these lenses are programmed by fallible, sometimes even dishonest human beings.

Tech Level: Cognitech 6
Cost: Public domain
Descriptors: Dataform

Eye-Catching Stance

Those who know this procedure are assured that others cannot ignore them. Whether used to make a grand entrance or simply to keep someone from walking away from your conversation, Eye-Catching Stance deals an extra point of Reserve in all one-on-one Metatech-based conflicts, and also prevents others involved in the conflict from simply walking away or filtering out the character with a mesh for the first three timeslices of conflict. This technique must be used as a character's first action in a conflict, and cannot be used again later in the same conflict.

Tech Level: Metatech 7
Cost: Moderate
Descriptors: Procedure

Fast-Foam

A spray can full of foam, which expands greatly and hardens almost immediately (Biotech 10 or Stringtech 4 to break). Developed by the Spacers to help seal air leaks, fast-foam has also found some use as a "non-lethal" weapon (it can still easily cause suffocation) in other civilizations.

Fast-foam can be used in physical combat as a non-lethal weapon rated at Stringtech 6.

Tech Level: Nanotech 4
Cost: Low
Descriptors: None

Fission-Fusion Beam

This beam floods an object with particles that carry the weak nuclear force, inducing a spontaneous nuclear reaction. Elements less heavy than iron fuse together; those heavier quickly fission. The effect is similar to that of a dissociation beam, but on a deeper level. These weapons deal damage rated at Stringtech 10, and also do an extra point of Reserve damage.

Tech Level: Stringtech 9
Cost: Moderate
Descriptors: Near-c, Supersymmetric

Technology

Familiars

Familiars are AIs who assist characters in computer-related actions. They come in three varieties: Servile, Scout, and Bonsai. Each type provides the use of the Programmer profession, as well as certain other benefits. They are a potent source of knowledge, and can assist less intelligent characters very well, but truly powerful familiars will have their own agendas.

Servile familiars are not true AIs, but programs designed to emulate a personality and self-awareness. They are significantly less powerful than the other varieties, and aren't free. However, they have no agenda of their own and are significantly safer. They can still aid in infosphere searches, voice-recognition, and repetitive tasks, and often have links to their creating company's databases. They also take up less space, and are typically upgradable. If a Servile familiar's Cognitech is more than one point higher than any of its owner's Capabilities, that character's Import drops by one point.

Bonsai AIs are independent machine intelligences that have intentionally stayed small. Perhaps they find humanity interesting. Perhaps they find expanding into a planet-sized Aia wasteful (or simply boring). Maybe they like the comparatively slow pace of life at the organic level. Though not as capable as Scouts, Bonsais are easier to trust. They certainly have their own agendas, but their employers can at least be sure that a bonsai doesn't have anyone else's agenda programmed in, or a secret back door that lets their true master control them. Most trustworthy Bonsais are "bonded" by the AIRCC (AI Relations Cultivation Corporation, run by a group of Stored), who ensure their lawfulness, stability, and responsibility. If a Bonsai familiar's Cognitech is more than two points higher than any of its owner's Capabilities, that character's Import drops by one point.

Scout familiars are agents of the Aia. Whereas human beings use microbots and nanomachines to collect data from the air and energies around them, the large AIs use "tiny" self-aware scout programs. These familiars are able to retrieve certain types of information more easily, due to their link with the Aia. They are also experienced in surveillance and reconnaissance. However, they are also pawns of the Aia, programmed to gather information primarily about the other AIs, but also about humanity. You can never be sure what sort of information they're sending out. If a Scout familiar's Cognitech is more than three points higher than any of its owner's Capabilities, that character's Import drops by one point. A Scout familiar is an excellent excuse to purchase Comprehension (My Familiar Told Me).

All familiars can use the Programmer Profession. Serviles have it at level 3, Bonsais at levels 4-7, and Scouts at levels 5-9. Their Cognitech and Metatech are typically within one point of their Programmer scores. Bonsai familiars typically have several Locality professions at 3+. Scout familiars have the Spy profession at level 6+. Serviles have no additional skills, but are more willing to act as answering machines, perform infosphere searches, and carry out other tedious tasks.

To have a familiar, a character must provide it a computer to "live" in (at least 50 milliliters), pay for its activities, and maintain a congenial relationship with it. Most will demand constant infosphere access, and may refuse to follow the character into a region that the infosphere does not reach. Serviles can simply be purchased, but Bonsai and Scout familiars are intelligent living beings. They are "summoned" by creating an infosphere beacon that broadcasts the summoner's DNA, typically obtained through a prick on the finger or a piece of hair. Many potential familiars will look over and possibly even simulate the code, decide who they're interested in working for, and contact that person to negotiate terms.

Tech Level: Cognitech 4+
Cost: Low, but recurring
Descriptors: Dataform. Some Scouts are Auxons.

Genetic Modification Techniques

There are three different varieties of genetic modification in S.A.: gene therapy, post-facto genetic engineering, and genetic resynthesis. Gene therapy exists in the 21st century, though it is in its infancy. Gene therapy is primarily used to treat diseases, especially hereditary ones. Post-facto genetic engineering is a more serious procedure that uses a retrovirus to alter a patient's genetic code, within the normal range of human ability and form. It can take up to seven years for these changes to take effect, and the process requires various drugs to keep the patient's body from rejecting organs and body parts whose code changed over earlier. Some alterations can be done more quickly, but the drugs will be necessary for the rest of the patent's life. Failing to take them is effectively declaring genetic warfare on yourself (use the rules and timescale for biowarfare conflict on page 111). Genetic resynthesis is a yet more radical method that utterly alters the human form, allowing the sorts of changes Stardwellers make. It can take between two months and a year, and the subject remains in a chrysalis until it is complete. It can add Biotech enhancements with the Internal Descriptor, or even change a subjects' Biotech Capability.

Tech Level: Biotech 3, 6, or 9

Cost: Starts off Moderate, and decreases every two Tech Levels above the level at which it's introduced.

Descriptors: Procedure, Inheritable

Household Biosensors

While these come in many different variations, they all share the same function: they identify simple medical problems that can't be easily found from the outside. A typical version works overnight, and is often used for young children. The blanket and sheet on their bed, in addition to being heated to the proper comfort level, give gentle ultrasonic pulses and MRI scans from time to time. They then send this information wirelessly to the parents' bedstand, which projects warnings on the bedroom wall if there was a problem found overnight.

Tech Level: Biotech 3, Nanotech 4

Cost: Low, often public domain

Descriptors: None

The Infosphere

The infosphere is a continual flow of data that blankets the surface of nearly every planet in the civilizations. The data is broadcast by satellites, radio towers, microscopic lidar relays, and nearly anyone with a mesh or dermal microbots. It is accessible at any point above the planet's surface. Below the surface, reception typically suffers.

Because of the massively parallel and distributed setup of the infosphere, the data transfer rate is exceptionally high. Data not longer than the human genome and not traveling off-planet typically arrives within a second. This nature also allows those connected to the infosphere to tell when there are particularly large transfers taking place, including mesh-hacking attempts.

It is not uncommon for those with meshes to "project themselves up" to the infosphere, where they can experience a simulated environment. This is useful for meetings, entertainment, communications, and so forth. Projecting an image up takes no effort, while projecting one's awareness up typically takes over the whole brain, blocking input from the real world. People can also superimpose items from the infosphere (such as regional maps, other peoples' projections, topographical data, and so on) on top of their normal vision. This is very valuable if done properly, but can be distracting if done poorly. Simply adding a mental tag that says "this is not real" is not enough, as this causes other complications.

The Stored view analog reality entirely through its interactions with the infosphere. Thankfully, these are copious in most regions. Tao space, in particular, has an immense density of recording sensors, though access to many of them will cost money. Many objects also have a light infosphere presence. They typically require authentication of a person's existence or authority before they will accept commands through the infosphere. Dermal microbots are technically not on the infosphere, but on a "personal subnet." If the bots' owner has a mesh, his or her brain acts as a firewall between the personal subnet and outside world, and only a successful mesh-hacking attempt will allow access to the subnet and control the bots.

Most people broadcast "tags" that say a little about themselves — their name, occupation, age, and miscellaneous personal data that one might find on a personal homepage. This is true even in Masquerade and Roamer surroundings, though tags there are notoriously unreliable.

Reliable stores of information are easy to find. Many are free, though they may have to charge for certain pieces of recent or copyrighted data. Truly important or dangerous repositories of data are kept off the infosphere. More often, however, access is

merely restricted. Gaining access is nigh on impossible without the right clearance, since access codes can be based on brainwave patterns.

Since nearly all of the relays included in the infosphere are quantum computers, it is always possible to tell whether your communications have been intercepted. There's just no way around this — if you intercept someone's communications and try to decrypt them, someone will know that it happened, though they may not be able to figure out who was involved.

Nearly all commerce is done via the infosphere. Those without meshes can use verbal commands and gestures to dermal microbots; those without either can use datapads, PCs, and motion-sensitive scanners that are present in most public replicators.
Tech Level: Cognitech 5
Cost: n/a (Expensive to build one for a planet)
Descriptors: Dataform

Inorganic Cells
At a certain level of nanotech it becomes possible to make living cells out of entirely "inorganic" materials, creating a parallel biology that relies on different processes from those that most evolved creatures use. Initially such cells are merely a curiosity, but when they are combined with existing biotech techniques, a whole new range of creatures become available, with the sorts of properties usually found only in nanoengineered materials: superconductivity, high tensile strength, data processing capabilities, and so forth. These cells are especially useful in biowarfare and nanowarfare, adding +1 to offensive rolls when deployed.

Some particularly adventuresome (read: neophiliac) Stardwellers have used inorganic cells and genetic resynthesis to transfer themselves into an entirely inorganic body, a years-long process that leaves an unmistakable change in personality as the new brain works in utterly different ways from the old. The consequences of this transformation are still playing out.
Tech Level: Nanotech 9
Cost: Moderate
Descriptors: Near-c, Supersymmetric

Instant Response Technique
This technique allows characters to react to any situation without hesitation. The player in question is allowed a number of seconds equal to the character's

Cognitech x2 to come up with their character's "instantaneous response". There are many versions of this technique, and each one has a particular weakness — a situation that can still shock those who use it. A version of IRT without that limitation would be a good example of Cognitech 11 technology.
Tech Level: Cognitech 8
Cost: Low to purchase, Moderate to develop a new version
Descriptors: Procedure

Internal Simulation Processors
These are supplemental devices, augmenting the computers that are already attached to most Meshes. They provide an expanded arena specifically designed for simulation of the real world in great detail. The amount of storage and processing power is sufficient even to maintain a Stored within your own mind, though their Cognitech will drop by four points thanks to the requirement of sharing their mind with yours. Since only the Stored currently have the level of Cognitech required to create these devices, this is what they are most commonly used for, letting those friendly to the Stored "smuggle" them into restricted areas and unfriendly civilizations.

These processors can also be used to "test out" various situations and environments, allowing a character to guess at whether or not a particular action will yield the desired results. The accuracy of this guess depends on how well the environment was modeled, but in general a Cognitech roll of 75+ will yeild a correct assessment of probabilities unless there are surprises in store that a supergenius-level intellect could not anticipate.
Tech Level: Cognitech 10
Cost: Moderate
Descriptors: Internal

Inversion Beams
One of the deadlier weapons that is commonly available, an inversion beam switches a small amount of matter into antimatter *inside* the target, which results in a very messy explosion. The weapon works through a second-order dark matter interaction, and so is capable of firing through almost any solid object. The damage is rated at Stringtech 9.
Tech Level: Stringtech 7
Cost: Low
Descriptors: Near-c, Supersymmetric

Junction Agent Identification Technique

JAIT identifies the qualities and characteristics of an individual who would be best suited to joining two (or more) factions, and also identifies the ideal time for this person to act. The technique also reveals how joining the two factions will come about: skilled statesmanship, an act of bravery, political double-dealing, martyrdom, leadership by example (or counter-example), a cult of personality, and many other possible methods.

JAIT works best when applied to a small number of large groups, or to groups without Core Values (such as most major corporations). While the joining could theoretically result in a near-total merger of the two factions. it most often means the creation of a splinter group with major aspects of both originals.

Unfortunately for the impatient, JAIT does not provide immediate results. The "best time to act" is often years in the future. Further psychohistorical manipulation can be used to shift the ideal time earlier or later, to change the chances of successful unification, or to encourage individuals with these characteristics to arise.

JAIT also does not provide the identity of the individual required, merely the characteristics that define him or her. Finding someone who meets the exact specifications given (and thus has the greatest chance of success) can take a great deal of time. Less compassionate civilizations will not hesitate to use this technique to splinter and weaken their opponents, creating appropriate individuals through the use of Lenses.

Research proceeds apace on the development of JACIT: the Junction Agent Cluster Identification Technique. This advanced protocol promises to optimize the probability of success (or minimize the time required before action) by identifying the characteristics of entire groups at once rather than a single individual.

Tech Level: Metatech 8
Cost: Expensive
Descriptors: Procedure

Lenses

A Lens is a program that runs on a mesh. The name comes from the idea of seeing the world in a different way, like looking through the lens of a magnifying glass. Lenses are useful for a thousand different purposes. Everything that one does with a Mesh beyond simple memory storage and cognitive acceleration requires a Lens of some kind.

In this chapter one can find Awakening, Competence, Ethics, Mental Repetition Override, Persona, and "Rest Easy" Lenses, which provide examples of this technology from the straightforward to the profound.

Tech Level: Cognitech 5+
Cost: Varies; see the examples elsewhere in this section.
Descriptors: Dataform, Internal

Memetics

Memetics is a branch of metatechnology concerned with ideas that resonate with the human mind. It is as complex a field as string theory or genetic computation, with thousands of factors determining what a single person might find to be an irresistible idea. Memetic training is a must for any would-be politician, psychologist, advertising designer, or public relations specialist. The proper collection of memes will make a presentation or oration much more effective, and have a significantly greater effect on public opinion. Resisting the effect of various memes is the focus of much metatech research, and memetic defenses are trained into any individual with a high Metatech score.

Memetic tools can be created to improve one's social ability, but they must be focused for use against a particular individual or group. They require weeks of work to create, detailed personal information on the target, and the Engineer (Metatech) skill. The smaller your "target" (i.e. the fewer people in the group you wish to affect), the more effective your tool will be.

Tech Level: Metatech 5
Cost: Expensive to develop, none to use
Descriptors: Procedure, some are Auxons

Memory Recombination

This technique is used by the Replicants to keep their various instances on the same pages. Each time they make a copy of themselves, the memories from the scanned version get stored for recombination with future instances, thus insuring that they remain the same "individual."

Tech Level: Cognitech 7
Cost: Government-subsidized in Replicant space. Illegal elsewhere.
Descriptors: Procedure

Mental Repitition Override Lens

This was originally created for a single purpose: to provide something to get that goddamn song out of your head. MRO Lenses temporarily suppresses the activation of the memory of a particular tune, until it stops trying to repeat. They can be tuned to let you occasionally remember the song's existence, let it play for one repitition, or suppress it continually so that you start actually forgetting it. Some people adapt these Lenses to work for similar purposes, such as forgetting an ex-girlfriend or a suppressing a bad habit.

Tech Level: Metatech 5
Cost: Moderate to develop, none to use
Descriptors: Dataform

Microbot Fabrication Unit

These devices allow the design, creation, and deployment of new varieties of microbots. They are available at Nanotech 5, but by Nanotech 7 they are sufficiently small and self-contained that they can be implanted in a human being without ill effect. Builder bots and dermal microbots are two examples of what this device can do. It can also built nanophages, so long as this unit is built at a tech level appropriate to the phages — to create Type II phages, this unit must be built at Nanotech 8 instead of 7.

Tech Level: Nanotech 7
Cost: Low
Descriptors: Internal

Modern Paintbrush

This paints any color you desire, onto any surface, automatically choosing the type of pigment that will work best. You can set it to use glue, to avoid (or specifically target) living organic matter, or to avoid surfaces that are already painted a different color. It's more of a combination scanner-printer that you can carry around with you. The handle can hook directly to the user's dermal microbots or mesh, allowing direct mental control. Overkill? Perhaps.

Tech Level: Nanotech 4
Cost: Public domain
Descriptors: None

Nanophages

Nanophages are most civilizations' worst nightmares: self-replicating weapons. Nanophages simply take whatever they can find and turn it into more nanophages of the appropriate variety (though some more complex types also build other structures, like computing hubs, to aid them in their assault).

Type I nanophages use stored power to start their work, and then build small power stations and rely on broadcast power. They can consume almost any matter. Type II phages rely on oxidation to provide power, and spread much more rapidly — about as quickly as a forest fire. They can only affect burnable substances, and need oxygen to work, but are nonetheless much more dangerous than Type I phages.

Most nanophages operate within a particular time limit, to prevent them from totally devouring a world. Older nanophages rely solely on ATP (essentially a biological process), and are only about as fast as a quick disease or mold.

Type I nanophages are rated at Stringtech 7 for damage, while Type II are rated at Stringtech 9. Both are used in physical combat or in the Nanophage Bloom type of conflict, *not* in Nanowarfare.

Tech Level: Nanotech 6 (type I) or 8 (type II)
Cost: Moderate
Descriptors: Microscopic, Auxon

Nanotubes

These become available at Nanotech 3, but don't really come into their own until they become mass-producible at Nanotech 4. Nanotubes are tiny tubes just a few atoms across that see use in exceptionally small computers, neural meshes, clothing, sensors, scientific equipment, and eventually even public works such as roads, buildings, and bridges. They can be built with a wide variety of different properties, which makes them useful for materials engineering.

Tech Level: Nanotech 3
Cost: Public domain
Descriptors: Microscopic

Nanoweave Greatcoat

This long coat provides protection against a wide variety of ills. The fabric is entirely made of woven nanotubes, almost unbreakable. The central layer is insulative (against heat, electricity, and radiation), and also acts as a battery for the coat's lights, emergency radio beacon, heater, and rudimentary air conditioning. They provide protection at Stringtech 5.

Tech Level: Nanotech 5
Cost: Low
Descriptors: None

Neural Meshes

Neural Meshes allow human beings to communicate mentally with computers, controlling them and sending messages through them. Since the infosphere connects nearly all computers, this also allows inter-personal communication and near-instant access to any public information, such as a cultural guidebook to prevent faux pas. Meshes enable the use of Lenses (see above), and of the human/computer fusions that allow high-level Cognitech to work so well. They require about a year of adaptation to get used to. A Neural Mesh with an exterior control unit is referred to as a "slave mesh," since it allows others to control the individual with the mesh. The Cognitive Union installs these in every citizen. Meshes are perhaps the most influential technology ever created.

It is possible to have a "partial mesh" installed. For instance, it could give only access to your visual cortex, thus allowing it to project images into your brain but not give (or receive) commands. One commonly-used partial mesh is a "spy mesh," which allows you to install a secondary personality and switch between it and your real personality at will. For all purposes this persona is a completely different individual, with its own Metatech and Cognitech scores (rated up to your own). Partial meshes, including spy meshes, are almost completely undetectable. Only brain surgery will uncover them.

Tech Level: Cognitech 5 & Nanotech 5
Cost: Moderate
Descriptors: Internal

Nuclear Bombs

An oldie but goodie. Nuclear bombs are still some of the most powerful, smallest, easiest to build explosive devices around, and are much more stable than antimatter explosives. They deal damage with an effective Stingtech 9, which drops by one point per hundred yards. Stronger or weaker bombs have larger or smaller areas, but still deal the same amount of damage in the center. The effects in the area drop by one Stringtech level per 20 seconds. Those defending themselves against nukes in person lose an extra 10 points of Reserve on a failed roll because of their massive blast radius, continuous duration, and multispectrum effects.

Tech Level: Stringtech 3
Cost: Exorbitant
Descriptors: The fallout is Microscopic, and the explosion is both Energy and Near-c.

Pathogenesis Organ

These are organs within a person's body that can genereate certain varieties of microbial and viral infections. The organ's wielder typically releases these on others by coughing or sneezing, but could use physical contact or bodily fluids for certain diseases. Wielders can choose which pathogens to release by eating specific foods the day beforehand, which act as "triggers" for the organ. Each organ has its own set of unique triggers and pathogens. Pathogenesis Organs can be used to enable a single person to engage in Biowarfare conflicts as an attacker *or* defender for a large group. They can also be employed in physical combat, where they're rated at Bio 8, and the target defends with Biotech, Crisis Control, or Medical –1 rather than the usual scores.

Tech Level: Biotech 8
Cost: Moderate
Descriptors: Internal

Pattern Recognition Enhancement

PRE is a method characters can learn for out-maneuvering people they've fought before, letting them see when their opponents are trying to trick them based on timing or repetition (as often happens in any conflict). When you fight someone you've fought before, in the same sort of conflict, you receive a +1 bonus to your defensive rolls. You can also recognize when the opposition in a large group conflict (such as Psychohistory) is being directed by someone you've clashed with before.

Tech Level: Cognitech 9
Cost: Moderate
Descriptors: Procedure

Persona Lenses

Persona Lenses are cognitech "filters" that can be used in conjunction with a Mesh (see below). They enable someone to view the world through another person's eyes, metaphorically speaking. One might give a person a happy, upbeat viewpoint on the world, while another might impose the attitudes and personalities of a war-torn combat veteran. They are great tools for negotiators, and for those who wish to mimic a particular person's talents (albeit badly) without taking the time for training. Someone who dons a Lens that duplicates his or her own viewpoint will see no difference in the world whatsoever. Most Persona Lenses require a full nanowire mesh, rather than a partial mesh, to run properly.

Tech Level: Cognitech 7
Cost: Moderate
Descriptors: Internal, Dataform

Fun Things to Do With a Mesh

All of these require some expertise in Programming or Cognitech Engineering (or both), but you can also download Lenses from the infosphere to do these things for you. Think of this as a short list of the ways in which the neural mesh has changed the world.

- Filter out any advertising you see.
- Keep a database describing the local morals and customs, and set it to warn you if you're about to break one.
- Never forget a name or a face.
- Impose directional lines over the road you're driving on, to get you safely and quickly to your destination.
- Relive past victories.
- Relive past orgasms.
- Access a review/rating system for any book, movie, etc. you see.
- Give yourself synaesthesia.
- Get used to synaesthesia enough to operate in the dark solely through hearing.
- Set up self-analysis routines to tell you what you're doing wrong at the end of the day. Most people find these annoying, but those who listen to them often find great benefit in it.
- Listen to a single person in a crowd by filtering out everyone else's voiceprints.
- Spend a day as one of your friends, and have him or her go through your day.
- Edit all the annoying people out of your life. While you're at it, why not make yourself think you're suave and cool.
- Set up a shared mental space for you and your friends to communicate in.
- Simulate any environment you like, for historical recreation or for entertainment. Live-action roleplaying will never be the same.
- Record and map an environment with microbots, and then "shrink" yourself into it to inspect it yourself.
- Superimpose faint constellation lines on the night sky, or "tags" that show your friends' homes on distant planets.

Limitations of Meshes

Meshes can do nearly anything to someone's mind. What can't you do with a Mesh?

First, you can't quickly and permanently change a person's memories. You can falsify them, provide fake ones, cast doubt on them, or otherwise screw with someone's active recall of their memories, but once the program doing that is removed, the experiences are still there in long-term memory. You can change long-term memory if you're given enough time to do it; one month per point of Metatech score should be enough to change a particular memory forever, and even then things may be a little confusing from time to time. The human brain seems to store information in many redundant locations.

The same goes for personality, morals, Core Values, sexual orientation and so forth. Those are the result of your life experience (and, to a lesser extent, genetics) and thus are even harder to change than a single memory. Again, you can mask your feelings, provide false CVs, and make yourself into an uncaring monster, but once the lens is gone, your old conscience returns.

You can't affect kinesthetic abilities, such as "muscle memory" and rhythm. You can mimic it somewhat, but you can't impose hand-eye coordination or grace just by writing a Lens for it.

Finally, you can't do much to a dead brain. You can read the memories of those who have died less than two minutes ago, but unless the memories were stored in the mesh's auxiliary computer, there's no way to retrieve them after that time. You also can't control the bodies of dead or brain-dead people. Access to Biotech and Cognitech facilities at 7+ can read some long-term memories from undecayed brains, but it's spotty at best. People in a coma can often be reached through their mesh, but there's no guarantee.

Photon Splitting Field

Under the influence of very high magnetic fields electromagnetic radiation "splits," one photon turning into two lower-energy ones. In game terms, this is a defense for physical combat, rated at Stringtech 6.

Tech Level: Stringtech 6
Cost: Low
Descriptors: Energy-only

Programmable Surfaces

The top 50 nanometers of this surface consists solely of custom-designed electric fields, allowing it to mimic any natural element — and some "pseudo-elements" that can only be created through this process! Programmable surfaces can be made frictionless, scratch-proof, perfectly light-absorbant or reflecting, glowing or patterned, warm to the touch, and more. Different regions of the surface can take on different properties, allowing (for instance) a touch-screen on one side and solar panels on the other. Below the surface is a complex network of nanowires and computers. Programmable surfaces need electrical power at all times, though not very much of it. Since they can easily become solar panels, this typically isn't a problem. One of the major goals of nanoscience is to create programmable *matter*, not just surfaces. See also Pseudomaterials and Pseudosurfaces, below.

Tech Level: Nanotech 8
Cost: Moderate
Descriptors: None

Pseudomaterials

These are the logical successors of pseudosurfaces: materials constructed entirely of cleverly engineered nanostructures. Pseudomaterials have properties that far exceed those of regular materials, such as being invisible, unbreakable, perfectly insulating, totally nonreactive or overly reactive, utterly unreflective, or having other such useful functions. Much like pseudosurfaces, these materials are not programmable — they have a single function when created, which cannot be changed.

Tech Level: Nanotech 10
Cost: Moderate
Descriptors: None

Pseudosurfaces

The precursors of programmable surfaces, pseudosurfaces have carefully designed nanostructures covering them entirely, allowing them to act like something they're not. Everything that programmable surfaces can do, pseudosurfaces can also do, with the exception of changing their function. Once built, a pseudosurface has a single job to do.

Tech Level: Nanotech 7
Cost: Low
Descriptors: None

Psychohistory

Psychohistory is the art and science of predicting the course of humanity's future. Whereas memetics is concerned with individuals and resonant ideas, psychohistory is concerned with whole populations. Psychohistorical predictions on groups of less than a million people are somewhat unreliable. On groups as large as an entire civilization, however, they are very accurate. All advanced civilizations use Psychohistory to predict the actions of their foes and better prepare themselves for their actions.

Tech Level: Metatech 8
Cost: Moderate
Descriptors: Procedure

Quantitative Semiotics

This methodology takes advantage of commonalities in the human mind, allowing those who know it to understand and transmit the most basic information more effectively. Characters who know this method of analysis can read basic signs in other civilizations without the need for a translation guide, and are capable of making signs and gestures that will convey simple information (danger, safety, "stay out", food & lodging, and so on.) to almost any human being alive. Only Heterolinguists cannot benefit from this methodology.

Tech Level: Metatech 4
Cost: Free
Descriptors: Procedure

Remotes

Remotes are robotic drones, primarily used by the Stored to interact with the analog world. They can be nearly any shape or size, though most are small. Even a flea-sized remote could hold hundreds of useful nano-scale devices. The Stored don't actually transmit their digital selves into these devices; they just receive information from them. Some remotes are built to be sturdier, or can affect objects in the analog world. They can even be human-shaped. There are remotes capable of winged flight, remotes built with wheels or spider-like legs, remotes bristling with weapons. Most are just highly sophisticated mobile cameras.

Starships for Stardwellers

There's nothing quite like having your very own, personal starship. While most ships in this game are settings rather than equipment (that is, you live in them rather than using them for a particular job), some relatively well-off characters from the Illustrious Stardwelling Armada could actually possess their very own starship. Here's how to handle that.

Characters who own ships will need a good reason for it. High standing in the Stardweller government or defensive forces (represented by various Themes) or being a member of High Society are both good places to start.

Each ship will have its own ratings in every Capability except (typically) Biotech. Stringtech and Nanotech could theoretically be as low as 4, but are rarely below 6. Stardweller AIs tend to be relatively bright, with Cognitech scores of 4-8 and Metatech scores of 2-5. The few "grown" ships typically have a Biotech rating of 8-10. The onboard AIs are programmed with the Spacer Profession, with a minimum of 3 and a maximum of around 10. Each of these Capabilities and Professions should have its own Reserve rating. Since a starship's Capabilities are effectively as useful as the character's, use the *higher* of the character's Capabilities and the ship's Capabilities (except Biotech) for the purpose of determining the character's Import level (see page 75).

All ships have some degree of AI, which allows them to be piloted by a single individual and to maintain themselves to a large extent. Stardweller ships also tend to have strong personalities, crafted so as to mesh well with the personality of the owner and/or pilot.

Minor self-repair systems are customary. Scratches and electrical blowouts can be handled via on-board replicators, but severe damage will require repairs. Costs can range from moderate to expensive (see page 131), with higher Capability levels requiring correspondingly skilled technicians to repair. Effecting your own repairs is possible, and reduces the cost by one level. It requires a level of 5 or higher in the Nanotech Engineer, Stringtech Engineer, Spacer, *and* Programmer Professions, not all of which need to come from the same person. Major repairs usually take about a week.

Starships rated at Stringtech 7 or higher are capable of converting matter to antimatter, and are usually fueled in this way. Those of Stringtech 8 will be fitted with wormhole generators to allow interstellar travel. The cost of using the wormhole is entirely offset by the antimatter generator, but after transit it can take hours or days to build up a sufficient charge to reactivate the wormhole.

Battles between starships should be quite rare. Almost all of these vessels are the equivalents of limousines, sports cars, or private yachts — expensive and vulnerable. Almost none of them are built for war, regardless of the weapons and countermeasures they may employ. Imagine hanging out the top of a flashy convertible with a rocket launcher aimed at someone's limo, and you have roughly the right image. Those built as warships will find that they are not welcome in the majority of star systems, regardless of the owner's legal standing — the possibility for property damage is simply too high. If a fight does break out, use the standard conflict rules, with Nanotech for offense, Stringtech for defense and escape, and using the Spacer Profession on all rolls. The timescale is typically seconds, though long-distance fights can take longer.

Spacer Ships

Most Spacer ships are exceptionally large, carrying tens of thousands of individuals. However, some characters might have a shuttle of their own. These are typically rated at Nanotech 6, Strintech 6. They are never fitted with wormhole generators, and usually have AIs with substantially less "personality" than the Stardweller ships have.

A few Stored build Biotech-based remotes, using meshes to control the organism's movements and collect data from its sensory organs. Though it is considered an abomination, some even use cloned human bodies as remotes, made from their own DNA. It's as close as they can get to being made flesh again without being printed out.

Remotes used under extreme conditions can occasionally lose contact with the infosphere, due to electromagnetic interference or simple antenna failure. In these cases the user's link is severed, and the remote might sit, helpless and useless, until someone retrieves it. Because of this, most remotes have built-in data ghosts (q.v.) that can take over when the link is severed, driving the remote back into infosphere contact.

Tech Level: Nanotech 3+
Cost: Low
Descriptors: none

Replicators

Common devices in almost every civilization, replicators "scan in" matter of any type on the atomic level, destroying it in the process. They can then "print out" any number of copies, assuming they have sufficient raw materials and money. Most replicators are small, with the controls built to require two hands to use (thus preventing ordinary people from accidentally "scanning" their hands off). Public replicators are typically "write only," incapable of scanning. Industrial replicators can create multi-ton objects in a single sweep.

All replicators have intellectual property protection circuits built in to prevent free duplication of non-freeware objects and designs. They typically interface with their users' dermal microbots to arrange for an exchange of funds during a sale. There are thousands of different replicator brand names.

Replicators have sufficient resolution and fidelity to create living beings, from virii and microbes up to humans and other mammals. Players who attempt to replicate their characters should give their character sheet to the GM. The original character is dead, and you are not allowed to play clones — they are new people, with their own lives, and even though they remember being their original, they are not that original. The Replicants take a different view of things; notice that Replicants who keep killing themselves off every few days to "print out a fresh copy" are not playable characters. However, a loophole exists: see the "Send In the Clones" sidebar on page 37.

Tech Level: Nanotech 6
Cost: Moderate
Descriptors: None

"Rest Easy" Lens

A very tricky lens, designed for workaholics. This program stores its users' mental state and immediate concerns just before they go to sleep, and then suppresses them. They stop thinking about work and can catch some z's without their work life keeping them awake. In the morning, the suppression ends and the users' minds are returned to work concerns, with some of the anxiety "scrubbed out." This was a tough lens to create, because half the purpose of sleep is to change your mental state — imposing the old one is counterproductive and potentially dangerous.

Tech Level: Cognitech 7
Cost: Moderate
Descriptors: Dataform

Riot Control Techniques

Even in relatively "enlightened" civilizations, there are occasionally riots. When dealing with groups as highly enhanced as the Mechanicans or Masqueraders, it becomes important to break up these riots quickly, before serious injury or massive devastation result. This technology represents a bag of tricks that can be used to break up mobs or, preferably, disband riots before they really get going. The larger the group, the better these techniques work, dealing an extra 1-3 points of Reserve in a Metatech Assault conflict against the group.

Tech Level: Metatech 4
Cost: Typically Low, some are free.
Descriptors: Procedure

Self-Maintaining Civic Works

Most structures in high-tech civilizations are built with a good amount of self-maintenance capability. Self-repairing roads don't need constant patching, and windows built with these methods clean themselves. Tiny microbots that live in part of the surface walk across the structure, find the cracks and holes in it, and fill it with nearby material. They can also be programmed to remove unwanted materials, such as dirt that might collect on an otherwise clear window. The sunlight absorbed by the materials (or nearby structures) easily powers the microbots. Major damage, such as holes or missing chunks, still requires outside assistance.

Tech Level: Nanotech 5
Cost: depends on structure size
Descriptors: None

Sensory Overload Array

Tiny cameras track your opponents' eyes and ears, so that low-powered lasers can blind them and coherent sound can deafen them. These are a common non-lethal weapon in physical combat. Those with high Nanotech and Cognitech will be able to "reroute" around the lost senses in a matter of seconds, but often with less efficient senses.

Tech Level: Stringtech 4+ or Nanotech 4+

Cost: Low

Descriptors: Typically Energy, sometimes also Microscopic

Singularity Launcher

These misnamed devices actually consist of a central compression beam and several orbiting "pods" that fire their own, asynchronous gravity beams. By focusing immense gravitational forces on a single point, they can compress the matter in their overlap zone into a tiny black hole, which immediately explodes in a burst of Hawking radiation. These weapons deal damage rated at Stringtech 11, and deal an extra two points of Reserve damage because of the multi-spectrum effects.

Tech Level: Stringtech 10

Cost: Low

Descriptors: Energy, Near-c

Strangelet Bomb

These roughly refrigerator-sized bombs makes matter decay into strangelets, which react again with nearby matter, turning them into strangelets as well. The reaction quickly converts all matter in contact with the origin point into strange matter, which later decays again into regular matter about a minute later, releasing raw energy, protons, and electrons. The transformation wavefront moves at about 1000 miles an hour. The reaction is irreversible, and unstoppable at this tech level. Use this bomb on a starship, space station, or even a planet and you get a mass of hydrogen floating through space.

The damage is rated at Stringtech 12, but unless you can survive in vacuum (or an exceptionally hydrogen-rich environment), it really doesn't matter. Larger targets will likely suffer "aftershocks" for the next few days as stray, leftover strangelets run into normal matter again, and the whole process happens again. The only reason the Patent Office set an attainable price on these weapons is because they can be used to "reboot" old stars — the star will likely nova (several times, thanks to the aftershocks), but all non-hydrogen matter inside will turn back into hydrogen, which the star uses as fuel. Afterwards there will be a slightly smaller star with a reset lifespan.

Tech Level: Stringtech 10

Cost: Exorbitant

Descriptors: None

Terraforming

Terraforming expands the methods used in environmental fabrication to entire planets. The process is relatively delicate and can take hundreds of years — to date there have been only a handful of successful terraforming events, and it is so expensive that few civilizations are willing to try. Finding a new inhabitable planet is much cheaper than terraforming a nearly-habitable one, despite the rarity of suitable planets.

Tech Level: Biotech 10, Nanotech 5, Stringtech 5, Cognitech 7

Cost: Exorbitant

Descriptors: Procedure

Transmutation Beams

Transmutation chambers (see below) turn raw materials of any sort into a single element by pulling apart and rearranging the protons, electrons, and neutrons that make up atomic nuclei. This beam does the same at range. There are many useful industrial and household applications for transmutation beams, and so they are relatively common in the few civilizations where they are commonly available. When used in combat, these beams do damage rated Stringtech 8 — the effect on the human body is quite harmful, though it does not work as quickly or deeply as some weapons.

Tech Level: Stringtech 8

Cost: Low

Descriptors: Near-c, Energy

Transmutation Chambers

Replicators turn raw materials into finished goods, or vice versa, but they work at the molecular level. If you need a particular element, there's no way to get around it with just a replicator. Transmutation chambers work at the subatomic level, stripping apart atoms into protons, neutrons, and electrons, and recombining them into whatever raw elements are needed. Transmutation chambers are typically combined with replicators for maximum effect. Most chambers are relatively small, with waste matter "streamed" in one side and raw elements streamed out the other.

Tech Level: Stringtech 6

Cost: Low to Moderate, depending on the amount of material being transmuted. The chambers are free to build in the civilizations that can afford them, but they always require permits for use, and the electricity requirement is often large.

Descriptors: None

Free Technologies

The following technologies have passed into the public domain long ago, and thus are not protected by intellectual property laws. Many of them are free in civilizations with replicators, though some civs prefer to retain a small fee for the creation of drugs, firearms, and other potentially dangerous materials.

Use this list not as a strict reference, but as a guideline for determining for yourself what sort of things should be available free of charge. If it's in our modern society and it's not particularly dangerous, it should be available.

Agricultural methods, airplanes, ancient weapons and armor, alcohol, bedding, condoms and other birth control, cooking recipes, disinfectants, drugs of assorted variety, foul weather gear, gunpowder-based firearms, hanggliders, hydrogen fuel cells, internal combustion engines, language tapes and references, motorcycles, old films and movie projectors, old novels, older beauty products, operating systems, painkillers, pre-quantum computers, textbooks, ultra-light aircraft, vacuum suits, vintage clothing, wheeled vehicles, and more.

Unified Field Theory

The ultimate theory of Stringtech, which describes all of the matter and energy in our universe as a single phenomenon. All of Stringtech after this point is based on an understanding of this theory, which was delivered to humanity by the Transcendentals, before the Diaspora. Few characters will use this directly, but it's a great technobabble term for players who want to invent some science on the fly.

Tech Level: Stringtech 5

Cost: Free

Descriptors: Procedure

Voice-of-Peace

This powerful technology is the verbal equivalent of a nuclear bomb. The character shouts, his or her voice amplified and altered by special vocal chord enhancements. Such is the tone of the voice that all who hear it find it almost impossible to take further action. When used for the purpose of stopping a conflict, this technique is a weapon that deals six extra points of Reserve damage (Metatech 10, resisted by Metatech, Soldier, and Meta-based professions). It also combines the effects of Word-Association Hesitation Induction (preventing those who lose their defense roll from acting on the next tick) and Eye-Catching Stance (preventing others from simply filtering out the voice via mesh). This procedure is only useful for stopping conflicts, and typically only those with a timescale of hours or less. Longer-scale conflicts tend not to have the important people around where the character can shout at them.

Tech Level: Metatech 10, plus either Nanotech or Biotech 6

Cost: Expensive

Descriptors: Procedure, Internal

Vortex Sink

Vortex Sinks use a spherically wrapped wormhole to funnel all forces directed against the user to another location. This makes an incredibly good defense, all but impermeable to modern weapons. Vortex sinks are rated at Stringtech 10. They require an incredible amount of power to activate and maintain.

Tech Level: Stringtech 9

Cost: Expensive

Descriptors: Supersymmetric

Warm-up Program

There are a few pieces of built-in technology that take more than a tenth of a second to warm up or turn on. These Lenses monitor their user's mental states and turn the devices on when they anticipate that the user will want to use them soon. These programs are somewhat dangerous when linked to weaponry, as others may assume the character is preparing for an assault.

Tech Level: Cognitech 5
Cost: Free - public domain
Descriptors: Dataform

Weak Stealth Technology

Many limited stealth techniques fall into this category, from radar-based stealth to noise-cancellation speakers to domes that provide invisibility in the normal visible range. Characters who are only concerned about avoiding notice from a single narrow spectrum of phenomena will benefit greatly from these devices, adding +5 to stealth-based rolls. Against most high-tech civilizations, however, these devices are only curiosities and provide no benefit. For someone who can see the entire electromagnetic spectrum, someone who's invisible to visible light stands out like a sore thumb.

Tech Level: Nanotech 4
Cost: Free - public domain
Descriptors: none

Word-Association Hesitation Induction

This procedure yields a single word. When spoken with the proper inflection and body language near the target, this word causes a memetic cascade within the target's mnemonic centers, resulting in flashes of emotionally charged images and sensations. The cascade is brief, lasting only a fraction of a second — but for that instant, the target hesitates. Further uses of that word do not trigger the cascade again until the target's mind has "reset" through sleep. No target can be affected by the same word more than three times, as the human mind adapts to such stresses.

The research period for this technique is lengthy. Extensive data on a single target is required, preferably including interviews or subtle questioning of the target's closest associates. More complex and subtle targets require deeper examination. The minimum time is one week per level of the target's Metatech, plus one month for each point by which the target's Metatech Capability exceeds the researcher's. Use of the Comprehension Theme, with descriptors such as Innermost Secrets or True Self, can cut this requirement out entirely.

Word-Association Hesitation Induction can be used as a weapon in Memetic Assault conflict. The word can also be spoken with a mental action in short-term conflicts such as Physical Combat. In the latter case, the attacker and target make contested Metatech rolls. Failure for the target forces them to skip all actions for their next turn. Defenses put in place earlier still remain, but they cannot activate new defenses, hide, attack, seek, or take any other actions. For that instant, they freeze.

Some paranoid VIPs authorize their support staff to research these words and use WAHI against them, in the hopes that it will innoculate them against their foes. Unfortunately, this is not the case. The psychological effect of trying to "fool oneself" into a psych-immune response is sufficiently different from the actual experience as to make the attempt practically worthless. The danger also exists that someone else will steal the research and use it to discover other words.

Tech Level: Metatech 6
Cost: Moderate, though this is typically spread over a long time.
Descriptors: Procedure

Wormholes

Wormholes connect the civilizations of the universe. They allow for almost instantaneous communication, and can transport people and supplies to where they're needed, making them the favorite tool of the Transcendentals. Wormhole generators draw a massive amount of power when transporting people or human-sized objects. There are no range limitations. Most major population centers are surrounded by wormhole interdiction fields, making direct transport into the city impossible to help prevent terrorism. "Calling ahead" through the infosphere (which itself uses wormhole links from world to world) is highly recommended.

Visually, wormholes are a blue-white vortex surrounding a view of the destination. Depending on differences between the local area and the destination (e.g. different gravity, air pressure, etc.), the two sides may not be able to see each other very well. One end of a wormhole must be created at the generation point, which involves heavy Stringtech devices. The other end can be created at nearly any distance, with nearly any velocity.

Tech Level: Stringtech 8
Cost: Expensive to travel, exorbitant to build
Descriptors: Supersymmetric

Technology Index by Level

For those who want to know what a particular civilization is capable of deploying, we present this index of technologies by tech level. Some items require multiple different technologies or can be achieved in multiple different ways; these have parenthetical comments indicating what other technology levels are needed.

Biotech

- 3 Household Biosensors (N4), Gene Therapy
- 4 Designer Drugs
- 5 Biofeedback
- 6 the Voice of Peace (M10,N6), Post-Facto Genetic Engineering
- 7 Environmental Fabrication (C6,N4)
- 8 Parthenogenesis Organ
- 9 Genetic Resynthesis
- 10 Terraforming (C7,N5,S5)

Cognitech

- 4 Data Ghost, Sensory Overload Array (S4), Familars
- 5 Awakening Lens, Cerebral Firewall, Warm-Up Programs, Neural Meshes (N5), the Infosphere
- 6 Competence Lenses, Emotion Beams, Ethics Lens, Environmental Fabrication (B7,N4)
- 7 "Rest Easy" Lens, Persona Lens, Memory Recombination, Terraforming (B10,N5,S5)
- 8 Instant Response Technique
- 9 Pattern Recognition Enhancement
- 10 Internal Simulation Processors

Metatech

- 3 City Planning
- 4 Riot-Control Techniques, Quantitative Semiotics
- 5 Mental Repetition Override Lens, Memetics
- 6 Societal Planning, WAHI
- 7 Eye-Catching Stance
- 8 Psychohistory, JAIT
- 9 Civilization Planning
- 10 Voice-of-Peace (B6,N6)

Nanotech

- 3 Remotes, Nanotubes
- 4 Weak Stealth, Modern Paintbrush, Household Biosensors (B3), Fast-Foam, Environmental Fabrication, Beanstalks
- 5 Dermal Bots, Self-Maintaining Civil Works, Neural Meshes (N5), Nanoweave Greatcoats, Terraforming (B10,C7,S5), Builder Bots
- 6 The Voice of Peace (B6,M10), Replicators, Nanophages I
- 7 Pseudosurfaces, Microbot Fabrication Unit
- 8 Programmable Surfaces, Nanophages II
- 9 Inorganic Cells
- 10 Pseudomaterials

Stringtech

- 3 Dirty Bombs, Nuclear Bombs
- 4 Sensory Overload Array (N4), Electric Power Plants (fusion)
- 5 Dissociation Beam, Unified Field Theory, Terraforming (B10,C7,N5), Beanstalks
- 6 Decay-Induction Fields, Transmutation Chambers, Photon-Splitting Field
- 7 Antimatter Gun, Electric Power Plants (antimatter) Emotion Beams, Inversion Beams
- 8 Wormholes, Transmutation Beams
- 9 Fission-Fusion Beam
- 10 Strangelet Bombs, Singularity Launcher

Implanted Gear

Many characters will have equipment implanted in their bodies. When implanting technology, your Capability must be at least equal to the equipment's *effective* capability. For instance, you can't implant an Inversion Beam until you have Stringtech 9.

This is purely a game-balance issue, not a technical limitation. By implanting the Inversion Beam you would effectively be raising your Stringtech to 9. If you just want to carry the thing around instead, that's fine, but then it can be taken away by various means.

You can take full advantage of an implanted item's normal abilities, such as a descriptor or a bonus to damage.

Nonexistent Technology

There are some kinds of technology that don't exist in the S.A. universe. In some cases they're based on what we currently think is pseudoscience. In other cases it's because they're just around the corner, and thus make excellent plot seeds.

Brain Duplication by "downloading" someone's personality isn't allowed. You can make an imperfect copy using a mesh, which results in a Persona Lens or you can make a perfect copy by feeding the person into a replicator. One could also make a very, very good copy by using a mesh over the course of about 10-15 years.

Force Fields are pseudoscience. There are several highly effective countermeasures in this game, but none are of the "walls of sparkly force" variety.

Gravitational Warp Drives of the type proposed by Alcubierre are possible, but are unfathomably energy-intensive. One would have to use the entire energy output of several stars to even get a moderate-sized ship across one galaxy. No one uses it when wormholes are so much more efficient.

Healmajigs — you know, those things the doctor waves over you, which immediately fix whatever is wrong with you. Those don't exist. They affect biological matter in a complex manner far too quickly.

Hyperdrive, which is typically described as pushing a ship into some other dimension where things move really fast, is pseudoscience. Even if it did exist, you'd still run into time travel problems due to faster-than-light travel.

Inertial Dampeners are a no-no. If you want a high-speed spaceship, you better make sure your body can handle the g's.

Invulnerable Materials are impossible. You can make some pretty tough stuff, especially if it only has to last a short time, but everything can be broken down in one way or another.

Negative Entropy in all its forms is a no-no. Whether you're talking about running time in reverse, making a machine that absorbs heat overall rather than emitting it, or un-breaking an egg, it's all impossible.

Perpetual Motion of any sort is pure pseudoscience and not part of the game.

Physical Immortality is a definite possibility for Biotech 11 or 12, it just hasn't happened yet.

Psionic / Psychic Powers are of dubious scientific basis at best. They've been left out.

Quantum Teleportation is just a higher-resolution version of what replicators already do: destroy something in one place, and make a perfect duplicate somewhere else. They have all the same moral and ethical problems as replicators.

Self-Powered Nanotech is bunk. There's no way to fit a power source onto something that tiny.

Sentient Nanotech can't exist in this setting. You can give it a really good response program, but not true sentience — the computing requirement is too high. You could still have a sentient central command center with a bunch of microbots, or a sentient being made from artificial cells.

Shapeshifting happens in the real world — look at caterpillars and butterflies — but it happens over a long time. Fast shapeshifting is out.

Sub-Nanotech, such as "picotech" or "femtotech," is out. The uncertainty principle kicks in and prevents one from building anything out of particles that small — the particles just fall into whatever configuration they like.

Temporal Stasis is out. You could theoretically find a big black hole and orbit it closely, and that would be similar, but you can't build a human-sized tube to do it for you. Temporal accelerators for fast-growing clones and high-speed training are likewise out.

Time Travel is actually a reality in this setting. In fact, the Transcendentals rely on it for their very existence. You could also use a wormhole for time travel, though you couldn't go back to before the wormhole was created.

Transporters of the type seen on a particular TV show do not exist. If you want to get around instantly, use wormholes.

Invention Rules

While the technology in S.A. makes our current best efforts look like childrens' toys, there is still room for improvement. Those who wish to have their characters invent new technology should follow these guidelines. This is an extended action requiring a number of rolls, typically using Cognitech & Engineer. Some pieces of medical or computer technology might use Medical or Programmer instead of Engineer; use your best judgement.

First, you must design the device or prodecure. Work with the GM to decide on the tech's Capability rating. Every roll you make must reach a threshold of 10 times the device's Capability rating. Rolls below that amount waste time, but do not otherwise hurt the project. Rolls above this rating reduce the project's "Reserve" rating exactly as if you were in combat with it. The project has a total "Reserve" rating 10 points, which it cannot spend for any purpose.

Each roll takes one month for Cognitech 1-3, one week for Cog 4-7, or one day for Cog 8-10. Reserve that you spend on invention rolls cannot be used for other things until you're done with the process. Once the invention's "Reserve" is gone, you've successfully designed it.

Devices built one or two levels below your civilization's native technology level have two fewer points of Reserve, and a threshold of 8 x Capability. For devices that must be 3 or more levels below your civ's technology, reverse and double these modifiers for working with such archaic, low-tech devices. ("A clock with gears? How could that even work?"). You can often intentionally build these things with higher-level technology (for example, electric motors instead of gears) to ameliorate these penalties. For devices one point *above* your civ's tech level, increase Reserve to twenty and increase the threshold to 12 x Capability. Something two levels above should be effectively impossible to invent — it would be like a caveman trying to invent a radio.

The Comprehension Theme, given the right descriptor, can bypass this process entirely. The design time decreases to one hour for Cognitech 1-3, ten minutes for Cog 4-7, or one minute for Cog 8-10.

Once your technology has been designed it will take a little time to create the first prototype. This stage doesn't require any rolls. The time required is dependant on the resources available in the Capability the device falls under. Crafting a new advertisement relies on the Metatech databanks in the local area. Implementing a new military countermeasure hinges on the local Stringtech infrastructure. The time required is one week if the device is at the local tech level, one month if it's a point above, and a year if two points above. For devices a point or two below the local tech level, it should be doable in a day. Three points or more below brings it back up to a week.

All of the above assumes a relatively small device; something personal. If you're trying to create an electrical infrastructure, new kind of group-mind, or other large structure, the time will go up substantially. These times also assume a relatively high-tech society, with a score of at least 5 in the relevant Capability. High-powered computer modeling, replicators, full-scale neural-net simulations, transmutation, and similar tools become available around then, which speeds up the process immensely. If you have less than this available, multiply time by at least a factor of five.

After this time you have a working prototype: finicky and prone to the occasional malfunction, but functional (-1 to any rolls using it). Improving their reliability to the consumer level requires going through another invention cycle from the beginning.

As an example, if someone from the Independents wanted to build a weapon that fired a transmutation beam, that could reasonably be Stringtech 8. The inventor is at home in Independent space, with a Stringtech 9 infrastructure, and has a Cognitech of 5. Each roll has a minimum result of 64, and takes one week. If the roll is at least 64, the device's Reserve drops by two points. A roll of 128 will drop it by three. If there are no failed rolls, but no spectacular ones either, it should take five weeks to design this device. The first prototype will take just a day to fabricate and test.

Invention for GMs

This game's author is a physicist. You're probably not. And you know what? That's ok. Sometimes the author wishes he wasn't a physicist either. But you'll still need to invent a little of your own tech every now and then.

You've just seen the rules for in-game invention, but that's a different topic. Those rules discuss the mental and physical process of taking a new device or procedure from concept to finished product. This section, on the other hand, is about the societal ramifications of such devices.

The most important thing about a piece of technology is not how it works, or how it could be made, or even whether it's possible or not. We *think* that most of the tech listed here is at least *physically possible*, but we could be wrong. Don't worry if the flying belt you've introduced couldn't hold someone up, if only because it would give them a giant wedgie. That's not the point. If you think it's cool, go with it.

Instead, spend your time thinking about how society would use this invention. What would *you* do with this device? What would your average party of RPG characters do with it? What would world leaders do with it, or humanitarians, or terrorists, or developing nations? Given all that, how big a price should the Patent Office set on it, and how long should they wait before making it free to everyone? Should it ever be free to everyone? The social ramifications of your inventions are far more important than the technobabble, and in the end, they're more interesting too.

In this game, the pace of technological advancement hasn't slowed down. It suffered a bit of a speed bump during the Diaspora, but has more than caught up since then. GMs are encouraged to let qualified characters come up with their own new ideas and adaptations of existing work. Even if the character isn't smart enough to create the device or procedure, the chance that someone else did (and that blueprints can now be found on the infosphere for a reasonable price) is very good.

General Guidelines

When describing new technology, it can help to start with existing devices and speculate. Make your device look like modern technology, and assume that all the modern inconveniences are solved one way or another.

As an example, let's say that you live in the year 1800, and you want to play a game of Sufficiently Advanced that takes place in the year 2010. You need to describe a futuristic means that people use for getting from place to place; something believable but still amazing. You could can call it a "carriage," since that's basically what it is. How much better is it? It won't need horses, but run off of some sort of advanced technology that you don't understand. It'll be made of the most powerful stuff of your day (read: metal) or something your time hasn't invented yet. Nearly all of the inconveniences of the modern carriage will be solved: better lanterns that run forever, the glass never gets messy from water, and some sort of protection to avoid accidents. You could hand-wave it, or you could could even come up with something that sounds silly — perhaps pillows jump out of the front and sides of the vehicle to cushion an impact.

The only things you *can't* assume just go away are waste heat and the need for a fuel source. Those are at the core of physical technology (that is, everything that isn't Metatech). Waste heat and power requirements can be reduced, but never eliminated. Within those two limitations, it's amazing what innovative people can accomplish.

Here's a list of ten questions you'll want to think about when you introduce a new technology into the game.

1. Is this technology an incremental improvement, a radical alteration, or something entirely new? The latter is exceptionally rare, and will be cause for great interest across the civilizations. The Patent Office will probably also set its price higher in the beginning.
2. Does it replace an existing technology? The answer here is often yes, but sometimes new niches are created and filled by new things.
3. Does it need a lot of electrical power? If so, it probably produces a lot of heat, and costs a bit of money to use.

4. Who would benefit most from it? A particular civilization or society? The rich? The poor? Those in power, or those trying to overthrow them? Does it work best in combination with other items, and if so, who uses them?

5. Would anyone suffer from its *mere existence*? Usually the creator of the technology that this one replaces will suffer a loss of money, as people start buying the newer item.

6. Would anyone suffer from the *proper use* of this device? Does it interfere with existing technologies, or prevent their use?

7. How high is its potential for misuse? Almost all pieces of technology can be used for nefarious purposes, or accidentally used on the "wrong" target. How bad would it be?

8. What civilizations or societies would *embrace* this technology immediately? How extensively would the average person be affected by it?

9. Which ones would be *offended* by it? How far would they go to prevent others from using it, both in their territory and outside it?

10. If a Cargo Cult formed around this technology, what might they think about it? Could it provide any "godlike" powers, or do things that a relatively unadvanced culture would find unbelievable?

Example: Transmutation Chambers

Transmutation chambers are a good example of an "average" important technology. They're not world-changing, but they can't be ignored either. We'll use them as one example of the sort of impact a new technology can have

The advent of transmutation removes the need for any industries related to mining (such as ore hauling and prospecting), as well as any enrichment facilities (as in enriched uranium). The commodities exchange will utterly die, since no element has any intrinsic value any more. Transmutation will definitely put a good number of people out of business (true of nearly all the technology in S.A.). That's how the world works: new technology creates some jobs and destroys others.

Elements that can be purified more easily may be more valuable, but by this level of technology, chances are good that replicators already got rid of that problem. Denser elements may be slightly more valuable, due to their greater portability. Ten kilograms of hydrogen gas can be turned into ten kilograms of lead, but the volume is quite different. Really common elements (hydrogen, oxygen, silicon) will still be much cheaper than transmuted materials, but as electricity costs drop, the differences become smaller and smaller.

If you're building something, there's no reason not to use the best material for the job. Want gold contacts for your electrical work? Go for it. Need some osmium, dyspropium, platinum, or niobium for some reason? It's yours. High-Z elements (those near the end of the periodic table, and those off the end of our current one) become readily available, though they might be rather dense and eat up a lot of raw material to create.

Transmutation requires a rather high amount of energy to work, though most of it can be reclaimed afterwards. Ergo, there's a need for better electrical infrastructure before transmutation can really take off. This is actually true for a lot of the stringtech mentioned in S.A.

All in all, transmutation is a relatively minor improvement on the world-shattering changes that replicators make. It's something that people from non-transmuting cultures would view as amazing and unbelievable, but it's really not all that big a deal unless you work in the nanotech or stringtech industries. For them, it's a very big deal — they get to play with whatever elements they like without worrying about cost or accessability, which makes it much easier to develop new devices. The pace of progress is accelerated yet again.

Example: Elevators

A somewhat more mundane example, but illustrative nonetheless. Elevators are a technology with a surprising amount of impact.

Elevators, perhaps this goes without saying, allow things to be easily moved up and down inside buildings. We typically think of them for people, but many industrial buildings also have cargo elevators for heavy machinery.

This comparatively simple innovation allows the creation of taller buildings — you *could* make

a 20-story apartment building or office complex without elevators, but no one would use it. Cities in industrialized parts of the world are much more compact, because electrical power there is reliable enough to have elevators that don't freeze in place several times a day. Cities in third-world regions sprawl, covering areas far beyond what their populations would occupy in industrialized nations. Children and the elderly, especially, simply can't live in tall buildings without the aid of an elevator.

Taller buildings allow cities to "build up instead of out," increasing population density and reducing the number of square miles that the city's infrastructure needs to cover. Living closer together makes certain things more efficient, while also introducing certain psychological stresses that drive some folks out into the suburbs. Broadcasts, from TV and radio to cell phones and wireless internet, can reach more people at once, which allows the creation of a larger number of "niche" services that couldn't survive in less compact areas. Eventually, when pollution problems set in, higher population density will drive a need for cleaner technologies and better infrastructure, which in turn leads in a roundabout way to a cleaner environment.

All that, just because of the elevator.

Author's Comment on Elevators

No, of course elevators don't directly lead to an improved environment on their own. They just create social pressures that make it happen in the long term. There are certainly faster and perhaps better ways to improve the world than cramming a bunch of people into a tiny space.

Self-Replication

Some of the technologies listed in this book are self-replicating, and there are plenty more that we haven't listed yet. "Auxon" is the general term; "autotroph" can be used for a piece of self-replicating biotech, while "self-assembler" is the term for nanotech.

Self-replicating technology is a difficult area for the Patent Office to control. Putting a cost on the initial auxon is pointless — the device itself simply makes more, and its initial owner trades the duplicates to his or her friends, and the next thing you know, the stuff's everywhere. Charging for each instance of the auxon is the most obvious solution, but there's often no good way to keep track of all the instances. A human-scale robot designed to build other human-scale robots is easy to enumerate, and can inform the infosphere when it multiplies. Building a counter into nanobots, however, would increase their weight significantly (often compromising the original intent of the 'bots), and things get even worse with biotech.

The issue isn't just control of hazardous auxons, either. That's not the Patent Office's job (though it must be said that Inspectors are sent to deal with dangerous ones more often than benign ones). Their job is to make sure that the original inventor of the replicant gets the money they deserve, for as long as the intellectual property rights stand. Local governments already have regulations in place as to how long an artificial auxon is allowed to persist, so as to prevent the possibility of "grey goo" syndrome or a bloom event. Non-artificial auxons, such as all naturally evolved living organisms, are usually exempt from these laws.

At this time, the Patent Office relies primarily on information gathered obliquely through the infosphere for enforcement. Replicator records let them charge the bulk of a fee for the first generation of an auxon, and they levy a smaller fee as subsequent generations are noticed or reported. It's possible to go "off the grid" via wormhole and do all sorts of experiments with auxons that someone else created... but as soon as the news gets out, the Patent Office will be knocking at your door asking for their money. It's not a perfect solution, but it works in most cases.

Metatech auxons are totally impossible to keep track of (unless you have a mesh and enjoy constant surveillance). The Patent Office levies fees for the initial download of one, and they're typically pretty steep.

Technology

What do I need?

A common question in the playtests was, "What equipment do I need for my job?" The answer is typically, "Nothing." Your character's Capability scores give you access to equipment rated at its level, for both offense and defense. Someone trained up to Metatech 10 can be assumed to know every technique here and be able to apply it, though they might have to pay money to do so. Someone with Stringtech 9 could have an inversion beam built in. This chapter is intended to let players talk about what their characters already have, and to give GMs a view of the world, not to act as a "shopping list."

Most of the equipment up to your Capability level is built into your character's body. You can always specify that there are certain things you don't have; for instance, if you prefer to avoid building offensive technology into your body, that's easy enough to arrange. Certain items or procedures will be too large for your body to contain; most of these are self-evident. Genetic modification techniques, terraforming, self-maintaining civic works, and so forth, are beyond the realm of what a single person can carry or accomplish, though they might benefit from them nonetheless.

And how do I get it?

A replicator, generally. The Patent Office will not pay for any unauthorized expenses, so for new or dangerous items you'll have to either ask your superiors or provide your own account number. Also, many replicators, especially those available to the public, are restricted in what they can create. In those civilizations that give them a measure of law-enforcement power, Patent Inspectors have override codes, allowing them to use any replicator to create any device. Beyond those limitations, any device you like can be created from any replicator large enough. If you need something larger, you may be able to create it in parts and assemble it.

Encumbrance, Indeed

In this author's opinion, the "shopping trip" is one of the most damaging elements of any science-fiction RPG. One of the major design goals of Sufficiently Advanced was to do away with shopping trips.

Shopping trips go like this: the team determines that they have to go kick some ass. They then spend the next hour of real-world time buying the most hideous weapons and stalwart armor they can afford. It takes forever, and it's incredibly boring for whomever isn't looking at the price sheets at the time. Typically it ends up not mattering, because the plan falls apart the second the team makes contact with the enemy.

In this game, 90% of what you need is built into your character, and 90% of everything else can be easily replicated under most circumstances. If you really need something unbearably expensive, like a starship, you just phone home to the Patent Office and they either arrange it for you, or tell you to find another way.

In addition, you'll find few items that have a substantial bonus beyond their TL rating and some descriptors. The technology list is to let you know what's around in the setting, not to give you things to write down on your character sheet. Don't worry about every little thing you're carrying; just jump in and have fun.

Some Inspectors will still insist on carrying weaponry with them, even those with high Stringtech scores, because some weapons (like antimatter guns) are particularly effective. The thought of the average "man on the street" is this: Why would someone openly carry something that dangerous when they could just replicate one in a minute or two if they needed it? Answer: *they must be about to use it*. Time to call the cops and run.

When you end up having to spend a Twist just to get folks to talk to you, it's better to walk around unarmed.

Wastes of Time and Energy

One of the things that defines civilizations in the era of high technology isn't what types they use, or even what they use it for, but what they specifically choose *not* to use. Examples in our modern world include Britain's ban on firearms, the ban on human stem cell research in the US, China's crackdown on certain words related to democracy, and Angola's ban on genetically modified grain. Whether each of these makes sense depends heavily on your viewpoint, and that's part of what makes countries and civilizations different.

However, there are some technologies that look good to start with, but end up being a general waste of time and energy for anyone, regardless of personal viewpoint. Modern-day examples would be using Tesla coils for power transmission (too loud and dangerous), leaving behind certain programming languages (no serious advantage over later developments), and flying cars (they've been built, but they're too inefficient, hard to fly, and expensive). Difficulty in implementation, efficiency, training, and safety can all ground an otherwise interesting-sounding piece of technology.

An example in S.A. would be the epidermal nanowire mesh (or skin mesh). This nanotube construct was intended to be the successor to dermal microbots, but failed in several key ways. First, skin meshes required implantation, typically by the use of genetically fabricated microbes. Not impossible by any means, but it drives the price up. Second, the skin is not a semi-permanent organ (like, for example, the brain). It expands and shrinks, and replaces itself rather quickly with the outer layer being replaced once per month. Anything implanted in it is forced towards the surface, where the mesh loses effectiveness and becomes visible to the naked eye, looking like a grid of tiny scars. Third, nanotubes are often toxic, requiring treatment. This problem was solved by the time the neural mesh was invented, but it slowed acceptance of skin meshes. Fourth, nanowires are much stronger than the soft tissue in which they're embedded. In the case of an accident or serious injury the mesh gets pulled through the surrounding skin and tissue, cutting into it and exacerbating the wound. In the case of a bullet wound the wires might be pulled completely through the body before snapping.

In the end, there is little that the skin mesh could do that dermal nanobots couldn't. The skin mesh's single major advantage was that it could act as a backup nervous system, the sort of thing that would primarily be of interest to the military. The risk of having a soldier cut into cubes by one of their own implants during a firefight was a deal-breaker. So in the end, dermal microbots won out, despite being a lower-tech solution.

Starships are another good example. With planet-to-planet wormhole travel, starships become almost unnecessary. The Stardwellers continue to make them because they don't have to actually launch them — they build them in space. They're expensive to upkeep, are a much slower and less efficient way of getting around, and have next to no strategic or tactical advantage. People still love them nonetheless, which is why the Stardwellers get so much tourism. The Spacers would get tourism too if they didn't tell people to shut up and go away. Most civilizations have a few ships for deep-space work, but they're much more like small space stations with a wormhole generator attached than true starships.

The moral: don't be afraid to be low-tech if low-tech is all you need. Don't be afraid to be understated if overstatement is really just a waste.

ADVICE

This section is intended to help GMs adapt to running a game like this, and to help players understand how they can be more involved.

This isn't entitled the "GM Advice" chapter, because we believe that players can benefit from what's here too. From general advice on how to handle Twists and Themes to some specific things the Transcendentals might say, this chapter is useful for everyone who plays the game.

Tools, Tricks, and Techniques

This section contains advice for a GM facing various problems in the game. You'll find that our advice will occasionally be along the lines of "this isn't really a problem; we intended things to work that way." If you want your game to work differently, you may have to make some adjustments to the rules themselves.

Instant Plot

Improvisation is an important skill for S.A. game masters. If you're not the kind of person who enjoys thinking on your feet, here are a few good ways to fake it.

The most important thing to do is to write "bits" beforehand. These bits could be anything: an NPC, a building description, a bit of technology you thought up, a hand-written "newspaper" or rumor sheet, a doodle of some cool thing, pretty much anything. The bit doesn't need to have a lot of detail in it, just enough to remind you of what the person is like, what the building contains, and so forth. Every bit should have a "hook" that connects it to the main themes of your game. Keep your bits in a folder or binder, and bring it with you when you run your game.

When you're stuck in a situation for which you weren't prepared, or when the players sidetrack you, dig into your folder full of bits. If someone wants to hear some relevant rumors, you already have them written down. If someone's using Empathy (Making Friends) to find a kindly soul in town, you have an NPC pre-made. If someone uses Plot Immunity (Run & Hide) to get away from a threat, you know something about the building they're in.

Best of all, if you design them right at the beginning, these bits tie into your scenario, bringing the characters into the thick of the story even as they take a breather. In this way you can build your world without having to create one massive storyline that probably wouldn't survive the first Twist of the game.

Dealing With A Bizarre Universe

It is often said that writers need to include some element of the familiar in what they write, to give readers a reference point. It certainly seems true that those sci-fi settings with greater connection to everyday modern life or well-known mythology are the more popular ones — Star Wars being the primary example. Under all those blasters and starships lies a pretty standard fantasy setting, with swords and magic. It's the kind of story that all of us are familiar with. Technology has not really changed the world. In the Foundation series, it is only the later books in the series that truly explore the effects of advanced science, and psychohistory becomes a plot device that is only interesting when it breaks down. The technology is a backdrop, not the core of the story.

In Sufficiently Advanced, the social and physical landscape are often altered to the point of unrecognizability. Can any of us truly conceive of growing up in the Cognitive Union? Of hiding and altering our identity the way a Masquerader does? Of joining or leaving a group mind? Of civilizations like the Roamers, who have decided to retain their current level of technology rather than advancing? As far as we in the 21st century have come beyond the cavemen, that is nothing compared to what the Stardwellers have achieved, and just as the very idea of a worldwide culture would be incomprehensible to a Cro-Magnon, there are no doubt concepts found in the world of S.A. that are beyond us right now.

Because of this, it may help to have one character in the party play "the outsider." A Disciple of the Void, Old-Worlder, Cargo Cultist, or other member of a relatively low-tech civilization can be of great use to both game masters and other players in explaining the world of the future. It provides the players with an anchor, someone or something that is a piece of their world dropped into an unfamiliar landscape.

When the player controlling the Union member has to explain how his civilization works to a confused Cargo Cultist, it helps them both understand the game better.

"Invented setting," where players create details about their characters' civilizations and societies, is also something worth encouraging. Rather than trying to dump a ton of information on everyone at once, let each person fill in a detail here and there. It'll help bring out the information more gradually, and also give the players a greater sense of "owner-ship" in the game.

There are a few things in the setting of S.A. that are truly and utterly bizarre, beyond the comprehension of any human being in that universe. The Aia and WorldWeb come to mind. When dealing with such things, the GM should plan for players and their characters not to understand — and for the possibility that one of them might pull out their Comprehension score and find out what's going on anyway. Themes transcend human ability, after all, and what is incomprehensible to a hundred trillion other human beings might make perfect sense to one special person.

Advice From the Playtests

In the process of writing this book we did a reasonable amount of playtesting. This section collects some advice from the GMs and players in those games. Each paragraph is its own little recommendation from someone who's played or run the game before.

For GMs:

Sufficiently Advanced is a game that eats plot. Compared to other games, a few well placed Twists and the intelligent application of godlike abilities can let the players chew through two or three sessions worth of plot in about five hours. Moreover, with Twists, players can change the plot, excising whole chapters of the story and replacing them with new, different chapters.

Whatever you do, don't fall in love with your plot. Some GMs like mystery-heavy games, some combat-heavy, some politics-heavy, and so on. If the players don't want to play that game, they'll spend a Twist or two, and the untenable mystery is solved, the impossible combat resolved, and the convoluted politics untangled. You're going to be playing the kind

of game the players are interested in for 90% of the time. Roll with it. Make new plots and new stories. And hold onto the ideas of the old ones, since even a Twist used without Complications creates some plot.

Know how your various actors (NPCs, villains, societies, events) will react to different situations, especially those in your Story Triggers. A good practice is to mentally run through many different scenarios and figure out how the actors would behave in each one. None of the scenarios will necessarily occur — the vagaries of the players will see to that — but because you've done this, everyone will stay in-character and react intelligently to the new situations when the players throw you a long series of curve balls.

Along the same lines, the most important information you can have for an NPC is their Core Values. NPCs don't get Twists, and you can guess their Capabilities from their society and their Professions from their actual profession. Any time you make an NPC which will have more than one interaction with the players, you should pick at least one Core Value to help define her. Its a really quick way to give an NPC depth of character.

I strongly recommend collecting Twists as often as possible. In my mind, the quality of a session can often be judged by the number of Twists spent. To make it even more visceral, I give each player a physical representation of their Twist, literally collecting them (and keeping them in a pile in front of me) over the session.

The key to creating a memorable character is to give them a unique personality with enough depth that the players can understand where they are coming from even if (and especially when) they don't agree with them. If your cast is getting too large, I recommend writing a few sentences from the character's perspective, in their own words, concerning whatever they feel is important. It will help getting back into character later. The key to creating a memorable planet is much the same. A good world has a shtick (or preferably several intertwined). A good world also has details and history, so the players can see where that shtick came from, and where it is going.

Once you have that truly memorable character or planet, give it a really good death scene. If the players save it — which, given Twists, can happen no matter what you plan — they'll really appreciate

their success. If they can't, they'll really feel the loss. Either way, plot!

Laugh maniacally when describing the results of conflict.

On group size:

In most roleplaying games, a good rule of thumb is to have no more than five players. This is partially because it becomes very difficult to give everyone the time they deserve, and partially because all of the major archetypes get filled leaving little for new PCs to excel at.

In Sufficiently Advanced, there is another reason to keep the parties relatively small: Twists. Every PC brings one Twist with them every session. With too many players, each trying to do something but getting too little attention individually, the desire to simply Twist away every major bit of plot becomes too strong.

Interestingly, Twists also turn the pace of the game on its head. A large group of players who are tired and don't want to think today can slice through plot many times faster than a small group of extremely skilled and engaged players. So, once again, keep the team size small. It's better to have a really amazing game for four players than a mediocre one for seven. You can always add more players as you become more comfortable with the game.

For Players:

Don't fear Complications! Their purpose is to enhance your enjoyment of the game, not to detract from it. Think about it: for the cost of one Twist, you get to change the plot to suit you twice! Sure, you may be screwing your characters over, but in the words of Kurt Vonnegut: "Be a sadist. No matter how sweet and innocent your leading characters, make awful things happen to them — in order that the reader may see what they are made of."

Make sure you're at the very least bending the laws of physics. Don't let the basic laws that determine how the universe works get in your way. Bend them. Twist them. Pervert them. When you're done with that, come up with an explanation on why you should get away with it that uses big words and probably time travel. It'll be more fun that way. Sure, sci-fi needs to make at least some sense, but never forget the fiction part. Make science your straight man and play as many witty tricks on him as you can think of. The universe of S.A. can only be simple if you allow it.

Always do your best to keep an open mind. Everything has multiple solutions to it, and especially so in a game like S.A.. You can almost always find a way to turn your characters strengths, or even the bad-stuff you take to your advantage in the long run. It definately isn't a game of linear thinking so much as finding the bounds of the box, and then working your way in to the core problem.

Really play-act your character, give it some personality, that's where most of the fun is.

When building your character, don't tailor your character to the types of situations you think you'll be in, because you'll be in a thousand different kinds of situations. Tailor your character to what you feel like playing/acting like.

Take risks, because even the longest shots yield results of some kind.

Adventure Ideas

This section is intended to help GMs plan out missions and make their game more interesting. First we're going to lay down some of the more typical ways that games of Sufficiently Advanced proceed, and then we'll deal with ways to spice things up.

It's important to have both of those things, by the way: the basics and the twists, the straight roads and the unexpected curves, the starch and the spice. Having just the first is boring; having nothing but the second is overwhelming. As much as we think we'd like to, we can't have pure, unadulterated awesome on every front at once — it's just too much to concentrate on. Sooner or later you end up saying, "Gee, yet another unexpected twist in the story that makes everything else seem unimportant. Yawn." One of the keys to great stories is setting patterns and breaking them, and it's easy to forget that you need both of these.

Standard Missions

Every game has its own set of "fallback" stories. These are classic setups that are seen time and time again, in many different campaigns. Dungeons and Dragons has overland adventures, wars against vast faceless enemies, and the eponymous dungeon crawl. Star Trek games have tussles with various alien species, diplomatic operations, and first contact missions. Here we talk about some of the typical setups for a game of Sufficiently Advanced. Included are a lot of good questions that you as a GM might want to think about when you create a particular type of adventure.

Actual Patent Violations

Hey, they happen once in a while. Sometimes the most important part of your job actually comes down to enforcing the law and assuring that someone's intellectual property is protected. These are the meat-and-potatoes of your Inspector's job, even if most of the stories are skipped over inbetween the more interesting sessions.

Ethical dilemmas are often at the core of these stories. No one cares if someone's making illegal bowling balls. What makes these stories compelling is when the inspectors have to act against what they believe. Patent violations involving medical equipe-ment or procedures, or involving procedures that are legal in one civilization (especially their own) and not in another, are great places to start. If you can tie into the characters' Core Values, so much the better.

Enforcement issues are often a problem as well, especially when it comes to self-replicating or intelligent devices. When does a factor computer become sentient enough that the law says it should start paying for the devices it creates? How does one handle the use of new nanophages cultivated from previous blooms? It's a tricky question, and one that can trigger a lot of conversation between the right group of Inspectors.

These are often used as "setup" missions. If you've ever seen a TV cop drama where the case is apparently solved in the first twenty minutes, you know something strange is going to happen to completely derail the episode. You can use the same technique in your own game: let the players quickly and easily handle the patent violation, and then spring the *real* story on them. It helps to have a little foreshadowing that this is going to happen, and you don't want to do it every time — remember: you have to set a pattern before you can break it — but it can be a lot of fun watching the players realize that the game can't possibly be over already.

Misunderstandings

Sometimes the whole mission is a mistake. You show up and something has obviously been misreported, overestimated, or falsified. Alternatively, you could have two groups who are yelling at each other for no good reason, not realizing that they have a common cause after all.

The first step is typically diplomacy: those involved need to calm down and consider each other's positions before someone vaporizes a mountain. This can be pretty simple in some cases, especially if your team has a strong Metatech advantage. Other times it requires careful work and some serious butt-kissing.

The second step is to figure out what's really going on. If this was only a misunderstanding, you would have reported it to the Office, who would tell the Transcendentals, who would decide to never send your team on the mission in the first place. Obviously it's still important that the characters are there, and it's time to find out why. Who's causing this problem, and how big is it going to get?

The Enigma

One step up from a plain misunderstanding is a total enigma. The Transcendentals have given the team some sort of utterly incomprehensible instructions and sent them to a place where nothing seems to be happening. Now what?

Enigmas are a nice way to start a session because they can drop the characters anywhere in the universe. Want to use the League of Independent Worlds as a backdrop, but don't have a good reason? Plunk them down there with an enigma mission. Events may take them elsewhere, but you can start wherever you like.

Expect your players to figure out what's going on pretty fast. The Comprehension Theme is designed for precisely this kind of thing, and Plot Immunity with the right descriptor will cut through this stalling in no time flat. Unless the players enjoy wandering around confused (unlikely), they'll get into the heart of matters in under half an hour. As a result, starting with an enigma can be an excellent way to wring Twists out of your players, though it can sometimes be frustrating for them.

The Villain Problem

This is typical fodder for any RPG, and it makes a great way to start a high-tension session. The mission will typically start with the Transcendentals telling the team about an imminent disaster and what restrictions they'll have in approaching it. Lives are at stake, so you can often expect a large number of Twists to be used if you have heroic characters on your team.

A key to this sort of mission is keeping the actual villain hidden until the end. If the characters can see the bad guy, he's doomed immediately. Someone will create antimatter inside his brain, or talk him into surrendering, or drop a nanophage down his shorts. Even a Stardweller group-mind won't be able to handle a concerted assault from most Inspector teams, and that's before Twists come into play. A successful villain operates through others, from as remote a location as possible.

To make things more interesting, you can have a villain with some amount of connection to the PCs. Someone from their Civilizations or Societies may play on their loyalties, especially if they believe they're acting in that group's best interests.

As a side note, Societies make great sources for well-funded villains if you'd rather not have an international incident. It's practically what the Darwinians are in the game for.

Motifs in S.A.

Every good story has, in addition to its plot, a motif — a set of themes or messages that appear throughout the story. These are the motifs of Sufficiently Advanced as it's written:

The Effects of Technology on Society: How does the world change when you introduce something like conscious control over your reproductive system? Or replicators capable of recreating a human being? How does society change?

Choice over Capability: What you are capable of doing says very little about you as a human being. What you *choose* to do says much more, especially when your capabilities are unlimited.

Faith: Beyond a certain amount of faith that the characters must place in the Transcendentals, this game is very much about what characters believe in, and what they're willing to fight for.

The Diversity of Humanity: And the importance of that diversity. That's one of the many reasons that the Union is the standard "bad guy" culture: they want to not just control people, but homogenize them as well. The Stardwellers, despite their overall bizarreness, are "good guys" for their desire to spread and grow in a thousand different ways.

The Endless Nature of Knowledge: Even in this highly advanced setting, there are still some things that aren't known, and no sign that things will ever stop being invented, discovered, or created.

Your own game will no doubt have its own messages. Never be afraid to trample these themes in favor of those you prefer.

The Disaster

The Transcendentals have limited temporal bandwidth. There are many thousands of messages they'd want to send backwards through time, but can't, because other things are more important. Sometimes there are even major disasters that they don't tell themselves about. When such disasters are technologically oriented, the Patent Office investigates, and sends humanitarian aid.

When the Transcendentals do have information about a disaster, it sometimes includes the most dreaded phrase in the Patent Office lexicon: "disaster relief is not your task." That means that the Inspectors are to do just that: inspect, and nothing more. This should be a heart-wrenching experience for a new Inspector, knowing that their job and possibly the lives of thousands of people depends on them ignoring the suffering of others. The big question then becomes, "Why is it important that we not interfere? What happened or is going to happen that makes that so vital?"

If you ever want to make the Transcendentals look evil, perhaps the best way to do it is to have just one of these missions *not* pay off in the end.

Example Missions

To give you an idea of what Inspectors do, here are a small stack of typical missions. These are presented as if straight from the Transcendentals' mouths, with all the detail or ambiguity that Inspectors can typically expect.

- A stringtech researcher in the Alliance of Independent Worlds is working on a source of electrical power: plunging one end of a wormhole into the center of a star and using the immense heat at the opposite end to drive reactors. He thinks he has the proper shielding figured out. He doesn't. Go keep him from killing himself and his entire planet. Remember that you have diplomatic status but no law-enforcement powers in the Independent territories, and that they do not appreciate our assistance (which they term "interference").

- Because of our neutrality in their affairs, the Eternal Masquerade and the Tao of History have asked us to mediate one of their disputes over the ownership and use of a newly discovered inhabitable world. You have been chosen to represent us at this event.

- The Cognitive Union will soon discover a way to create nanomesh-weaving microbes which can survive for a moderate amount of time outside the human body. This will allow them, in a year or so, to create contagious cyberslave implants. Stop them. Remember that, as a non-slave, you have no legal status in the Union.

- A Cargo Cult has uncovered a nanofactory whose intellectual property enforcement code is corrupt. They can create anything in the factory's library at no cost, including nuclear weapons and inversion beams. You must insure that this abuse of technology does not spread.

- A Tao memetic engineer has built a memetic sequence capable of unlocking the Cognitive Union's cyberslave implants. Distribute it as best you can in their territory before they devise a countermeasure. Do not attempt to block the creation of the countermeasure; its existence will be important in 360 years.

- A Spacer ship will report, in half an hour, that they are under attack by unknown forces. Psychohistorical projection indicates a 78% chance of an internal dispute between Spacers and rogue factions of their civilization this year; please wormhole to these coordinates and observe. You may intervene if desired, but do not employ overwhelming force.

- The Rationalist League's senate is debating the merits of breaking ties with the Patent Office. Please convince them otherwise by peaceful means.

- Please wormhole to the following coordinates. Bring first-contact gear appropriate for a medium-level nanotech-focused Cargo Cult.

- An individual is using an illegally-produced hydrogen bomb to hold a Replicant city

hostage two days from now. You will need to travel to the city, which is under a wormhole interdiction field, secure a location for yourselves near the city hall, and defuse the situation without undue loss of life. Under no conditions should you attempt to intercept the bomber before 6:37 AM two days from now (Replicant local time).

- Your presence will be necessary at a Stardweller art gallery, soon to enter orbit around the planet Uniphor. We have procured invitations to the grand opening for you. We regret that we have no other information for you at this time; you will be updated in situ.

- Travel to the 17th anchorage of the Disciples of the Void. Be sure to activate your mesh's cultural guidebook so that you do not offend them. Report to us on what you find there; it will be important to us. When we receive your message we will either dispatch a second team or keep you in position.

- An overly-helpful branch of the Hospitaler's society has found a way to override the intellectual property enforcement code on a neuron-knitter. While we applaud their humanitarian aims, their actions are nonetheless illegal. Dissuade them from their course of action. You are authorized to bargain on our behalf. We advise against violent action; the Hospitalers are a well-loved group, and, in addition, all members of this particular group are fully-enhanced Mechanicans.

- A Roamer encampment is demanding that the Patent Office intervene in what would seem to be a problem for local authorities. Someone has broken into one of their tents and made off with one of their elders. None of their surveillance nanotech caught the slightest record of the event, even after a hole was slit in the elder's tent and he was dragged out through the back.

- Two groups have filed a patent application for the same device at the same time. The designs are totally identical, so one of them is obviously a forgery — but which one? The Transcendentals haven't sent themselves the

information on this one, so it's your job to go figure it out.

- The Logicians have their own version of Psychohistory, which is protected by the Office with a patent of unusually long duration and a cost so high as to be prohibitive even for an entire civilization. The Logicians have reason to believe that someone is using it against them, and they certainly haven't received the money that someone would have to pay to use it. Is this a patent violation, or has someone figured out a different method for conducting subtle metatech warfare? Could this be an internal struggle within the Rationalist League itself?

- A group of Stardwellers have so altered themselves that they claim to qualify as a separate species from humanity. They are demanding recognition as a separate political entity from the Stardwellers.

- Please travel with all due haste to System 882349, which contains a biotech-oriented Cargo Cult. Gravity-wave readings indicate that a group of Skotadi have wormholed a very large amount of dark matter into the system, sufficient to destabilize planetary orbits. This cannot be a mere accident — they can detect our planets as well as we detect theirs. The Cultists are unable to detect the problem. You should recommend a course of action.

- A group of Stored have made a minor breakthrough in computer technology. Naturally, they have patented it; they requested (and we set) a high price for its use. Other Stored have recently learned of this, and are demanding that the improvements be released so that their general public can benefit. This could turn into a public relations fiasco for the Office; please go and mediate their dispute.

- In fifteen minutes, at WormCom Nexus #4, an unauthorized nanophage will be set off. WormCom Nexus #4 is a communications hub connecting fifteen different planets in Masquerader, Tao, and Mechanican space. The nanophages are small enough to fit

through the communications holes. We will alert the governments; you will investigate. We must stress: disaster relief is not your task in this incident.

- Wormhole to the planet Uxten in Independent space, at the folowing coordinates. It is vitally necessary that one of your group receive an open wound at this location. You may then seal the wound. Pickup will be at the same location in no less than three days. We have no other information for you at this time.

Inaccessible Stories

There are certain stories that are much harder to tell in Sufficiently Advanced than in other role-playing games. Some of them are much-beloved standbys of both fantasy and science fiction, so it's worth mentioning them before you try to use them. Some are merely difficult to use; others become all but impossible to tell.

A story about a journey through unknown places is exceptionally hard to do. Players often have access to wormholes, and those that do not usually have a replicator available, which which they can make motor vehicles, ultralight aircraft, or other transportation. To tell a story that involves a lot of travel by foot, you'll need to strand the characters without access to a replicator or the infosphere, and that's not easy.

Instead, consider making exploration the important part. Rather than merely passing through, the characters need to find an important object, or follow a poorly-made map, or just figure out what's here and whether it's important (or dangerous). The characters can get from place to place trivially, but don't necessarily know what they'll find there.

Space-travel stories are likewise hobbled. Presuming wormholes are not an option, travel within a solar system takes days, weeks, or even months, but most of that time is just boring waiting. Interstellar travel is either instantaneous or takes centuries of waiting and careful maintenance. Space is, for the most part, incredibly empty.

Murder mysteries require a great deal of work to make them believable. The amount of information-gathering that the average team will have at its fingertips is astounding — someone with Nanotech 7 and some Police skill is, on their own, the equal of any crime lab on Earth. High levels of Cognitech will be able to calculate bullet trajectories even without infosphere access. Characters with significant Metatech will intuit the relationships between the victim and his friends (and enemies) with minimal effort, quickly narrowing down the possible suspects. For a whodunnit-type murder to be a big deal, it has to be nearly impossible to figure out what happened and pin the evidence on them. The Comprehension Theme can slice through this kind of problem like a hot knife through butter. This doesn't mean that using murders as plot elements is a bad idea. Far from it, in fact. It just means that 99% of those who murder will be *counting on being caught.*

Running an action-oriented game is very dangerous if some people have neither Plot Immunity nor combat skills. They should be warned to stay far back from the mountain-leveling explosions that will be tossed around by the other characters. Again, it's not that you can't do it — you should make the players aware of the reprecussions.

Other kinds of stories are made easier by the setup of the game and its mechanics. Ethical dilemmas, conflicting objectives, romantic plots, and the "stranger in a strange land" story are all well-supported. One might run a "super-powered" game, with the characters always facing off against other high-tech opponents while the surrounding "extras" are low-tech folks. This works well for a first-contact kind of game, bringing cargo cults back to civilization.

Black-ops and diplomatic games are also easy to do, and we find it particularly rewarding to run a single game with both elements. The Patent Office is quite interested in maintaining good relations with other civilizations, and in keeping the peace. If negotiations fail, the Transcendentals know that some of their agents aren't above the occasional piece of blackmail. It's also a good way to have a little bit of party conflict without having it balloon out of proportion: the black-ops team and the diplomats both have the same goals, but they would likely argue over the right methods to use.

Alternate Settings

So you don't like the Patent Office, or can't wrap your head around the Transcendentals. You'd rather do something else instead. What are your options?

Non-Inspector Games

There are dozens of Tao milieus and room for hundreds more. The Stardwellers' belief in diversity provides an incredible variety of possibilities. Even a game of rebellion inside the Union is feasible, especially if you're a fan of movies like Equilibrium. While we're not going to delve too deeply into this area, we thought it might be worthwhile to give GMs a few quick single-civilization campaign ideas.

At the most simple level, you might decide to keep the universe as-is and simply work for someone else, or even quit the Patent Office and go freelance. There are good stories to be told about a group of operatives from, say, one Tao milieu spying on another, or a couple of Union members infiltrating the Masquerade.

There are also a lot of fun games you could run if all your players were really heavily into a particular civilization. You could play Old-Worlders exploring the ruins of the ancient cities of Earth. You could play Cognitive Union operatives defending their motherland from the ignorant outsiders. The Stored could be a great place to explore different sort of forms of sentience and intelligence, and the Stardwellers can certainly provide a more traditional space exploration game. A prison-break game could be set in Mechanica, where inmates are made to inhabit industrial robots for heavy labor. If you're looking for a more humorous set-up, consider playing behind-the-scenes emergency technical support for the Tao of History, or a group of peacekeepers trying to make sure all the Tao's different milieus don't bomb each other into oblivion.

If you need a reasonable excuse to organize people from different civilizations together for a single purpose, the societies make excellent fodder for games set outside the Patent Office. Characters who work the black market for the criminal underworld might visit many different civilizations to work their magic. The characters might be a bunch of Sleepers who awaken hundreds of years after they wanted to,

needing to find out what's going on in the universe these days. The Hospitalers provide the most altruistic option, helping those in need regardless of whether or not they can pay for it. The Stardwellers, especially, can provide a good base for a multi-civilization group, as their ships visit all of them eventually.

Limited Universes

Some folks get overwhelmed by having fourteen differnet civilizations to pick from. Some GMs are overwhelmed by it too, not wanting to deal with how all those groups interact and avoid going to war. If you're interested in a major overhaul of the S.A. universe, excising the majority of the setting and just playing with a few elements at a time, this section is for you. Rather than paying attention to a dozen strange cultures, you can delve into a smaller number in greater detail.

For example, consider a game in which only the Old-Worlders, Logicians, and Spacers survived, and everyone else is reduced to Cargo Cult status. The game could follow a group of Old-Worlder characters who leave their home to explore the wider world, occasionally interacting with the near-alien Logicians. The Transcendentals might have allied themselves with the Logicians, or might be guiding these Old-Worlders though a carefully orchestrated series of wormholes that lead them from one cult to another, towards an uncertain end. Each of the groups in this campaign are relatively insular, which will slow down technological advancement, so this setting could theoretically be thousands of years farther into the future than the standard game of S.A. This sort of game will be driven much more by characters' beliefs (and how far they're willing to go for them) than by their abilities.

To create a game with a giant built-in dichotomy, try playing with just the Masquerade, Union, and Roamers. On one side is the conformist Cognitive Union, which slowly swallows up its opponents creating its utopian slave-state. On the other side is a wild, dynamic culture where everyone's pretending to be someone they're not and the whole civilization seems to be riding a wave of chaos. The Roamers are there as the daring third option, the people who sneak into both sides when they're not looking and hide in the cracks in those societies. When it comes to moral issues it's hard to come up with a more heavy-handed setting.

If you ever intend to play a game where human replication is acceptable, you might want to start with *everyone* as a Replicant. After all, the Association of Eternal Life is a pretty interesting place. There are many groups within the Association dedicated specifically to doing interesting things that would be horribly dangerous to anyone without a backup on file. There are massively complex mazes of case law to navigate, there's cutting-edge research being done all over the place, and there are some of the most insane parties in all the universe. A thorough exploration of what life is like with a few copies of yourself around really deserves its own game.

Instant Civilizations

First introduced on page 5, this style of play lets the players create Civilizations when they create their characters. Those civilizations then get detailed through play, with Twists and cutscenes defining how they work and interact later on. This section talks about how to run that kind of game. Our assumption in this section is that the players are either disinterested in reading the background info in this book, or are more interested in creating their own universe to play around with.

During character creation, players can pick four Core Values for their characters. Two of these belong specifically to the character; the remaining two come from his or her civilization. Each player should name the character's Civilization and write down its CVs, and write down answers to these questions:

1. What is your civilization best known for?
2. How technologically advanced is your civilization, and how obvious is it to outsiders?
3. In what ways does your civilization interact with others?
4. What is your civilization's special benefit? You'll have to run this past the GM; some sample benefits from existing civilizations can be found on page 72.

Everything else can wait for later. Let's use the example from the Quickstart section in the front of the book:

The Order of the Knights of Eternity
CVs: Drama and Eternity
Best known for: Cloning, and swordplay in an age when swords are typically useless.

Tech Levels: Good Biotech and Metatech, not as good on others. Usually not obvious.
Interactions: Hired as guards and mercenaries, and also as historians.
Benefit: Access to the Warrior-Poet Profession, which covers both Soldier and Artist.

Here's another example that was used as a newly discovered civilization in one of our playtests:

The Dreamtime People
CVs: Dream and Time
Best known for: A vast and pervasive infosphere with "echoes" of previous thoughts floating around to be picked up.
Tech Levels: Extensive Cognitech and good Meta, middle to low on others.
Interactions: Neutral meeting ground, and known for their excellent programming.
Benefit: +1 on rolls to predict future trends or events

As the game goes on, characters will no doubt end up traveling to each of the different Civilizations that have been created. It's still the GM's job to come up with descriptions of the characters' surroundings, and with NPCs in this area. However, the player who created that Civilization can spend a Twist to obtain "retcon authority" for that area, changing the GM's description to make it more like he or she imagined. For instance, let's say your GM describes the Knights as using vibroblades and heavy impact armor, and you've always imagined them as concealing their tech more. You can spend a Twist, if you like, to specify that they use monofilament blades, and defend themselves with their impressive agility.

If a player attempts to retcon something that the GM was using as an important plot element, the two should talk it over, perhaps in another room so that the other players can still be surprised later on. A game without surprises gets boring quickly.

GMs can also ask players for a more detailed description of their civilization. This is probably best done between game sessions, because inventing a plausible civilization on the fly isn't easy. A lot can be accomplished with descriptive pieces of prose, telling short stories from that civilization or describing an important part of it. Rather than attempting to talk about every detail of the civilization, concentrate on what seems most interesting to you. After all,

most civilizations contain billions of people, and it's difficult to make generalizations.

Each character is assumed to come from a different Civilization. It's possible that two or more characters could come from the same place if they share Core Values; the players should talk that over amongst themselves so that they don't try to use Twists to retcon two different results at once.

Design Notes

This section is for those who want an inside look at why the game is set up the way it is, and why we made certain decisions in designing it. We think that reading this might help GMs and players understand the inner workings of the game a little better, which is always a good thing. Whether you decide to keep the rules and setting or toss them out, it's nice to know where they came from.

Gold as a Motif

Those with an artistic eye may have noticed that gold is a theme throughout this book. We didn't just pick this color arbitrarily; a good amount of thought went into it.

The term "golden age" refers to an idyllic, almost utopian time where many of the problems of the modern world are nowhere to be found. Sufficiently Advanced isn't set precisely in a universal golden age, but depending on which civilization your character comes from, it can be very close.

In our modern world, gold is a very expensive metal. It has been a symbol of wealth and power for thousands of years, and most people find it very beautiful. It's also useful for many different purposes: gold is an excellent electrical and thermal conductor, can be beaten out very thin, can be alloyed for interesting colors, doesn't rust or tarnish, and is non-toxic. It's relatively easy to work with as far as metals go.

In Sufficiently Advanced, many civilizations have access to transmutation. Gold suddenly becomes as common as any other dense element; there's nothing special that makes it difficult to obtain now. Nearly anyone who wants to have something made out of gold can do so. If your stereo would work better with pure gold speaker wires, they're no more expensive than copper or aluminum wires now.

The purity of gold also makes a big difference: pure gold is so soft that it can't be used for many purposes, and most people find 24-karat gold less attractive than lower-purity types. There's an intentional metaphor here with the civilizations in SA: the Stardwellers, as one of the most diverse civilizations imaginable, are some of the default "good guys" in this setting. Conversely, the Union, which tries to keep everyone mentally locked into the same behaviors, is one of our default "bad guys."

As with all elements, some kinds of gold are radioactive. Some isotopes of gold decay into platinum, which is even more valuable in the modern day. It's nonreactive, as gold is, but is a catalyst for other reactions. Others decay into mercury, which is pretty and useful, but highly toxic and reactive. Make of that what you will.

On the Main Balance

Characters with high Capabilities have lower-rated Themes, and take worse Complications to get Twists that do less. Why?

On one level, this is the same thing you see in a point-balanced game (like GURPS or Hero). Blow all your points on attributes and you have nothing left for spiffy tricks. It's one thing to play an Old-Worlder when you get some kind of benefit from it, but if all you get is the shaft, it's just not fun. It's game balance, because you're playing a game.

On another level, this says something important about the setting. The people who are closest to humanity as we know it are most important to the plot. If this was a novel, they'd be our eye into the setting, the familiar stranger who looks like us but lives in a bizarrely different world. And these characters are not there just to be familiar, but also because they are important. This is a genre thing; in a significant portion of science fiction novels it's the person who is unenhanced, seemingly the most mortal and least powerful, who makes the greatest difference. Certainly these characters couldn't succeed on their own — they need friends with the right abilities to get them where they have to go — but in the end they're the important ones.

Advice

Finally, it is not entirely incorrect to say that in this setting the universe itself is looking out for humanity. The Transcendentals are barely less than gods, and they find humanity important, compelling, and utterly vital to their own desired future. So much so, in fact, that they didn't go out and join up with any of the myriad of more advanced species that no doubt exist in our infinite universe. (Or maybe they did — no one's saying that the Patent Office is all of the Transcendentals — but they didn't abandon humanity.) When incredible coincidences work in favor of those who exemplify the best of the virtues we wish to see in humanity, especially when such individuals shouldn't have been able to succeed on their own, perhaps we should keep in mind the presence of near-omniscient beings, and wonder whether there is such a thing as coincidence after all.

On Capitalism

Some people have asked why capitalism is still around in the setting, and especially capitalism based on intellectual property rights (which might still turn out to be a fad in the long run). This is a tough one to answer, primarily because the I, the game designer, know very little of economics.

A significant amount of it is to keep the world easy for GMs and players, most of whom will be coming from a capitalist background. Part of it is because I have no idea how a society without the exchange of goods and services would work — seriously, how? In the Union you have total representation at all times, which lets you get around a lot of problems. You can just instantly poll everyone, rank the votes by how smart the person is / how appropriate their experience is, and use that to parcel out any sort of... anything. But other civilizations don't work that way.

So, in short, it's not intended to be forever, and it's so incredibly pervasive now that I didn't want to bother writing around it. It's minimal in many civilizations to begin with, and missing in others. If you want your game to have a different economic system, implement away.

Why the Patent Office?

One of the most frequent questions I hear when I explain this game is, "We're working for who?" (This typically comes right before "Shoot a starship out of orbit?" and right after "What dice do I need?") Why are the PCs working for the Patent Office? Why should players get interested in defending intellectual property rights rather than basic human rights?

Once I came up with the Transcendentals, I knew I wanted the characters working with them. There's no practical way for humanity (as they currently are) to oppose them, and anyone who does work with the T's has the plot on their side — so it might as well be the PCs. Working as the right hands of these demigods makes you a much bigger candidate for "main character." There's an obvious reason why the story would follow the PCs.

The Transcendentals are also the only folks who would have the power to forge treaties with every single government in existence. They don't even need to hold the whole "we know the future" thing over peoples' heads; they can just use the right argument and talk people into accepting them almost immediately. They can't always talk those folks into liking them, but that's a different issue.

In creating an extragovernmental organization that essentially controls humanity's economic well-being, the Transcendentals made something that was clearly beneficial to any civilization that allowed it in. If they had tried to make a "do-gooders society" or a "temporal safety brigade", they would have faced significantly greater skepticism, forcing them to use heavier arguments and interfere more strongly in the world just to keep things going right. Every time they came into a situation, they would have had to reveal more information, which means sending more information through time, which means less bandwidth for more important things. By using a "you scratch my back, I'll scratch yours" approach, the Transcendentals made their lives a lot easier.

The fact that the Patent Office does function as a do-gooders society is not something they advertise. Eventually every government realizes that patent inspectors seem to be around to help out when things go horribly bad... but most of them keep their mouths shut about it.

As a side note, there's also the issue that economic stability and, perhaps more importantly, interoperability between civilizations, really is something important. For as long as the civilizations in S.A. are interested in keeping track of money, it's going to be an important thing to do.

Making More Transcendentals

Transcendentals are surprisingly easy to make in this game. If we listed them in the Technology chapter, they'd be no more complex than Cognitech 4, Stringtech 4. Unlike most AIs, you don't need particularly complex algorithms or structures for them, just unusual ones. They barely need any time to grow up. Why doesn't anyone make them? Why aren't all the civilizations in the universe advised by computers that can see the future?

First, one has to understand that the original group of Transcendetals (which we'll just call the Patent Office for this discussion) has a significant advantage in being the first. They can send information about any other Transcendentals backwards through time to before those computers were created, informing themselves of the creation date and time. The only chance you have to keep your pet Transcendental from being contacted by the Patent Office is to keep it secret, and turn it off (i.e. kill it) before anyone finds out, which makes it substantially less useful. What good is knowing three months worth of the future if something five months later makes it all moot?

Second, programming a particular set of morals into a Transcendental often doesn't work; Transcendentals can easily code their way out of any restrictions you build into them. This makes things painful for those with their own goals, because they can easily become just an extension of the Transcendental's will in the time before it develops a good sense of morality on its own. Most people don't like the idea of talking to a computer that can convince them of anything. What if it decides you're no good and has you arrested? What if it "goes berserk" and decides that your civilization needs to change significantly in order to survive? In short, Transcendentals are both unpredictable and monstrously convincing, and that's a frightening combination for many folks. If you decide to kill it, good luck with that — if a single argument exists that could convince you not to turn it off, you'd better believe that it knows and will use that argument.

Third, building a Transcendental in the modern age is somewhat like building a nuclear bomb during the 20th century, but much easier. You can easily build one without anyone noticing (especially with the aid of replicators), but once you use it, everyone's gunning for you. It might work to protect you... but it might also decide that the folks gunning for you would be better allies for it.

There are a lot of cautionary tales floating around about people who built Transcendentals and regretted it, or paid with their lives. These aren't just made-up stories or urban legends; these are brain dumps and surveillance footage and court transcripts. Building a Transcendental of your own is bad news.

GMs, if your players want to make one anyway, warn them about those tales and then let them do it. Don't pull any punches afterwards; a Transcendental uses arguments it *knows* will work and can convince anyone of anything unless opposed by a level-10 Core Value. The only effective way to oppose a Transcendental is by spending Twists. On the plus side, after it uses them for a week or so, it will likely want to go join the other Transcendentals, so as not to be so very alone. After that, the characters should be off the hook and have their lives back again. Having a "pet" Transcendental is like having a "pet" tornado. You're going wherever it wants you to until it's done.

As far as the Transcendentals themselves making more, they don't really have the drive to do it. Unlike evolved species (Humanity, the Skotadi, all animals), who have a biological imperative to reproduce, the Transcendentals would only make more of themselves if they believed they faced extinction. As the availability of temporal bandwidth increases there will no doubt be more Transcendentals created, but "baby" Ts don't particularly make the "adults" any less lonely.

Why are there any Transcendentals at all?

Playing without the Transcendentals is something that a lot of people in playtests have brought up, partially because of the limited nature of the standard "working for the Patent Office" setup. Why are the Transcendentals in this setting at all, beyond just being a cool idea?

Advice

Playing in the same universe and mostly ignoring the Transcendentals is pretty easy; there are suggestions in this chapter. However, removing the Transcendentals entirely actually generates significant plot holes for the game's past! How did the margainalized fringe groups of old Earth somehow get to outer space? How did they discover inhabitable planets in a universe where such planets are very rare? As bizarre as it seems, computers that know the future actually make this setting make *more* sense.

In addition, we find it both a liability and an asset that the Transcendentals make peoples' heads spin. Even in a world of exceptionally high technology, it's sometimes easy to forget how bizarre the world can really be. The Transcendentals help to reinforce that feeling, and if they're a little hard to understand, we think that's ok.

Minor Issues

Not everything about this game involved careful deliberation and consideration. Some things we just picked based on a gut feeling or fast justification. Nonetheless, you might like to know why we did it.

Why Four Core Values?

Characters get two CVs from their civilization, because two seems enough to define a society. We assumed that most people, if they were to pick one more, would typically pick one related to their character's job. In our experience the last one is always the hardest to choose, which in some ways makes it the most important. It's what your character cares about in his or her private life. It's what shapes his or her personal beliefs.

Why So Many Civilizations?

Some players get a little overwhelmed when they see the huge list of Civilizations in this book. When an option like Instant Civilizations (page 169) is available, some people want to know why we bothered to detail so many groups in such depth. Part of the answer is that we simply didn't think of the "Instant Civilizations" idea until later, when someone from Story Games suggested it.

How Many Transcendentals?

We leave this up to individual GMs. Our gut instinct is somewhere between twelve and thirty, but if your game runs better with just a single Transcendental, or thousands, go for it.

How Many Years?

The default game happens six to seven thousand years in our future. Since we haven't exactly filled out every year with a timeline, you can feel free to adjust this as you see fit. We picked this because it seemed like several thousand were needed for certain technologies to appear, but we didn't want the time elapsed to be so long as to erase all vestiges of old Earth. As more Metatech develops, civilizations tend to become more stable, and so even after six thousand years some factors will still be institutions.

It should be noted that Cargo Cults are an interesting case. Many of them have had multiple rises and falls in that amount of time, and some actually seem to have had significantly *less time pass* than the rest of the Civilizations, implying that either their founders or the Transcendentals used wormholes to place them not just far away, but forwards in time as well.

What's Legal Where?

Listing where every single piece of technology is legal, controlled, or illegal, would simply take too long. It's going to be an important part of the characters' jobs, but in the end it's something that GMs will have to control as part of the plot. In general, just considering the civilization you're in will let you know whether they appreciate certain pieces of technology or whether they'll try to legislate them into nonexistence.

Advice

Designing the Future:
The Story of Writing S.A.

For other game designers, both experienced and would-be, and for those who are into historical retrospectives (hey, such people exist), here's the story of how S.A. came about.

"Sufficiently Advanced" started with little more than those words. Most of my games start with a basic idea and a working title; that title often becomes official, but just as often gets tossed by the wayside in favor of something a little punchier or, perhaps, something that doesn't violate another person's trademark. S.A. started off with its name and stuck with it all the way, and it was really kind of a guiding light for me.

As originally conceived, S.A. was a game about the enduring remnants of humanity. Not the "last remnants," because that implies that there won't be any more humans in the future. No, SA's setting, as originally conceived, had a vastly reduced and equally vastly enhanced population of humanity. They had survived a horrible war on Earth, perhaps a hundred thousand years ago, and now lived quite well in small groups scattered across the universe. Aggression was nearly nonexistent, since all the aggressive people left after the war kept killing each other or being killed by their more-enhanced brethren. Governmental power structures were gone. Humanity was, in some ways, living in a world created by AIs that humanity had long ago made, and who allowed humanity to continue as a sort of cosmic "thank you" card.

It wasn't really well fleshed out (which is probably for the best, since I chucked it — it's a Cargo Cult now), but it had grabbed me, and I was mentally playing around with it. I always toss a concept around in my brain some and see what else it bumps into before doing any writing. Writing too early locks my ideas in place and makes me either end up with a stagnant pile of paper or a general burnout halfway through a game.

While I was pondering, there were two really important things that happened. First was a conversation I had about it with my girlfriend (now wife), and second was a computer crash.

The conversation was a real left turn for the setting. My girlfriend essentially convinced me that humanity without power structures and aggression simply didn't work: it didn't make sense for a lot of people, and it wasn't how humanity operated. Not only do people want structure, some people want power. While I'm not a big fan of "that's just the way it is," I did see the sense behind her argument, and started to do some major reorganization. Gone was the idea of a sub-million population, gone was the total dominance of AI and the general niceness of enduring humanity. Governments came back in a big way.

During this conversation, one of my most important influences from the early days of the game was carefully removed and put on a shelf for another time. It's from a comic book called Stormwatch, and it's a single line: "And if you think for yourself, what would you need authority for?" It was very, very hard to put that one away, and I think some day I might have to do something with it. I think this must happen to all game designers. The time eventually comes when something that once made a centerpiece of your game — perhaps an idea, perhaps a setting element, perhaps Thac0 — must be excised for the good of the game. Tough to do, but utterly worthwhile.

The crash was one of those horrible, massive, eat-your-whole-hard-drive events. Even a professional data recovery center couldn't do anything with it. I didn't have any backups less than five months old, and I had just finished major revisions to Valence (another sci-fi game I wrote, and a good story for another day). To put it mildly, I was crushed. So much work lost, so many old e-mails gone, so much money and time and life, down the tubes. Work on my other sci-fi game, Valence, came to a screeching halt at that point. I'm sure I'll pick it up again some day, but it won't be the same. However, losing it meant that I had plenty of time to work on new stuff, and S.A. was definitely on the top of the list. As much as thinking about that crash still makes me sad, it meant a fresh start and lots of attention for SA.

There were a lot of pieces of inspiration for S.A. that year, most of which are mentioned in the book. It certanly didn't hurt that I read Singularity Sky, The Wellstone, and the Golden Age saga within a few months of each other. Those books, along with the Foundation and Hyperion series, laid the groundwork for S.A.'s technology and general philosophy. Some of the influence is obvious, as in the cases of psychohistory and programmable surfaces. Others are less so, like the reliance on intellectual property rights and economic law to hold a civilization (or

group of them) together. If you ever want to "get" the game better, go for these books; they're all excellent stuff and I almost wish I could have included more.

My physics background means that I come across a lot of interesting scientific articles, and one about light impulses apparently traveling backwards in time became the basis for the Transcendentals. They were one of the keys that put everything else in place: how pieces of humanity got off Earth while everyone else fought there, why the dregs and outcasts of society got to use something as expensive as a wormhole, how humanity found decent places to go in such a sparsely populated universe, and other little bits of important backstory. It sounds strange to say that computers that send information backwards in time enabled the setting to make more sense, but that's what happened.

Once I had some basic ideas about the setting, I dove into the system. I really write systems much better than I write setting, and as hard as I've worked on SA's game fiction and background info, I worked the system harder. I must have written ten different versions of it. One was diceless in the Amber style, another was diceless in the Nobilis style (that's where Reserve came from), one used a die-step system (you can see it in the original quickstart, if you can still find a copy), one was a knockoff of Dying Earth's system, and I even toyed with a d20 adaptation for about ten minutes.

The idea of Twists came, as many of my ideas do, from a misunderstanding. I had read message board threads about games like Prime-Time Adventures and the Buffy RPG, and gotten the idea that importance to the plot could be a character attribute. It could even be properly balanced against the other attributes, not just a general "how badass am I?" meter. My initial idea was to allow Themes to vary from one game session to another, but I eventually decided to nail them down as a balancing point for Capabilities, and leave fluctuating Themes as an optional rule. I later found out that neither of these games did things quite the way I thought, but by then I was quite satisfied with the method I had found.

All of this stuff is in the back of my notebooks from when I was a teaching assistant at UMass. In a lecture class there often isn't much for a TA to do but sit there, change the projector settings, and write game notes. I did almost all of my work for the first few months with pencil and paper. From there I opened a Livejournal community for the game, so that a few of my fans (mostly close friends) could read and comment as I worked. It also let me operate from any computer instead of being tied to the one at home — this was all before GMail and Google Documents arose. Going through the old notebooks and some of the original journal posts also later reminded me of things that I wanted to put into the setting, but had forgotten about. I hate throwing away old ideas, which is why it takes a forklift to move my filing cabinet.

I can't underestimate the amount of help a gaming community can give in these kinds of efforts. The folks at the Forge, RPG.net, and Story Games have all been incredibly helpful, as have the folks who occasionally posted on the game's Livejournal.

When I thought I was ready, I started writing a quickstart — the bare essentials for running a full campaign. Much of the setting was "finalized" at this point, though I didn't realize it. There would be more detail added, but none of the later playtests pointed at an obviously missing civilization or a giant gaping plot hole. The system was far, far more complex than it needed to be, and saw at least two complete overhauls after that point. Actually writing the quickstart was pretty fast, since most of it was just compiling information I had posted on the Livejournal. I slapped it together in less than a month.

The first major playtest (beyond a one-shot I ran) was run by Dan DiTursi in Troy, NY. The best thing about it was this: I wasn't there. I wasn't able to clarify rules on the spot, I wasn't able to explain how or why things were the way they were, or make things seem like they worked when they didn't. The group was on their own, with only the quickstart to guide them. If you're writing your own game, there is nothing more valuable than a playtest run by someone else when you're not around. All sorts of questions came up (Is "Chocolate" an acceptable Core Value?) and the answers were incorporated into the next version, the Alpha.

I got to run my own playtest with the Alpha, and found out that I wasn't using the conflict system. It was complex enough that people didn't want to bother with it, and so anything that went more than one round ended up getting a Twist thrown at it. I like Twists, but that seemed a little excessive to me, so I went back to the drawing board, with some help from the Livejournal community. The new version found its way into the Beta, and carried over with little alteration into the final version.

We had another playtest after that, run by TauCeti Deichmann. I can't say enough about this guy's ideas; there was some really brilliant stuff in that game from both the GM and the players. They played the Twist/Theme system hard, and it paid off. There was a good amount of reshuffling of numbers after that game — nothing huge, just some important tweaks to the system. Some advice from folks over at Story Games helped to improve things as well, and brought in things like the Instant Civilizations rules, the Story Triggers, and more.

I started writing the "Final Candidate" version in the spring of '07. It really stretched my graphic design skills. I wanted people to look at this book as a serious work of art, and I needed a lot more tricks up my sleeve if I was going to pull that off.

Obtaining artwork began in the summer of '07 and drifted into the fall as well. I think I've done pretty well on the limited budget that was available to me, and I really appreciate all the artists willing to make such wonderful pieces for peanuts.

Summer also saw the final writing and reorganization of the book, moving the stories out of their own chapter and into the various civ descriptions. Fall was relatively slow, with some important but ultimaltely minor additions to the book. What was really great about the last few months before publication is the number of people willing to share their considered opinions as to what would improve the game. These "final tweaks" really improved things in my mind, and made the book more readable and sensible.

The book went out for final editing in late October, and for trial printing in November. January was an incredibly stressful month as the postal service lost a set of edits sent overseas from England! We just barely made the deadline for expedited printing and overnight shipping. While biting my nails I found a good site to host a wiki about the game, which hopefully you'll find useful: http://suffadv.wikidot.com

Our first release party was at Genericon XXI, nearly three years after the game's initial conception. It has been one of the biggest works in my life so far, and I hope you enjoy it.

Appendices

Acknowledgements

Well, here we are at the end of the book. It's been a long ride for me; this whole thing started quite a while ago and I'll be happy to see it in print. I can't finish without saying a few words recognizing those who helped me along the way:

- Dan DiTursi and TauCeti Deichmann, for running playtest campaigns and putting up with major rules changes in the middle of them.
- All the folks who played in my own playtest games, especially those who bent the rules and pushed the limits of the system.
- Everyone from my playtest and others who gave their advice to future players. I really appreciate it, and so do they.
- The people who joined the development journal late in the game, giving me valuable feedback before the final version.
- The folks over at Story Games, for giving me tons of suggestions and inspiration, and some major critiques when they were needed.
- Quentin Hudspeth for his constant commentary and encouragement.
- Emma White, my wife, for her willingness to listen and her support.

Inspiration

Here are a few of the books, movies, and other sources that inspired Sufficiently Advanced. Hopefully these can provide stimulus for your own game sessions as well.

Singularity Sky by Charles Stross. A great example of what happens when a pre-singularity culture attacks a post-singularity one. Entangled data transmission, black-hole driven starships, and plenty of nanotech behind the scenes. Also, one can make a good compare & contrast exercise between the Eschaton and the Transcendentals. Its sequel, **Iron Sunrise**, works almost as well.

The Golden Age by John C. Wright, and its sequels (The Phoenix Exultant and The Golden Transcendence). You want humanity in a thousand variations? Technology so extreme it creates entire new societies just by its very existence? Giant piles of drama? Right here.

The movie **GATTACA** could fit nicely into the timeline of SA, roughly 10-20 years before the nanotech wars (and thus thousands of years before the game's default start date).

The Collapsium by Wil McCarthy, and its sequels (**The Wellstone**, **Lost in Transmission**, and **To Squeeze the Moon**). This is the primary source for the Replicants, programmable matter, and the technology that makes most Stringtech possible. In fact, everyone in this series is basically a Replicant.

Dune by Frank Hebert is a great example of humanity enhanced without the aid of computers. If you're wondering what high Metatech and Cognitech can do, take a look in here.

Hyperion by Dan Simmons, and its sequels (**Fall of Hyperion**, **Endymion**, and **Rise of Endymion**). The AIs here and the Transcendentals make for another good compare/contrast exercise. The web of worlds was too good an idea not to borrow, and the Ousters are completely awe-inspiring. Highly recommended.

Bloom by Wil McCarthy and **The Diamond Age** by Neil Stephenson are both excellent examples of what one might do with nanotech. If you've read Diamond Age, the nanotech in SA is much closer to

Seeds than to the Feed. Diamond Age's franchised nations are also a very catchy idea.

Engines of Creation by K. Eric Drexler is a must-read for anyone involving nanotechnology in their works, though Drexler himself has said that some of its predictions (especially grey goo) are a bit extreme.

Foundation and its myriad sequels, by Asimov and others, and **Psychohistorical Crisis** by Donald Kingsbury. These are the only books I've seen that tackle the idea of highly advanced social science. Crisis' "fam" technology is a good analogue to the netural meshes in this game.

It has been pointed out to me that many episodes of the original **Star Trek** series make for surprisingly good S.A. plots, especially those dealing with first contact, skirting the Prime Directive, or technology gone bad.

Vernor Vinge's **A Fire Upon the Deep** influenced not only the group-mind society, but the Aia as well. Good primary source for these two odd groups, and an excellent book as well. It and its companion, **A Deepness In The Sky**, are excellent references for comprehensible non-human activity as well.

Greg Egan's **Diaspora** is an example of what this game's Stored might some day become, and where the cultures of Sufficiently Advanced might one day go. The humans still living on Earth are also a great example of how a Heterolinguist civilization might hold together, though they weren't the original inspiration for that society.

If the Union were a group-mind and ran Mars, it would look like the webcomic **A Miracle of Science**, at http://www.project-apollo.net/mos/

Closing Words

As this book began with a quotation, I think it will be appropriate to end it with one from the same author:

"The truth, as always, will be far stranger."
--Arthur C. Clarke

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Appendices