Introduction

Sufficiently Advanced is a roleplaying game about humanity in the far future. Technology has changed and improved human life beyond measure, and what your character will become is limited not by what is possible, but by how you choose to use it.

This game is about the effects of technology on society and on individuals. It's about beliefs and choices and the impacts they have. It's about the endless nature of knowledge. Most of all, it's about what it means to be human, in all humanity's myriad forms.

Game Play In Brief

Sufficiently Advanced has a traditional GM-and-players setup, like most roleplaying games. One person (the Game Master) is describes the setting and speaks for its characters. The other people in the group (the players) portray their individual characters and describe their actions. Most games involve the GM setting events in motion and the players describing their responses. In some settings this involves a tightly-focused mission handed down from superiors. Other settings present a broader scenario that gives the players substantial latitude with their characters' actions.

Most events in the game are handled through **Capabilities** (basic attributes enhanced by technology), **Core Values** (your character's beliefs), and **Professions** (your character's expertise in various fields). You also have **Reserve** that you can use to speed the completion of long-term projects.

If your goals conflict with those of another character (typically an NPC, but sometimes a PC) the game uses a score comparison to see who prevails. No dice are involved. You add together a Profession and a Core Value, then multiply by your Capability to get a total. Comparing this total against your opponent's score will let you know who wins a conflict. The margin of victory tells you whether the victory is complete or partial. In most conflicts both the winner and loser will take a **Complication** or gain an **Advantage** to represent injuries, changed mindsets, economic hardships, exhaustion, and other results of a conflict.

Players can also control the game through **Themes**, which describe the type of stories that unfold around your character. Themes are a purely metagame attribute – your character does not know about them. Themes are activated by spending **Twists**. You get some Twists at the start of each game, and can gain more by willingly accepting **Complications** for your character. Characters with high Capabilities will find it hard to gain more Twists. You can also use your Twists to create **Plots**, which are long-term changes to the game world that you build up over the course of several sessions.

The Feel of Sufficiently Advanced

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Where To Start

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For New Players

Sufficiently Advanced is a game all about high technology. Because of that, this game involves a non-trivial amount of terminology. Science fiction fans will be able to understand most of it from context, but some of it is unique to this game. If you have difficulty with a particular term, you may want to check out the glossary on page xx.

For Returning Players

If you have read "Game Play in Brief" above, you have no doubt noticed that the second edition of SA is substantially different from the first. You may want to check out page xx, which describes the differences between the editions

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.

Creating a character can be done very quickly if you have a good concept in mind. The first time you play it may take some time to come up with a strong concept. You should consult with your GM to see whether there are any restrictions on the sorts of characters available in this game.

To create a character, follow the checklist below. Other items, such as a name and some background details, will also be useful if you intend to play a fully-realized character rather than just a compilation of statistics.

Character Creation Checklist

0. Character Concept (page xx)
1. Choose or create a Civilization. (page xx)
2. Choose a Society (optional, page xx)
3. Choose a Neuroform. (page xx)
4. Name your Core Values. (page xx)
5. Choose your Themes and their Descriptors. (page xx)
6. Set your Capabilities. Record your Tech score. (page xx)
7. Pick your Expertise. (page xx)
8. Record your Import and Tech. (page xx)

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 and play before adjusting your character's every detail.

Some pre-generated characters can be found starting on page xx, 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, at the end of each Civilization. Those who are interested in playing a typical member of a particular civilization might want to look through these.

Character Concept

Sufficiently Advanced supports a broad range of character concepts. In playtests of the second edition, players came up with characters such as:

- A religious pilgrim who believes in the sanctity of silence
- A human mind scanned into a computer, trained as a soldier, who fights wars in digital worlds
- A double-agent from a culture of actors who portray the first human voyages into deep space
- A warrior from a technologically backward world with a powerful energy weapon
- An entire police force made up of replicated officers
- A computer intelligence controlling a swarm of nanobots
- "I want to play a dragon"
- A human brain implanted in a spacefaring transformable robot body
- A living starship and all the symbiotic humanoid life forms who inhabit it

With such a broad range of possibilities, many people find it difficult to narrow things down the first time they play. Our first piece of advice for players is this:

Decide what your character does. What your character is will follow from that.

SA is a game where your character's body and mind can be shaped to match that character's desires and beliefs. If you are a geological surveyor who examines new planets for habitability, it might be nice to have dozens of bodies with a single controlling intelligence. Even if you were born in a single body, that's a change your character can make in many different civilizations. If you're playing a programmer who wants to be able to change his or her own mind like computer code, you can scan yourself into a computer and make it happen. It makes perfect sense to play a character whose body and mind match his or her chosen path in life.

As you play more and become more experienced, you might want to take on more unusual or nuanced roles. Sometimes we become attached to things like our bodies or the brains we were born with, and many characters in SA have jobs and bodies that are a little (or a lot) mismatched. Don't worry about that for now. There's nothing wrong with playing an archetype on your first time through.

Talking with the other players will range from helpful to vital. Some groups (such as recruits in a war story) work perfectly well if everyone plays the same sort of character. Others (such as a starship crew) demand a range of skills and abilities in the group. Talking with the other players will help you refine what you want to play and ensure that the group "fits together" more effectively.

Civilization

Each character comes from a particular civilization. In game terms, a civilization passes on a set of beliefs and benefits to each of its citizens. More fundamentally, it is your character's home.

Eighteen different civilizations are detailed in this book, starting on page xx. Depending on the setting your GM chooses, these civilizations may span multiple planets, or a few of them might share a single world.

Check with your GM to see what civilizations are available. Your GM may want you to choose your civilization from a specific list, in order to create a specific feel for the game or to set up particular storylines. If your GM doesn't specify a preference, you can choose to have your character come from one of those, or you can even invent your own from whole cloth (see below).

If you pick an existing Civilization, write down its Core Values and special benefit on your character sheet. You typically lose access to that benefit if those Core Values' ratings drop to zero.

Once you have your civilization you may add a Society. If you are not part of a Society, move on to your Neuroform.

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. If the ratings of these Core Values drop to zero, you lose access to that Civilization's benefit. It can be difficult maintaining two separate loyalties.

Characters Without a Home

It is also possible to play a character who has rejected a home civilization, or even rejected the very concept of civilization. Such things are fairly rare, but not unheard-of.

To accomplish this in game terms, simply drop the Core Values for your Civilization and replace them with whatever you like. You lose your Civilization benefit.

Civilizations and Capabilities

Not all civilizations offer all enhancements, but this should not restrict you as you create your character.

In the previous edition of SA, your character's civilization impacted his or her maximum Capabilities. In the second edition, this is no longer true – while civilization descriptions do list a maximum Capability value, you can decide to play a character who has "sold out" his or her heritage for greater ability without penalty. It is still worth considering the Capability level for your Civilization as you create your character, but more for story purposes than for game-mechanics reasons.

Inventing A Civilization

GMs who want to allow for more player-driven creativity might tell you to create your own civilization for your character. This is an opportunity for you to create and define a piece of the game world.

If you invent your own civilization, take a few moments to consider your character's home world and other worlds in that civilization. Each player should name the character's Civilization 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 does your civilization care about most?
5. What is your civilization's special benefit? (see below)

There are many other questions to consider as the game progresses. This sort of exercise can easily take all night. Skim the surface for right now. You will have the opportunity to elaborate on your civilization as the game progresses. Those civilizations will become more detailed through play, with Twists and cutscenes defining how they work and interact later on.

Later on you should consider: How does your civilization deal with such things as immortality, intellectual property, digital intelligences, and personal freedoms? What religions are prevalent? What does the civilization call itself, and what do outsiders call it? Is it bound to a single world, or spread across dozens? How does this culture feel about its long-lost relatives from across the stars?

You should pick up to three of your Core Values (see page xx) that link you to your civilization. Other individuals in that civilization will share those values to some extent. Even characters who were programmed as digital intelligences and have just come into existence are typically graced with someone else's point of view and basic morals.

You may also choose to state that your Neuroform applies to all others in your civilization, or to have your character be considered unusual.

Finally, you may choose a benefit that all members of your civilization enjoy: competitive advantage (see page xx) in a single Capability, two extra Twists (page xx) at the beginning of each session for use with a particular Theme, or an extra Core Value. If you have an idea for a more unusual benefit, check with your GM.

Society

Some characters belong to a Society. Societies are groups that spread across multiple civilizations, with members on many different planets. Over twenty Societies are described starting on page xx.

Every Society is different. Some Societies are well-organized groups: you might be part of a secret society that trades and collects persona lenses from famous individuals, or an organized criminal cartel that spreads across the stars. Others are catch-all descriptions for people who typically share a Core Value: medical caregivers, people in high society, or people who worship a particular deity. Some Societies have membership numbering in the millions, but others have only a few thousand members.

If you choose to be part of a Society, write that Society's Core Value on your list of CVs. When that CV is rated at 3 or higher, you receive the Society's special benefit. If it drops below 3, you lose the benefit. You will eventually lose membership in the Society if you lose the CV entirely.

Inventing A Society

You may wish to invent a Society for your character. Even in games where the GM has a set list of Civilizations, you should feel free to ask about creating your own Society – there are many more Societies than Civilizations.

If you create a unique Society for your character, consider how this Society would fit into multiple different Civilizations. Think about how it is seen by others, and how its members view each other. What rituals or beliefs do they have? Are there other Societies who are their rivals?

Society benefits are typically focused on the skills necessary for a member of that society. They might offer a competitive advantage (see page xx) in a particular Profession, an extra point of Reserve that can be used with a particular Profession, or a special Profession that only members of that Society can have. The special Profession should be broader than usual, covering the same ground as two standard Professions.

Multiple Societies

It is possible to be part of more than one Society. In game terms this is easy – all you need to do is have the appropriate CVs with a high enough ranking.

In terms of your character's free time and freedom of action, however, joining multiple Societies is likely to be draining. Not only do you have additional passions that will occupy your character's time, you will likely have demands on your schedule from those higher up in your Society. Someone who is both a Hospitaler and a Peacewalker (a fairly reasonable combination) would be very busy in a conflict zone, with two groups each expecting full measures of his or her time.

Neuroform

Neuroforms describe your character's mind and how it is organized. A wide variety of people are possible within each neuroform, but the contrast between different neuroforms is very large. Many characters will have no descriptors at all; their neuroform is referred to as "Baseline" (or occasionally as "Baseline Dynamic," to contrast it with the Static neuroform). Citizens in the majority of civilizations in this game have a Baseline neuroform.

Neuroforms appear in contrasting pairs. Characters pick one of the two from each set. The typical item appears on the left, and characters with Baseline neuroform have all of the left-hand items.

- ***Dynamic or Static:*** The Dynamic neuroform represents characters who wear a Neural Mesh (see page xx). They can download Professions, alter their Core Values intentionally, and run Lenses (see page xx). Such characters can also be the target of brain-hacking. In comparison, Static minds have limited ability to change themselves quickly. Characters capable of using Meshes are not Static.
- ***Physical or Dataform:*** Physical characters, in short, have bodies that they cannot leave. Dataform characters are primarily minds. They exist with minimal physical form, and interact best with the infosphere. Characters who are digital intelligences or uploaded humans would have this neuroform. If they are "embodied" (that is, currently implanted in a biological or mechanical body), they do not necessarily die if the body dies. See page xx for some advice on playing dataform characters.
- ***Single or Multiple:*** Characters who are Single have only one mind. Characters who are Multiple run the gamut from small group-minds up to continent spanning compositions made up of millions of people. Single minds have a single massive point of failure; multiple minds have many points of failure but can be in lots of places at once. See page xx for some advice on playing group-mind characters.
- ***Autonomous or Parasitic:*** Autonomous minds run on their own hardware. Parasitic minds run on the processing power of others' brains. Those others must be taken care of, or they will become worn out and need to be replaced. Parasitic minds receive Twists when their nature gets them in trouble. See page xx for more advice on playing parasitic characters.
- ***Sovereign or Slaved:*** Sovereign minds run their own software. Slaved minds run other peoples' software. Their minds are the playthings of another; they can be controlled at any time by a particular individual or group. The exact nature and extent of this control should be worked out before the game begins. Slaved minds receive Twists when their nature gets them in trouble. See page xx for more advice on playing slaved characters.

It is important to note that most characters choose their own neuroform. They may have been born with one particular form, but they need not keep it for their entire life. In a high-tech civilization, no one needs to be parasitic. No one needs to stay static. While changing neuroform is an arduous process, it is no worse than the work of a year or so. There are many free services to help people change who they are. Characters who are Slaved are an exception – this neuroform is often imposed as a punishment, or as part of a spy network, and few people freely choose it.

Core Values

Core Values describe what your character believes in. They are the basis of your motivation. Core Values also hold civilizations and societies together, giving them something to rally around.

Core Values (CVs) 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.

Each Core Value is rated from 1-5, based on the depth of your character's convictions:

1 I am not completely convinced.

2 I will argue for this belief.

3 I will take action for this belief.

4 I will suffer for this belief.

5 I am obsessed. I will die for this belief.

Your character will have four Core Values at the start of the game. One will be the Self-Preservation CV that all characters start with. Two will be inherited from your Civilization. One is a free choice you make when creating the character. (You can use this to qualify for a Society if you wish; see page xx.) In addition, you will have a fifth CV that is initially left blank.

Choosing and Rating Core Values

When choosing a Core Value you can select literally any suitable concept or cause. These are normally encapsulated in a single word or short phrase. A list of examples can be found in the box on page xx. Since different characters can interpret the same CV differently, you might also want to write down a longer description of your CV, so that your GM can better understand your character's motivation.

Complex actions or philosophies are generally not suitable Core Values. "War" is a bad choice; that's an action, not an ideal. Make it more specific: "The Glory of Battle" or "War Brings Peace."

The Core of Character

Core Values are the essence of a character, the central core of who he or she (or it) believes in.

The most basic consequence of this is that the rest of your character should be shaped by CVs. Not every facet of your character needs to come directly from Core Values, but these facets should at least not contradict them. Someone who believes in Peace and Simplicity should not be toting weapons that can level a mountain. Someone who believes in Security and Preparedness should be familiar with the Crisis Control profession.

A more subtle consequence is that changing CVs means changing your character at a level deeper than just a game-mechanics. When we see character development in a book or movie, we see people changing what they believe in. Different priorities come to the fore, and things that once seemed important become less so. If you want that sort of story arc for your own character, you're almost guaranteed to change his or her Core Values.

Changing your Mind

With a Dynamic neuroform, your character can change his or her mind simply by going into the "brain settings panel" and changing the settings, or by downloading an appropriate Lens. This includes altering Core Values.

However, Core Values are the things in which your character **genuinely believes.** You should have a good reason for giving up on those things – a major story event that shakes the foundations of your character's beliefs. A Dynamic Neuroform doesn't let you pick whatever CVs are most convenient unless you're willing to give up on your other beliefs.

It is possible (even recommended) to run a Persona Lens with a built-in timer, set to deactivate after a certain amount of time has passed. This helps to prevent you from giving up your old mindset and becoming a different person entirely. There is a certain amount of hazard in this, as the new you may decide to deactivate the timer. All manner of neurological tricks are used to prevent this from happening, but it is not an unheard-of occurrence.

Changing your Core Values without such technological aid can be a difficult and lengthy process, or it can be the result of a single dramatic event in your character's life. Using Twists and Plots can help to create such events if you feel like you need one. Talk such things over with the GM and decide what makes the most sense for your character's personal story.

"Buddhism" is likewise a bad choice (as are almost all religions) because there are too many facets to it. You should choose specific aspects of a religion instead of the faith as a whole.

You may select whatever rating you like for your Core Values. High scores are as much a handicap as an advantage. You may even rate a CV at zero to indicate something that you were taught to believe but have rejected.

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

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.

Effects of Core Values

When in a conflict, your CVs improve your effectiveness as long as you are acting in accordance with them. See page xx for details on exactly how Core Values factor into conflict. You may only use the highest relevant CV.

When people try to convince you to take a particular action that aligns well with one of your Core Values and you attempt to resist, you are at a substantial disadvantage. You might or might not be able add your Self-Preservation CV, but you always *subtract* an aligned CV when resisting such tempting persuasion.

With a CV of 3 or higher, you may escalate (or de-escalate) conflicts you are involved in related to your CV, forcing both sides to suffer a Complication one level more (or less) severe than would normally be indicated. You can only do this once per conflict. See page xx for more info.

At CV 3 or higher you also receive extra Twists for Complications that are related to your Core Values. See page xx for more info.

Self-Preservation

All characters receive a CV entitled "Self-Preservation" at 4 for free. You may rename this to "Enormous Ego", "Fight Like A Cornered Rat", or whatever you like in order to fit your character better. The general gist of this CV is that you care about your own survival. You may alter the value of this CV with GM approval.

The Open CV

One of your Core Values is blank at the beginning of the game. You may choose this CV and set its rating at any time. Once chosen, it is treated like a normal Core Value and cannot be changed again without effort or conflict.

You might use this to pull a "surprise reveal" for your character, such as being part of a Society or working for a particular faction. It's good to consider such things well in advance. If you reveal a CV that is contradicted by your character's past actions, it makes your character less believable. Alternatively, you might simply use this CV as a part of your character's normal development through the story. Difficult situations can make us realize what we believe; the phrase "character-building" is not mere rhetoric.

Themes and Twists

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.

There are eight Themes: Action, Comprehension, Empathy, Intrigue, Magnetism, Romance, Terror, and Wonder. Each one carries a **descriptor** that defines the sorts of situations where that character's Theme is appropriate to use. Not all Themes appear in every game. Your GM will let you know if any Themes are inappropriate for the setting in which you will be playing.

Using your Themes requires spending **Twists** (see page xx). At the beginning of a game session you start with Twists equal to your **Import** (see page xx). Twists do not carry over from game to game. You lose any unspent Twists at the end of a session.

Your Themes are linked with your Capabilities in such a way that high-Capability characters find it difficult to gain Twists. More information can be found on page xx.

To choose your Themes, simply pick three that seem appropriate to your character and choose descriptors for them. You do not need to rank your Themes in any particular order, and there is no number associated with them.

You are not forbidden from using two or even all three of your choices on the same Theme with different descriptors, but you will not get as much benefit from this as from choosing three different Themes.

Some sample descriptors are listed next to each one, but you can also invent your own. Good descriptors restrict the use of your Theme, but not too much. If you dream up a set of situations that are related to that Theme, your descriptor should make it so that you can only imagine using your Theme in about half of those situations. Descriptors that allow their Themes to be used all the time are not restrictive enough to be meaningful. Descriptors that only make their Themes useful about quarter of the time are probably too restrictive to be fun playing.

Here's a list of Themes with a little description for each and a set of sample descriptors. You can find much more detail on Themes and their use starting on page xx.

Themes and Scope

Themes are intended to have a great deal of power. They are also intended to have a relatively narrow scope. This means that they typically only affect a couple of people, work in the short term, or preserve the status quo.

It is possible to use Themes to impose longer-lasting changes on the game world. You can do this by crafting Plots (see page xx). This is an excellent use for "leftover" Twists at the end of a session, as well as being a good way for players to cooperate. Plots are not easy or quick to create, but they have the potential to completely alter a campaign.

Action

Action is the theme that turns your character into an action movie star. It allows your character to engage in flashy maneuvers that should be impossible for someone of his or her Capabilities. Physical maneuvers include defeating dozens of opponents to enduring impossible wounds or chasing down a car on rooftop. Action can also be used for less overtly physical activities. The keys are fast pacing, personal prowess, and a sense of danger. Many movie computer-hacking scenes would fall under Action, whereas real-world ones would fall under Comprehension.

Sample Descriptors: One Man Army, Superspy, Won't Fall Down, Unstoppable Vengeance, Berserker, Natural Gymnast, Ninja Skills, Parkour, Hacking, Chase Scenes, MacGyver

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.

Sample Descriptors: Intuitive, Logical, Emotional, Forced Monologuing, Explanations Ex Machina, Methods Behind the Madness, Invention, Religious, specific branches of technology, specific profession

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.

Sample Descriptors: Reluctant, Bad News, Matters of Love, Trusting Fools, Shoulder to Cry On, Good News, Day-to-Day, Problems, From Afar

Intrigue

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.

Sample Descriptors: Eavesdropper, Pillow Talk, Digital, Political, Instant Insider, Stumble Upon, Psychohistorical, Spy, Government Newsfeed

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.

Sample Descriptors: Fame, Friendship, Political, Ideological, Physical, Convincing, Memetic, Cult, Pheromonic, Religious, Bullshit Artist, specific cultures or kinds of people

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.

Sample Descriptors: Long-term, Short-term, Hopeless, Unexpected, Tragic, Legendary, Sexual, One-Night Stands, Devoted, Manipulative, Loving, specific types of people

Terror

Terror is the Theme of fear, on scales from personal to planet-wide. Taking points in the Terror theme tells the GM that you want stories about slavering alien monsters, creepy cyborgs with inhuman strength, insidious corporations trying to take over entire Civilizations, and some real "what have I become?" questions. Your Descriptor will go a long way towards defining the kinds of stories that you'll be involved in, and whether you want to have significant power over them or be along for the scare ride.

Sample Descriptors: Personal, Impersonal, Creepy-crawlies, Insert-a-phobia, Splatterhouse, Conspiracies, Ancient Evils, Lovecraftian, Technological Threats, Loss of Control, I'm Mister Creepy

Wonder

There are many amazing and incredible things in the universe, and lots of them seem to happen to you. Or perhaps just around you. Wonder is a tough Theme to explain, because sometimes inexplicability is at the heart of it. This Theme doesn't make "wonderful things", it creates "things of wonder": events, objects, even people, who are amazing and almost unbelievable. Buying this Theme tells the GM that you want a campaign with incredible events and spectacular vistas.

Sample Descriptors: Scenic Vistas, Philosophical, Religious, Art, Deathless Prose, Big Dumb Objects, Small Things, New Discoveries, Scientific, Uncovering the Overlooked

Capabilities

Your character has five Capability scores, each based on one type of technology. These describe your inherited abilities, technological implants, and generalized training.

Biotech represents fitness, strength, endurance, and internal energy stores. **Cognitech** describes your character's logical ability, quality of thought, memory, and speed of learning. **Metatech** represents charisma, charm, savvy, force of will, and perfect inflection. **Nanotech** represents precision, perception, hand-eye coordination, and stealth. **Stringtech** represents raw physical power, both offensive and defensive, provided by devices built into your body. In addition, each Capability has a range of tricks and tools of which enhanced characters can avail themselves.

Capabilities are rated from 1-5, with higher ratings indicating greater enhancement and effectiveness. You may rate each Capability for your character as you see fit. The higher you rate the Capability, the fewer points of Import you will have later (see page xx).

Characters whose bodies and minds are similar to 20th-century humans are said to have "unenhanced" Capabilities. Such Capabilities have a numerical rating of 1. To use Biotech as an example, Unenhanced characters are assumed to be neither crippled nor olympic athletes, but may run the range between a flabby couch potato and an amateur athlete.

Most characters in SA have Capability ratings of 2-5, indicating that they are enhanced in one manner or another. They have devices built into their bodies, improved genetics, techniques they have learned since childhood, and so forth. Those with a rating of 5 are sometimes referred to as having "cutting-edge" enhancements.

Characters who want a Cognitech score of more than 3 must have the Dynamic neuroform.

Capabilities at the character level are described in detail on the next few pages. Possible advancements of level 6 are included, though these are not available to individuals and are still speculative in many cases.

Capabilities rated at N/A

Some characters do not have certain Capabilities. They aren't rated at 0, they simply don't exist. For example, a Dataform character might do without Biotech, using robotic drones to interact with the physical world. You cannot participate in conflicts that involve your missing Capabilities. When calculating Import, you substitute your highest remaining Capability for any missing Capabilities.

All characters must have Cognitech and Metatech; all other Capabilities are optional.

Level 3 Benefits

Capabilities rated at 3 or higher provide a benefit of particular note:

Biology: Immortality, which grants access to greater levels of Expertise.
Cognitech: Mesh use (and with it, infosphere access), which also opens up new types of Expertise.
Metatech: The ability to read others' Core Values and Professions with a five-minute interaction.
Nanotech: The ability to read others' Capabilities using an active scan that they may be able to detect.
Stringtech: Energy weapons with great precision, range, and flexibility.

Biotech

1 This is the realm of **everyday physical prowess**. Even if not trained as an athlete, most people can run, climb, swim, and resist disease **in the absence of injury**.

2 Characters at this level can **run faster**, **jump higher**, **lift more weight**, and **react quickly** when in danger. They are **more durable**, **longer-lived**, more **disease-resistant**, and **heal more quickly** (though they do not regenerate lost parts). All of this **continues to improve** with higher levels of enhancement. This level also provides **control over autonomous functions**, such as heart rate and adrenal response. **Hibernation** becomes possible.

3 Medical technology leaps forward. A myriad of treatments make **immortality** feasible, and allow for the **regrowth of lost limbs**. DNA augmentation can also incorporate more exotic animal traits, including **poison glands**, **redundant organs**, and **gills**. Augmented scent glands produce pheromones that can **influence emotions** or imitate a particular scent. Sensory organs hear **extreme pitches** outside the normal human range and **see in the infrared and UV spectrums**. Many of these alterations are **immediately visually obvious** and require **special foods or unusual nutrients** to maintain properly.

4 At this point, characters are immortal and regenerate extremities **without the need for treatment**. Characters enhanced at this level can **stay awake for a month** without ill effect, at least physically. They are **immune to handgun fire**, can **lift a ton**, and can **outrun cars**. Further sensory enhancement include a **bloodhound-like** sense of smell that allows the **detection and analysis of diseases and poisons**.

5 Total control over one's bodily structure. Such characters can enter cocoons for a slow process of **metamorphosis**. They can create **internal pathogen factories**, letting them literally cough out a plague. They can **close wounds with a thought**. The changes started at level 2 have advanced such that characters can **lift five tons**, **breathe water with their lungs**, and **skydive without a parachute**.

6 Procedures at this level can be accomplished in some advanced laboratories or hospitals, but are not yet the realm of individual prowess. Increases in speed and scope are on the horizon. DNA will encode for multiple physical forms, allowing for **shapeshifting** on a scale of minutes rather than days. Characters may have blood that carries **contagious enhancements**, letting them infect and augment others through transfusion. Characters may **grow duplicates** of themselves, or store the DNA of those they meet to **create clones**.

The Merger of Biotech and Nanotech

Biotech and Nanotech begin to bleed into each other more strongly at level 6. Once the energy requirements are reduced, bodies may be made of programmable matter, creating shapeshifting people who can change their physical properties but need electricity to survive. Swarms of microbots may eventually be able to hold a human consciousness, allowing for dispersed bodies that can flow through openings. Such things require mastery of both technologies, but are in the near future for many civilizations.

Cognitech

1 Even without much training, unenhanced human minds can **find patterns** in daily events, use **basic writing and mathematics**, and **plan for the future**. They tend to be **forgetful** and to **ignore implications**.

2 This level sharpens the mind's existing abilities. You can **think faster**, quickly **memorize** even unfamiliar things, and perform complex **mental mathematics**. You have enough concentration to take **mental and physical actions simultaneously**.

3 The nanowire mesh is the hallmark of this and all higher levels. This brain implant allows you to **run programs on your brain** and **connect to the infosphere**. It also opens you to the **dangers of mesh-hacking**. The attached computer will **store memories** for you, and can also **house data ghosts and familiars**. As a side effect, at this level and higher you will tend to have **bizarre dreams**, which can be very distracting if not analyzed by an outside expert.

4 At this level, you don't run programs in your mind – programs *are* your mind. You may **record your own persona** and **edit your personality** as you see fit. You can also **take on someone else's persona** if you have their recording. You can even create **emergency backup personalities** that will activate under certain conditions. This level also allows **memory editing and recombination**. You have **uninterruptible concentration** and **infinite patience** when you want them. Your mind has expanded to the level where you can **house other digital life forms** within your brain.

5 Multitasking allows your character to take **several mental actions at once**. You can **simulate multiple personas**, which, among other things, means that you need **never hesitate**. One of your personas oversees the others, ensuring that you **do not forget implications**. Your mental processes can **simulate a city in detail**.

6 These approaches currently use algorithms requiring massively more computing power than the human body can house. Advanced computers can **simulate a continent in detail**, down to the atomic level. They can **house large Aia fragments** or billions of intelligences equivalent to an unenhanced human.

Intersections: Cog and Meta

Cognitech **plans**; Metatech **implements**.
Cognitech governs **creativity**; Metatech governs **artistic appeal**.
Cognitech allows one to **analyze** human behavior; Metatech provides the tools to **predict, manipulate and exploit** it.
Cognitech **records, edits, and runs** personas, Metatech **understands** them.

Metatech

1 Interactions can put **social pressure** on others through conversation or oratory, **swaying opinions** and **reinforcing or undermining Core Values**. Such methods are generally **either shallow or slow-working**.

2 This level of capability begins an improvement of **non-verbal communication**. A stare can **cause hesitation**, a gesture might **incite or neutralize a particular emotion**. Such things are **easily resisted by the prepared**, but can still be effective when unexpected. Other techniques **teach a skill without words** and subtly **improve teamwork**. Many slower techniques are also perfected at this level, such as **brainwashing**, **advertising**, and **hypnosis**, allowing one to program a specific response into a person. All of these **take time or cause stress**.

3 Techniques developed at this level **read emotional and mental states** very accurately, allowing one to **sense the intent behind actions**. Characters can **read others' Core Values and Professions** with five minutes of interaction. Memetic analysis creates (or destroys) deeper understanding between individuals and makes **existing messages more effective**, but also **requires careful study** of the target before use.

4 Manipulating and shaping large groups becomes easier. Psychohistory is used to **influence large groups** and **predict times of crisis or opportunity**. Combined with personal charisma it can **raise nations, protect them, or destroy them**. Like memetic techniques, psychohistory **requires substantial data-gathering**, and is also **subject to historical inertia**.

5 Such techniques reach to the very core of a person's psyche and instincts. Words of Power **activate basic instincts** and reflexes such as fight-or-flight, anger, hunger, or a mating response. Nonverbal communication advances to the point where the character can **use body language to convey metatech assaults**. Techniques such as Locking Body Mirror **freeze an opponent** with indecision. This level also allows the creation of **selective messages**. For instance, orators may deliver different messages to different members of the same audience in a single speech.

6 These techniques cannot yet be implemented by individuals. At this time, only teams of experts working in concert can achieve them. Interpersonal interaction of this depth can **reveal the presence of spy meshes**. Characters can **spin memetic stories** so compelling that people begin to live them.

Level 3 Needs

Characters with Capabilities rated at 3 or higher require more maintenance than a baseline human. Missing this maintenance results in the degradation of these Capabilities, which drop no

Biotech: You need specially made high-efficiency food, which can be found in any advanced civilization.
Cognitech: Your character's dreams are significantly more complex than normal. To avoid being preoccupied with them, you must have processed by a rêvetech service. This service is cheap, but requires infosphere access or someone with higher Cognitech.
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.
Nanotech: You must give your microbots and sensors an hour to rest and self-repair. You can typically do this while you sleep. Your Nanotech rating drops by two points during this time.
Stringtech: You need electricity, plain and simple. Plug into a wall jack in an enhanced civilization for about an hour. In lower-tech surroundings you may need to plug directly into an electrical substation.

Nanotech

1 The ordinary range of **touch, taste, smell, hearing, and vision**. Human touch has roughly **millimeter precision**.

2 You can see into the **UV and infrared** spectra. You have **perfect proprioception** and can **measure distances by eye**. You can hear sounds **several octaves above** the normal human range. You can emit bat-like clicks for **sonar**. Your **hands never shake**.

3 You have a cloud of microbots that live on your skin and float around you, acting as **telescope**, **microscope**, **spectrograph**, and **radio antenna**. The bots sense **electric and magnetic fields**. All of this allows you to **read others' Capability scores**. They can track each others' positions, giving you a picture of **wind and pressure** and allowing for **short-range communication** with other people. They are equipped with weak lasers that can **project images directly into eyes**, or **disorient the unprepared**. They do need to take an hour to **recharge daily**, during which time you are much less perceptive.

4 You can **feel gravity waves**. The entire **electromagnetic spectrum** is open to you. You have forensic devices that allow you to **analyze chemical compounds**. You can **read DNA**. You have a replicator that can **construct small objects from raw materials**, though it is **very energy-intensive** and **produces heat**. Your touch has **micrometer precision**. You also have access to nanophages, self-replicating nanobot swarms that are **voracious living weapons**, and pseudomatter, which can **mimic other materials**.

5 You can **detect flows of dark matter and neutrinos**. Your touch has **nanometer precision**, allowing you to **feel and move single atoms**. Your telescopic vision allows you to **identify starships in orbit**. Your replicator can now **fabricate nanobots**. Your nanophages are **faster-acting** and **more dangerous**. You can interface with programmable matter that can **become any tool you need**, though it has **high energy requirements**.

6 These sensors and devices have cooling and stabilization requirements that are currently impossible to meet inside a human body. As nanotech hits physical limits in sensing and precision, it becomes more all-encomapssing and more technique-oriented. Backscatter sensors allow you to build **images of closed rooms** and **see the structure of materials**. You can **scan in objects** for replication. Scanning people is still difficult; the precision needed for human consciousness **destroys the brain during the scan**, though the scan itself is still successful.

Stringtech

The levels listed below focus on weaponry, but also include appropriate countermeasures and defenses against these weapons. Much as a rifle's damage would be rated at Stringtech 2, so would the protection offered by a bulletproof vest (in a limited area).

1 **Bludgeoning or cutting force**. The basic fists and feet of human beings. Simple weapons such as knives and clubs. This level can **kill the unenhanced** or **crush flimsy objects**, but it **requires intent**.

2 You can employ **deadly force**, typically **projected at range**. You have built-in ranged weaponry on par with **20th century firearms**, and close-up weapons as dangerous as **chainsaws** or vibroblades. You likely also have non-lethal weapons capable of **distracting or incapacitating** in the manner of flashbang grenades.

3 You have built-in energy weapons, such as lasers and electromagnetic pulses. Energy weapons are **precise**, require **no ammunition**, and are adjustable to be **either lethal or non-lethal**. They often produce **significant waste heat** and **require electrical power**. You can generate simple electromagnetic fields at close range, letting you **move metal objects** or create **electrical discharges**. Your projectile weapons are as dangerous as **tank guns** or **dynamite**. **Collateral damage** becomes a serious concern at this level or above.

4 This level introduces supersymmetric weapons such as inversion beams, fission/fusion beams, and transmutation rays. Your weapons **ignore solid matter**, moving through it and **hitting only their target**. You can manipulate nuclear processes such as **atomic decay** and **transmutation**, and can even **create and handle specks of antimatter**. Thanks to this, you can **generate substantial electrical energy**. Your weapons are as powerful as **lightning strikes** and **conventional bombs**.

5 You can control gravity, allowing you to **fly**, **manipulate objects** at a distance, and **alter local time rates**. Such control enables the creation of folds in space, such as wormholes. These allow characters to **travel instantaneously** over long distances, **redirect or reflect attacks** with spatial mirrors, and **change the geometry of space**. Such things require **tremendous power expenditures**. Your weapons are as destructive as a **nuclear bomb** at ground zero.

6 These devices are not yet miniaturizable to the human scale, but some civilizations can build this level of power into larger objects such as starships. Exotic particles and phenomena are the hallmark of this level. Strangelet bombs can **destroy entire planets** or **restart dead stars**. Domain walls can take an area the size of an island or small moon and **isolate them from the rest of spacetime**. Geometric changes can **locally alter universal constants**, almost always with disastrous effects. Black holes are at this level.

Capabilities in Conjunction

Capabilities at higher levels (3+) have synergistic effects, where they begin to work together more effectively than they do alone. There are no numerical bonuses for this, but more options become available to your character.

Biotech with Cognitech not only opens up every type of Expertise, it also provides a **"backup brain"** in case your regular brain is mesh-hacked. This backup typically has a fight-or-flight mentality, to get you away from danger and toward people you know are safe.

Biotech with Metatech allows you to emit **carefully tailored pheromones**. You may not even need to have people see you to communicate simple concepts or emotions; smelling you may be enough.

Biotech with Nanotech allows you to **construct and even gestate more complex organisms.** You can also perform more detailed analysis of pathogens.

Biotech with Stringtech improves your **raw physical capabilities**, like lifting, running, and holding your breath.

Cognitech with Metatech allows you to **affect broader groups** with your Metatech, as you juggle the probabilities and interactions in your head more effectively.

Cognitech with Nanotech allows you to **channel your new senses directly into your sensory cortex** – you "see," "hear," or "feel" rather than merely detecting. You can **record and analyze** your data in greater detail **without having to stop** what you're doing.

Cognitech with Stringtech allows you to **obliquely use your enhancements**. By creating interference patterns, reflecting signals, and using your Mesh as a trigger, you can create physical effects with your Stringtech without seeming to be the source.

Metatech with Nanotech gives you more accurate insight into emotions as you hear heartbeats, sense blood flow, and obtain brain images through MRI. You can use facial detection and analysis to **gauge moods without the need for communication**.

Metatech with Stringtech gives you the ability to **project influence over a large area**, such as by rewiring sonic devices to act as loudspeakers, or displaying images on clouds for a city to see.

Nanotech with Stringtech allows **exceptional precision** with fields that you generate and weapons that you fire – you can hit small targets at large distances under non-combat conditions, **without collateral damage**.

Expertise

Whereas Capabilities represent inborn talent and technological enhancement, Expertise represents your character's training and experience.

During character creation you will pick one or more types of Expertise, which will give you a certain number of Professions. All characters should have one type of Baseline Expertise. You may also select as many Enhanced Expertise options as are appropriate for your character. All of the Enhanced options are compatible with each other, and the effects and requirements are cumulative.

Much like Capabilities, Professions are ranked 1-5, with higher rankings indicating greater skill and effectiveness. Your level in any given Profession does not affect your Import, but some of the Expertise options will alter your Import or Tech score.

Baseline Expertise Options

Choose just one of these options. Open to all characters regardless of enhancement.

Professional: You may choose three professions and rate them 1, 2, and 3. This is the default option.

Amateur: Choose three professions and rate them at 1, 1, and 2. This option is good for young characters who do not have a lot of experience under their belts. Amateur-level Expertise gives you an additional point of Import, but does not change your Tech score. Characters lose this benefit if they choose Omnicompetence.

Master: Choose four professions and rate them at 2, 2, 3, and 3. This option is good for characters who are old and well-experienced but not immortal. Master-level Expertise costs one point of Import, but does not change your Tech score.

Enhanced Expertise Options

Choose as many as you like. Each of these options has Capability or CV prerequisites, and an associated cost.

Adept: You have trained extensively in one particular technological area, or you have a natural knack in it. Pick one technology and receive the Engineer and Researcher Professions, as well as three other related Professions, all at level 3. You must have Dynamic neuroform and/or enhanced Biotech. If you have only enhanced Biotech you must be at least 500 years old. Adept-level Expertise adds one point to Tech (which will also reduce your Import).

Omnicompetent: Your character is broadly competent in a vast array of fields. Perhaps you are a long-lived jack of all trades, or perhaps a Lens collector. In any situation where Expertise is relevant, you have a rating of 2, without needing to download Lenses. You must have Dynamic neuroform and/or enhanced Biotech. If you have only enhanced Biotech, you must be at least 500 years old. Omnicompetence adds one point to Tech (which will also reduce your Import).

Satori: You have a great depth of experience in a particular field, the kind only seen from an immortal who has dedicated his or her life to the topic or a severely obsessed individual. Choose a profession and rank it at 4, and gain Competitive Advantage in that profession (see page xx). You must have both Dynamic neuroform and enhanced Biotech, or choose a Core Value that you consider linked to this profession and rank it at level 5. If you lack the linked Core Value, you must be at least 1000 years old. If you have both the CV and sufficient Capabilities and are old enough, you may rank

the profession at 5. Satori adds one point to Tech (which will also reduce your Import).

All characters are also assumed to be familiar with their home civilization – its language, customs, values, history, geographical layout, and so forth. **This is represented by the Locality profession, which all characters receive at level 2 for free.**

Multiple Minds

Characters whose neuroforms are Multiple may end up with several characters who have diverse skills. To keep this from being a "free" set of Professions, such characters must divide their Professions among the minds they have in play. To have a broad skill set across dozens of bodies, consider becoming Omnicompetent.

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.

Professions are ranked from 0-5.

0 Untrained. Anyone can do this.

1 Modicum of training – just a year or two. Many tasks are still likely to be beyond your reach.

2 Professional level. Ten years of training. You can do almost all of the things that fall into your field, and can earn a living in this profession.

3 A lifetime of experience. You are respected by others in this field and are capable of innovating within it.

4 One of the best ever. A thousand or more years of experience, or complete obsession with the subject.

5 Both millennia of experience and total obsession.

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.

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. Anyone can plant a backyard garden; only someone with the Farmer profession can manage a full-sized farm. Anyone can shoot a gun; only someone trained in the Soldier or Police profession can expect to do it accurately under pressure.

Each Profession gives some examples of specialized tasks. You can't even attempt a specialized task unless you have the right Profession. Competence lenses *do* give characters the ability to do specialized tasks, because they give you an effective rating in their Profession.

Clearly this requires a certain amount of adjudication, and not all groups will contain an expert politician player to answer questions about Politics, or a policeman with forty years of experience to speak authoritatively about what the Police profession should include. **Because Professions are intended to be restrictive, if the answer is uncertain, treat it as a "no."**

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.

Low-Tech Environments

All Professions are technology-dependent, even apparently simple ones like Farmer. This results in a 2-point penalty to Profession whenever the character would be interacting with local resources that are below his or her Capability level. This can change the answer to the Four Questions if a character's Profession is low enough.

Physical combat is not affected, but mesh-hacking is, because it relies on the presence of an Infosphere. One-on-one diplomacy is not affected, but media and political tasks are, because they involve interaction with the local populace and broadcast media. Outdoorsmen need tents they can understand, engineers need modeling programs, and police cannot afford to be baffled by a lack of equipment. Being dropped in the past (figuratively speaking) can turn any expert into a novice again.

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.

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 intend 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: In high-tech surroundings, this Profession is only available at character creation to those who belong to a particular Society (such as Organized Crime). Others must purchase it during the game, through trial and error (and by "error" we mean "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 2. 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.

Unique and Odd Characters

All characters in SA are human or human-derived. However, not all characters fit perfectly into a human-sized-and-shaped mold.

If your character has no body (for instance, if you are a digital intelligence or are run in simulation), you should remove your Biotech score, and possibly your Nanotech and Stringtech scores as well. You should adjust your Neuroform to be Dataform rather than Physical.

You may have a character who is composed of many interacting sub-units, such as a group-mind or symbiotic starship. This is represented by setting your Neuroform to Multiple rather than Single. Consider whether you want to be large enough to qualify for the Infrastructure descriptor (see page xx). Remember that if you do, it will increase your Tech score by 1, thus lowering your Import.

You may own a starship. See page xx for specific rules related to this.

You cannot play an energy being, ghost, or other entirely nonphysical entity. Even a digital intelligence is housed in a computer somewhere – possibly more than one.

Import, Tech, Reserve, and Twists

Your character's Import score is his or her importance to the plot, irrespective of any other attributes. It determines the number of Twists you have available at start each game session. This value is decreased by your Tech score, which represents the amount of technological enhancement built into your character and any enhanced levels of skill he or she may have. If you want to use your Themes a lot, you will need to choose low Capabilities. If you want powerful Capabilities, you will have to be ok with less access to your Themes.

Your character's Tech score, on the other hand, indicates his or her raw physical and mental capabilities – capabilities that can be stretched in times of need. Your Tech score is also your maximum number of Reserve points (see page xx).

Average the numerical values of your character's two strongest Capabilities and subtract 1 to get your Tech score. Only the two highest count. Round down. For instance, a character with Metatech 4, Cognitech 2, and scores of 1 everywhere else would have a Tech rating of 3. A different character with a rating of 3 in every Capability would also have a Tech rating of 3.

Your **Expertise may also add to your Tech score** and thus reduce your Import. This will give you fewer Twists and more Reserve.

The higher your strongest Capability is, the lower your total Import will be, and the more difficult it will be to garner Twists. **Your starting Import is 10 minus your Tech score. Subtract your Tech score from the number of Twists you get from any Complication that you willingly accept (see page xx).**

Character Examples

Breath-of-Mist

Civilization: Breath-of-Mist comes from the Stardwellers, a high-tech and wide-spread civilization that travels the universe deals with many other civilizations. Their benefit is two free Twists for use with Wonder, and their Core Values are Freedom and Diversity.

Neuroform: Baseline Dynamic

Core Values: Freedom 4, Diversity 3, Carpe Diem 3, Unity 2, Self-Preservation 4

Themes: Comprehension (systems dynamics), Romance (bad ideas), Wonder (new horizons)

Capabilities: Biotech 5, Cognitech 3, Metatech 3, Nanotech 3, Stringtech 2.

Expertise: Adept: Biotech. Ranked at 3 in Biotech Engineer, Biotech Research, Crisis Control, Medical, and Outdoorsman. Professional: Nanotech Engineer 3, Courtesan 2, Teacher 1. Locality (Stardwellers) 2.

Tech: 4 ***Import: 6***

Astina of the Sun-Circlers

Civilization: Astina comes from a Cargo Cult, one with two factions at war with each other over the course of hundreds of years. They have a competitive advantage in Stringtech. The cult's Core Values are Ritual and Worship.

Neuroform: Baseline Static

Core Values: Ritual 4, Worship 2, Property 4, Freedom 3, Self-Preservation 3

Themes: Magnetism (too crazy to stop), Empathy (bullshit artist), Comprehension (explosives)

Capabilities: Biotech 2, Cognitech 1, Metatech 1, Nanotech 3, Stringtech 2.

Expertise: Professional: Soldier 3, Scout 2, Farmer 1, Locality (Cargo Cults) 2.

Tech: 1 ***Import: 9***

Sotyet Aleph-fold

Civilization: Sotyet is a DI hierarchy whose selves research fractal spacetime disruptions near black holes. It is part of the Replicants, who create multiple copies of themselves for convenience and profit. Replicant characters gain an extra two Twists that can be used when representing something done with their duplicates. The Replicants' Core Values are Life and Safety.

Neuroform: Dataform, Multiple

Core Values: Life 4, Safety 4, Investigation 3, Fellowship 3, Take Care Of Myself 4

Themes: Comprehension (multi-layered things), Terror (catastrophic accidents), Magnetism (scientific community)

Capabilities: Biotech --, Cognitech 5, Metatech 4, Nanotech --, Stringtech --.

Expertise: Adept: Cognitech. Ranked at 3 in Engineer, Researcher, Crisis Control, Media, and Programmer. Locality (Replicants) 2

Tech: 5 ***Import: 5***

Abraham Ezekiel Driver

Civilization: Abraham is an Old-Worlder, from Earth itself. Old-Worlders have a competitive advantage in Metatech as they speak for the homeworld of humanity. Their Core Values are Tradition and Simplicity.

Neuroform: Baseline Static

Core Values: Tradition 4, Simplicity 3, Worship 4, Humility 4, Self-Preservation 4

Themes: Comprehension (emotional), Romance (matchmaker), Wonder (simple things)

Capabilities: Biotech 1, Cognitech 1, Metatech 1, Nanotech 1, Stringtech 1.

Expertise: Professional: Farmer 3, Outdoorsman 2, Religious 1, Locality (Old-Worlders) 2.

Tech: 0 ***Import: 10***

Flowering Unreason

Civilization: Flowering Unreason is a Disciple of the Void, who believes that the voice of God can be heard in the silent places of the universe – the billion-light-year-wide voids between galaxies. Their Core Values are Worship and Privacy. She benefits from their free Stealth profession.

Neuroform: Baseline Dynamic

Core Values: Worship 4, Privacy 3, Discovery 3, Efficiency 4, Self-Preservation 4

Themes: Intrigue (easily overlooked), Empathy (reluctant), Comprehension (eavesdropper)

Capabilities: Biotech 3, Cognitech 3, Metatech 3, Nanotech 3, Stringtech 2.

Expertise: Professional: Religious 3, Crisis Control 2, Programmer 1. Stealth 4. Locality (Disciples) 2.

Tech: 2 ***Import: 8***

Abhilasha Gupta

Civilization: Abhilasha is from the Rationalist League, who believe that emotion is ultimately harmful to well-evolved sentient beings. She is an explorer and first-contact expert who works with cargo cults to bring them up to a higher level of technology. Members of the League are immune to any emotional appeals, including Theme use.

Society: Explorers, who have competitive advantage in the Exploration profession.

Neuroform: Baseline Dynamic

Core Values: Logic 5, Efficiency 4, The League Must Grow 3, Exploration 4, Self-Preservation 3

Themes: Comprehension (deductive), Magnetism (convincing logic), Romance (people can be so irrational)

Capabilities: Biotech 3, Cognitech 5, Metatech 1, Nanotech 3, Stringtech 3.

Expertise: Proficient. Explorer 3, Diplomat 2, Legal 1. Locality (Rationalist League) 2.

Tech: 3 ***Import: 7***

Time Flies

Civilization: Time Flies is a Masquerader. They believe in Anonymity and Identity, and can identify when someone is disguising themselves, regardless of the method.

Society:

Neuroform: Dynamic, Multiple

Core Values: Anonymity 2, Identity 4, Adventure 3, Whimsy 2, Self-Preservation 4

Themes: Action (one-man teamwork), Wonder (novelty), Comprehension (instant expert)

Capabilities: Biotech 5, Cognitech 5, Metatech 5, Nanotech 5, Stringtech 5.

Expertise: Omnicompetent. Adept: Stringtech. Ranked at 3 in Stringtech Engineer, Stringtech Researcher, Soldier, Explorer, and Crisis Control. Satori: Nanotech Engineer 4. Satori: Nanotech Researcher 4.

Special: Time Flies is a starship with symbiotic crew, large enough to qualify for the Infrastructure descriptor.

Tech: 9 ***Import: 1***

Game Play

There are two basic ways for your characters to affect the world around them. The first is through the use of **character-level abilities**, such as Core Values, Capabilities, and Expertise. All characters have this option, whether controlled by a player or the GM. The second is through the use of **player-level abilities**, such as Themes and Twists. These are available only to the players' characters. The first part of this chapter deals with character-level actions. The second part, dealing with player-level actions, starts on page xx.

Both character-level and player-level actions are tied into **Complications and Advantages**. These represent story events in game terms. Your character's statistics are the cause; Complications and Advantages are the effects. Because they are so important and so central to the game, we'll start by discussing them and then move on to other game mechanics that tie into them.

It should be noted that not every interaction needs to be mediated by a game mechanic. Most day-to-day tasks can be assumed to be successful, and even "day-to-day" actions can be quite impressive for those with high Capabilities.

Complications And Advantages

Sufficiently Advanced revolves around Complications and Advantages, collectively known as Effects.

Complications are bad things that happen to your character, or unfortunate circumstances that surround him or her. Wounds, a loss of money or prestige, or your enemies discovering your plans are all Complications.

Advantages are the reverse: favorable circumstances and good things that happen to your character. Financial windfalls, election victories, and discovering your opponent's plans are all potential Advantages.

These effects are the core of the Sufficiently Advanced rules system. When you're in a conflict, both characters will end up taking a Complication or gaining an Advantage. If you spend Twists, you will typically create an Advantage for yourself or a Complication for someone else. When you need more Twists, you gain them by taking a Complication. Almost everything in the game ties into the Effect system.

Advantages and Complications are broken up into five levels:

Effects by Level

Level		Description
1	Trivial	Immediate and ignorable. No new info.
3	Minor	Short term, low impact, skeletal info
5	Moderate	Long term, high impact, **or** accurate info
7	Major	Long term, high impact, **and** accurate info
9	Critical	Rule of Force

The number shown is the Twist cost for that level (see page xx), and also factors into the optional Impairment system (see page xx). There are no even-leveled Effects – you can't choose something between Moderate and Major, for example.

Trivial* (1): Immediate and minor impact to unnamed characters. No new information is involved. Examples: Your foe is annoyed or distracted. Your opponent is barely taxed. Cameras lose track of a single being among dozens during a riot. Prevent yourself from stumbling at an unimportant time. Give your foe a moment of doubt.

Minor (3): Minor effects are **short-term, low-impact, and involve skeletal information**. They can still be potent if several build up, but they are unlikely to be a problem in the short term. Examples: An escape, but not without consequence. A delay or acceleration in plans. Your location is revealed to a distant enemy or vice versa. You are pointed toward the next piece of the puzzle. Minor but noticeable monetary impact. Minor injury.

Moderate (5): Moderate effects are l**ong-term, or high-impact, or involve accurate information, but not more than one**. Examples: Kidnappings. Your actions are revealed to a distant enemy or vice versa. You are befriended by the enemy. Plans significantly delayed or accelerated. Material possessions destroyed. Substantial injury. Resources severely taxed or substantially increased. A clean escape.

Major (7): Major effects are **long-term and high-impact and can involve accurate information**. Examples: Deluded by the enemy, or successfully feed them misinformation. Convinced of a particular fact or falsehood. Important secrets revealed to the enemy. Allies turn against you. Friends lost. Your Society rejects you. Severe injury. Unconsciousness. Resources lost forever.

Critical* (9): **Effects at this level may bring the Rule of Force into play.** Examples: Death and fates worse than death. All Core Values changed. A major character is dying or near death. Your target is unable to exercise any number of Capabilities or Professions. You are exiled from your beloved homeland. Extensive brainwashing or mesh-hacking. Friends' allegiances reversed. Long-term plans ruined, or coming to fruition immediately.

* Players may only take one Trivial and one Critical complication per game session, but may take as many others as their aching backs can carry.

Examples of these effects in play can be found in the sections on Conflict (page xx) and Theme use (page xx).

The Big Deal Rule

A Complication that does not cause problems for its character is not a Complication. Twists are not gained from Complications whose effects can be easily ignored.

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.

The GM shoulders the majority of this burden. It's typically easy to 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, perhaps the player should pick a different complication. The GM also has the option to push the consequences off until the next session, when a different threat has come along.

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 a Complication involving public embarrassment, so it should count as more than trivial. Likewise, an unsympathetic character with no friends would not be particularly hurt losing friends, so such Complications shouldn't count for such a high level. It's best for the GM and players to talk these things over for before they come 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.

Remember that the number of Twists you receive is reduced by your Tech score. A character with Tech 3 would receive no benefit from a Minor Complication, and only 2 points from a Moderate Complication. Tech does *not* reduce the amount of Impairment.

Most Complications are intended to be nearly immediate, and of relatively short duration or personal scope. They can rarely affect anything beyond the character.

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.

Recovery

It is possible to recover from any Complication, short of certain items at the Critical level. Complications created through conflict can be removed by the use of Themes, but those willingly accepted in order to gain Twists cannot (see the Frying Pan Rule).

The general length of time that Complications last is "until you get them fixed," which can vary greatly depending on the situation the characters find themselves in. Seeing a psychologist, visiting a hospital, spending time to reconnect with a friend, all of these can be useful actions to take if you need to recuperate.

For some Complications (such as "befriended by the enemy"), the character may not be capable of fixing his or her own issues, and may need help from others. Complications left unaddressed may persist indefinitely, but it is recommended that only Major complications have impact beyond a single game session, and only Critical ones should have permanent effects.

Basic Actions

Characters taking unopposed actions will find success or failure based primarily on four factors: their Core Values, their Expertise, their Capabilities, and their players' ingenuity. For each factor, determine a "yes" or "no" answer based on the following guidelines.

Core Values: Does the character care about the outcome of the event? Is he or she willing to put in the time and effort required?

Expertise: Does the character's Expertise cover these sorts of tasks? Does he or she have substantial experience in this area, as represented by a properly-ranked Profession?

Capabilities: Are the character's Capabilities up for the job? Is he or she enhanced in such a way as to make the task reasonable? Does the character have tools that would help in this area?

Ingenuity: Is the task one that is simple, easy, or obvious given the character's attributes? If not, can the player invent a way in which to use those attributes and solve the problem? Can the player redefine the problem to be a solvable one, or find a way around the issue?

This approach to solving a problem is known as answering the Four Questions, or using a Basic Action. Conflicts between characters (whether PCs or NPCs) should not be handled using these rules; see the sidebars about "Conflict vs. Contest" and "Serious Threats are Sentient" on page xx.

If you find the answers to be "yes" in three out of four categories, you should consider the task accomplished. The higher the character's attributes, the faster the task can be done. If all four categories are on the character's side, the task will be completed in style, quickly, and with a minimum of fuss.

If most of the answers are "no," however, the character is doomed to failure. Without enhanced Capabilities, the character may know *how* to achieve something without actually being able to accomplish it – the classic "If only I had a..." Lack of Expertise can lead to botched efforts and imperfect work that falls apart quickly. Lack of an appropriate CV leads to a an uninspired effort, short on passion or dedication. A lack of ingenuity on the player's part cements these, and ingenuity on its own can only accomplish so much.

When considering particularly complex or skill-oriented tasks, Expertise is the most important factor. Certain tasks simply cannot be attempted, let alone completed, without the appropriate skills in place. Someone who has never picked a lock before is doomed to stand aimlessly before it, stymied by a lack of knowledge. The shark-filled waters of national politics are likewise impossible to navigate without some experience. The GM should be fairly strict on this front.

Conversely, the applicability of Core Values should be fairly wide when it comes to basic actions. A character who has the skills and technology necessary to complete an action can succeed if they care about something broadly related to the goal. The Self-Preservation CV will be relevant to many critical goals.

Examples

An Old-Worlder is irritated by a sizable stone in his field. It needs to be moved if the plow is to get through. His CV of "My Farm" is clearly applicable in this case. Without enhanced Stringtech or Biotech, he cannot simply pick it up and move it. However, the player suggests that, as an experienced farmer, his character can probably hook up chains to a tractor and pull the stone out.

A character is stuck on a Cargo Cult world and wishes to acquire gold for money and high-tech construction. She has Stringtech 3, which includes transmutation beams. She will starve without money, and her Self-Preservation CV comes into play. Unfortunately, she has no scientific skill, and without Infosphere access is unsure of how to set the beam to produce pure gold rather than merely act as a weapon.

Her player suggests that the character can dig up a periodic table and a chemistry text to supply some numbers, and find a supply of a simple element (such as Hydrogen) to act as a base. The GM agrees that this is sensible. The process is slow, but it works.

En route to one crisis, a character is asked to solve another. She is presented with a tricky political situation that requires significant mediation. While the character has enough Expertise, has Share The Load as a Core Value, and is loaded with Metatech, the player is stumped as to handle the situation quickly enough. He must now choose for his character – which crisis is worth his character's time? Who must she help, and who will she abandon?

A character seeks to escape exile on an asteroid before he runs out of oxygen. He has the Spacer Profession, and this is clearly a matter of Self-Preservation, but lacks sufficient Stringtech or Nanotech to create fuel. The player seeks for inspiration, but the asteroid is barren and remote. Rather than face failure, the player changes the terms: she suggests using her expert-level Spacer skill to set her spacesuit for a hibernation mode. Her character cannot escape, but he can at least await rescue. The GM agrees.

As a result of a battle, a character is trapped beneath a ton of rubble. The Self-Preservation CV comes into play here. Unfortunately, he lacks the Stringtech or Biotech required to escape, and frankly there aren't many Professions that cover digging oneself out from beneath an avalanche. No amount of player ingenuity is going to help at this stage – he's stuck there.

Lateral Strategies in Technology

There's a fungus named *Ophiocordyceps unilateralis*. It infects ants in tropical forests and literally takes over their brains. (It's real, look it up.) The ants climb down from the trees they usually live in, find a leaf, latch on, and die, after which the fungus reproduces in an ideal environment.

Is that Biotech or Cognitech? Which would your character use to create a more sophisticated mind-controlling fungal weapon?

The answer is normally Cognitech. Cognitech is the technology that deals with brains and thoughts; it's the clear answer. Biotech is about bodies, mostly the parts besides the brain. If you want to mess with someone's brain, you normally use Cognitech to create a neural virus. (I suppose you could be civilized, and talk to them with Metatech, but that's not mind control.) However, there is clearly an argument that this should at least be *possible* using Biotech.

In order to use the "wrong" Capability for an action, your Civilization needs to have a *competitive advantage* in that technology (see page xx). In story terms, your civilization has studied and relied on that technology so extensively that they've discovered unusual applications for it. You can then substitute that Capability for others with a -1 penalty.

Some substitutions make more sense others. Substituting Nanotech for Stringtech makes a fair amount of sense. Substituting Metatech for Stringtech makes less sense, and might require specific conditions (such as having someone nearby with the appropriate weaponry available).

(more examples here)

Pushing Hard

When you are on the border between success and failure, having a little extra effort to put in can make the difference. You may spend one (and only one) point of Reserve (see page xx) to take the answer to the Four Questions from a "no" to a "maybe," or from "maybe" to "yes."

Assistance from Others

"Two heads are better than one" is a common saying for a reason. Team efforts, whether from just one assistant or a large group, can take the answer to the Four Questions from a "no" to a "maybe," or from "maybe" to "yes."

Assistance is most often helpful in terms of Capabilities. A group of non-experts is likely to come up with a decidedly non-expert consensus as to how to act, based on half-remembered facts or near-facts. Groups of experts often squabble over personal interpretations and complex details. What is most effective is a team of experts all working for a common goal – that is, sharing a Core Value.

Teamwork's most reliable impact is that it simply speeds things up. Ten people may not quite work ten times as fast as one person, but they can come close.

Teamwork in conflicts is different; see page xx.

Competitive Advantage

Some civilizations have a "competitive advantage" in a particular Capability. Some Societies have that in a particular Profession. Competitive advantage can take the answer to the Four Questions from a "no" to a "maybe," or from "maybe" to "yes." This can be especially useful when the character needs a Capability that he or she does not have. It enables the character to rely on unusual tricks and cutting-edge techniques from a different Capability to achieve unexpected and amazing results.

Competitive advantage has other benefits as well: It gives +1 before multiplication in Conflicts, and see also "Lateral Strategies" on page xx.

What About Bad Luck?

The GM may offer you some Twists to turn one of your answers to one of the Four Questions from a "yes" to a "no." This is intended to be used to model those times when you should be able to handle the situation, but dumb luck intervenes. Your computer crashes the night before the exam. You can't find your keys. The Lens you wanted to use has a virus. Life gives you lemons, but you get some Twists.

The number of Twists you receive is dependent on the level of Complication that is being offered. As usual, this is reduced by your Tech score, but you can still get one Twist even if your Tech score is higher than the Complication level.

You are not required to accept the offered Twists. You may reject them and succeed despite the bad luck. If you do accept the Twists, treat this as a voluntary Complication – the Frying Pan Rule applies.

Do I need a Core Value to tie my shoes?

No, you don't need a relevant just CV to tie your shoes. The basic game mechanics are designed to answer whether characters can do things that are difficult or challenging. If something is clearly trivial, don't use these rules for it, just let it happen.

What counts as "trivial" varies from person to person, of course. Demolishing an old-worlder building is trivial for a high-Stringtech character, as is designing one for an architect with 500 years of experience. Demolishing a reinforced bunker quickly or designing a grand cathedral would be considered challenges.

The Consequences of Failure

Because of the all-or-nothing nature of basic actions, the consequences of failure can sometimes seem severe, as in the example with the man trapped under the rockslide. Remember that after a player's character fails at a critical action, the next step is typically the use of Themes. If a Complication arises because of this, that's exactly how the game is supposed to work.

Not all failures are life-ending. Some simply indicate that the character isn't capable of solving the problem quickly enough or decisively enough. Sometimes you simply accept the failure and move on.

Failure on the Four Questions does not constitute a Complication and does not provide Twists unless the Bad Luck rule is in place.

Contest vs. Conflict

Some head-to-head interactions are not conflicts in the way this system handles them. Contests of strength or speed, comparisons of pure skill, and situations where no one stands to truly lose anything might be contests, but they're not conflicts. For such purposes you can simply compare Capability or Profession scores, using other scores or competitive advantage to break ties. Conflicts are situations where there is some interplay between the people involved. They are situations where power, skill, and willpower are all necessary. Most importantly, they are situations where losing is meaningful, and many outcomes are possible. If that isn't true in your situation, don't use the conflict rules to handle it.

Serious Threats Are Sentient

The conflict system should be used for dealing with intelligent opponents. If a character is up against a non-sentient force, even a complex computer program, use the Four Questions to resolve the event. If you're uncertain of where to draw the line, the relevant question is this: Does the obstacle in your character's way have Core Values? If not, it's not sentient and should be addressed with the Four Questions.

Conflict

Basic actions and the Four Questions are designed to handle unopposed activities. However, the more exciting parts of the game happen when your character is facing opposition.

Conflict Summary

When characters come into conflict, follow these steps:

1. Each side adds a Core Value and a Profession together, then multiplies by a Capability to get a total.
2. Declare goals and intended Complications or Advantages based on the difference in totals.
3. Describe the conflict, especially how the effects of the conflict occur.

Conflict in Detail

Conflict occurs when one character's goals are incompatible with another's. When it becomes clear that this is the case, every side involved should state their goal explicitly. This is a player-level statement – the characters may not realize each other's true goals, or even that they are in a conflict at first. (See the "Subtle Conflicts" sidebar on page xx for more about how to handle this.) However, it should always be clear to the players what the stakes are.

The consequences of a conflict come in the form of Complications and Advantages. Unlike Complications accepted to fuel Themes, these Complications do not provide Twists, nor do the Advantages cost Twists.

Each side should have a particular effect in mind going into the conflict, one that can represent the character's actions and intentions accurately in game or story terms. Only one item from a particular level should be chosen. If you inflict a Complication on your foe, you cannot choose more than one effect. You also cannot buy multiple weaker Complications instead of a more serious one – for instance, you can't trade in a Major (5) for a Minor (3) and two Trivial (1) Complications. However, you can choose to inflict a lesser level if you desire.

While we will often refer to Complications as the typical outcome of a conflict, it is typically possible to gain an Advantage rather than suffering a Complication if you prefer.

Along with your goal, you should state which CV, Capability, and Profession your character will use to achieve it. If you lack a suitable Profession, you cannot achieve that goal.

Once you have your goal and its means stated, add the levels of the relevant Core Value and Profession, then multiply that by your Capability score to get a total. You should end up with score between 0 and 50. You will be comparing your total to that of your opponent using the table on the next page.

For example, if your total is 42, and your opponent's total is 20, you have more than double your opponent's score. This puts you in the "x2 or more" level. You will take a minor complication, but you will inflict a major complication on your opponent.

The higher score rarely comes out unscathed – both sides in a conflict usually take a complication. It might even be that the side with the higher score doesn't "win" in the way they would like, but that they exact a worse punishment on the lower-scoring side.

Advantage	Effect
x4 or more	No contest. The loser is at the winner's mercy, taking a critical complication while the winner is unharmed.
x3 or more	Crushing. The winner takes a trivial complication, and the loser suffers a critical complication.
x2 or more	Decisive victory. The winner takes a minor complication, while the loser suffers a major complication.
Less than x2	Narrow victory. The winner takes a minor complication, while the loser suffers a moderate complication
Less than 10%	Stalemate. Both sides suffer a minor complication.

Trading Complication for Advantage

Complications are flexible, but they describe only negative effects. If you are looking for a more positive effect, you can trade in your ability to inflict a Complication to get an Advantage for yourself. The level of Advantage you gain is the same as the level of the Complication you would have inflicted.

Just like Complications, Advantages need to make sense in terms of the conflict that creates them. For instance, if you are hacking a bank in order to transfer credit to yourself, it makes sense that you could create an Advantage that describes your increased wealth. On the other hand, if you're shooting someone from miles away, using your Advantage to gain secret information probably doesn't make much sense.

It is vitally important to note that characters with Nanotech 3+ can read Capability scores without effort, and characters with Metatech 3+ can do the same for Capabilities and Core Values. As a result, **characters are likely to know their fate before engaging in a conflict.** The phrase "I don't think I can do much here" should be in every character's vocabulary, followed immediately by "Let's see where I can be more effective."

Adjusting Conflicts

Any abilities or technologies that give a "bonus" in conflicts give +1 to a character's effective Profession + CV score, before it is multiplied by Capability.

The GM may make simple adjustments to either side in a conflict by adding or subtracting up to two effective levels of Profession. For instance, a character trying to escape pursuit across a barren plain might suffer -1 to the Spy profession for lack of a place to hide, while a character using Locality to hide in his or her hometown might receive an effective +2.

Characters suffering under the effects of a Complication might also be penalized in appropriate ways. For instance, one whose faith has been shaken might act with a lower Core Value, and one who is injured would have certain Capabilities reduced.

The Impairment system on page xx is a codified way of dealing with such penalties. Impairment is a strictly optional system, and the GM will inform you if it is being used.

Teamwork in Conflicts

When working as a team, use the following table to determine the effectiveness of the group. Apply this bonus to the highest-score character ***before multiplying.***

Group Size	***Modifier***
Just You	+0
2	+1
3 – 10	+2
11 – 30	+3
31 – 100	+4
101 – 300	+5
x3 bigger	+1 more

Relative bonuses generally cap out at +4. For massively parallel processes (e.g. economics), cap at +6 instead.

If your target is large enough and structured enough, it may have one or more levels of the Infrastructure descriptor. See the sidebar on this page.

Attacking Infrastructure

Some groups and objects in SA have the Infrastructure descriptor (see page xx). From starships and cities at Infrastructure I to entire civilizations at Infrastructure III, they are substantially more durable and effective in conflicts. When a small group or single person is in a Conflict against something with Infrastructure, use these rules.

First, the larger group applies the maximum Teamwork bonus (see the Teamwork in Conflicts sidebar) for the type of conflict involved: +4 for most conflicts, +6 for highly parallel ones.

Second, if the larger group would suffer a Complication, the level of that Complication is reduced by one step for each level of Infrastructure (e.g. from Moderate to Minor). If the smaller group also has Infrastructure, use the *difference* in levels to find the reduction. This reduction also applies to any Advantage the smaller party might try to gain.

Finally, when applying Complications to a target with Infrastructure, use the Large-Scale Effects list on page xx. The normal set of Effects is designed for human-level conflicts, and the Effect chart in that section is a better choice for such large-scale effects.

Multiple Opponents

When three or more people are in a single conflict, first make sure that their goals do indeed conflict with each other. You may be able to simplify this down to several one-on-one conflicts. If several people team up to take down a larger threat, and then squabble amongst themselves, treat it as two regular conflicts, one after another. Use the teamwork rules on page xx.

In the case of a true free-for-all, with many conflicting goals and each participant (or group) out for themselves, things can easily ratchet up in intensity. You are allowed to inflict Complications on each and every participant you face, based on the difference in your scores. You do not have to inflict Complications on everyone if there are people you would rather leave out of the affair, but it is your option to inflict one if your score allows it.

Multiple opponents cannot escalate separately against a single target so as to leave one person un-escalated. Escalations affect the entire conflict.

The Obligatory 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 the brain, supernovae, suicide Lenses, and more are real dangers in this game setting.

Whenever the GM is about to deploy 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.

The OIDCR does not generate Twists on its own. See page xx for things that do, and ways for tapped-out players to get a few Twists in this kind of situation.

Subtle Conflicts

Particularly masterful characters may be able to defeat others without having them even realize they have been bested. **Reduce your multiplier from Capability by 1 to completely hide your actions** from your opponent, winning secretly. You may still end up suffering a Complication due to exhaustion or use of resources.

CA Reminder

Competitive Advantage gives a +1 in conflicts before multiplication.

The Battle vs. The War

Changing timescales for a conflict can be very useful. It forces your opponent into a faster conflict, presumably one where you have the advantage. However, winning the short conflict will not give you the same results as winning the longer one. If you're sick of a political debate, you can change it into a fistfight, but it might not get you the results you're looking for.

Timescales

Your chosen effects should be achievable on the same timescale as your opponent's. If someone assaults you with an axe and an intent to do grievous bodily harm, responding with a carefully orchestrated psychohistorical campaign is not going to stop you from ending up in multiple pieces. If Metatech is your thing, perhaps some Words of Power or a memetic virus will help you come out with only minor wounds. If your opponent in a long-term action comes back with a shorter-term goal, you can feel free to revise yours in order to match theirs. You can return to your previous efforts afterward, pending the results of the conflict.

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. Fights are handled through the Conflict system because characters will either have the Capabilities to detect weapons brought to bear, the Expertise to have the hairs stand up on the back of their necks, or enough Twists to handle things via the Obligatory Instant Death Cutscene Rule (page 43).

Escalation

The conflict rules do not assume a knock-down, drag-out, anything-goes environment. However, as some people say, "there's no kill like overkill."

Any character with a Core Value rated at 3 or higher can escalate a conflict. Both sides then receive a complication one level higher than would otherwise be indicated. Conflicts can only be escalated twice: once by each side.

Characters can only escalate when their Core Value aligns directly with the conflict in question.

Escape!

Characters who have been caught and are in a conflict they want no part of may simply wish to escape. You may gain a Minor (3) Advantage to state that you have escaped, but that you suffer the effects of your opponent's assault. If you can get to the Moderate (5) level, you can declare that you escape unharmed, and your foe cannot target you with a Complication, though she may still gain an Advantage.

Themes Uber Alles

Remember that Themes and Twists automatically trump all other measures, regardless of the relative difference in other scores. A character with a reasonable supply of Twists can easily escape unharmed against massively superior opposition. Meanwhile, one with a pending complication *will* face it, regardless of what countermeasures are employed.

Conflicting Goals

You've found the spy in your ranks, and are chasing him down. You have only a narrow advantage – if you escalate, you can exact a Major complicaiton, but the spy gets a Moderate complication in return. The spy chooses "your foe escapes unharmed" to represent his escape; you choose "kidnapped" to represent the capture. What happens?

What happens is that you **both must choose new goals**. If the higher rank Complication always won, escape would be essentially impossible due to the setup of the system. The original question of the chase may remain unanswered, or may be obvious given the situation.

You might choose "Important Secrets Revealed," while the spy might choose "Befriended by the Enemy." You get the information you want from the spy, but in the process, he earns your trust. Who wouldn't let their friend go in such a situation?

Professions in Conflicts

It is assumed that you will be switching tactics and pulling tricks during a conflict. You might use an unexpected Capability, such as intimidating people using Biotech (rather than Metatech) to show off your strength or release fear toxins into the air. However, there is only one Profession involved. Even if you set someone up with a few verbal quips, a punch to the gut is still thrown with Soldier, or perhaps Athlete (Boxer). **Your final goal is what determines the Profession involved, not the means that you use to achieve that goal.** You can't punch someone with Athlete (Boxer) and make them lose money. Someone with a very high level in a Profession is likely to be able to use it for more purposes, such as using Police to work with a media outlet and release a missing-persons story. Overlap is inevitable and ok. Try to keep this to level 3-5 of a Profession; be more strict with characters at the 1 or 2 level.

Conflict Examples

Physical Combat, Example 1

On an old-worlder planet, a pair of young thugs seek to ambush a veteran soldier back from the wars.

Thugs: Bio 1, Criminal 1, I Deserve Things 2

Veteran: Bio 1, Soldier 2, Espirit De Corps 4

Because the thugs outnumber the soldier two to one, they have +1 before the multiplier. The thugs have a score of 1 x (1+2+1) = 4 and the soldier has 1 x (2+4) = 6.

The soldier's rating is less than double the thugs' rating, which is a narrow victory for the soldier. He takes a minor complication, and they take a moderate complication. The thugs choose "your foe escapes" so that they can get away, while the soldier chooses to dole out some injuries and knocks them about the head and shoulders.

Physical Combat, Example 2

A weapons researcher in Independent space goes mad and begins laying about with a new and deadly weapon. The police are called to bring him in. The scientist has downloaded a war lens that gives him the Soldier profession.

Mad Scientist: String 5, Soldier 2, Fools! I'll Destroy Them All! 4

Police: String 4, Police 3, The Public Good 4

Four police show up at first. The scientist is alone. The police have a score of 4 x (3+4+2) = 36, while the madman has a score of 5 x (2+4) = 30.

This is a narrow victory for the police. The scientist will escalate, so he takes a major complication while the police take a moderate one. The police choose to knock the scientist out and throw him in jail, which certainly will count as "high impact and long-term." The player of the scientist wants to gain an Advantage related to media coverage, but the GM turns it down – this is a physical conflict, not a social one. The scientist's player instead chooses to obtain accurate information, saying that the new weapon has been successfully field-tested and is ready for use. The GM agrees.

Social Interaction, Example 1

A Union member (Meta 5, Media 3, no useful CV) is trying to talk a Cargo Cult guard (Meta 1, Soldier 1, Lock 'Em Up 3) into letting him out of prison. The Union member has 15, the guard has 4, so the Unionist has a x3 advantage. This is a Critical advantage. The Unionist loses a trivial amount of time, and the guard is talked into joining the Union.

Social Interaction, Example 2

A Union member (Meta 5, Media 3, no useful CV) is trying to talk a Independent guard (Meta 2, Soldier 2, Lock 'Em Up 3) into letting him out of prison. The Union member has 15, the guard has 10, so the Unionist has less than x2 advantage. The Unionist spends a Minor amount of time to influence the guard to a Moderate amount - not enough to be let out in general. If the Unionist escalates, this could become a Major amount, with long-term and substantial benefit, but the Unionist would take a Moderate amount of complication.

How might this happen? Let's look at the Effects involved. A Major effect is described as being long-term, high-impact, and involving accurate information. A Moderate effect can have one of those effects, but not two or three of them. Here are a few possibilities:

A. The Unionist talks her way into a bathroom break, then runs and escapes from prison (Major), but takes a wound (Moderate) in the process. The GM reduces the Unionist's Biotech score for a time.

B. The Unionist talks her way out of prison (Major), but is delayed (Moderate) in the process.

C. The guard shakes the Unionist's faith in the values of obedience (Moderate), but in the meantime succumbs to pressure and lets the Unionist escape (Major).

There are many different ways that any conflict could play out.

Infiltration Mega-Example

A Disciple attempts to sneak into a Cargo Cult citadel to rescue her compatriots.

Disciple: Nano 3, Stealth 3, Friendship 4
Guards: Nano 1, Soldier 2, Duty 2.

The Disciple's total is 3 x (3+4) = 21.
There are a dozen guards on rounds, which gives a teamwork modifier of +3. Their total is 1 x (2+2+3) = 7.

The Disciple has a x3 advantage, and can claim a critical advantage while suffering a trivial complication. The GM states that the Disciple is slightly winded after avoiding the guards and charges her a point of Reserve. The Disciple, in return, states that she has now mapped out the entire citadel, including the guards' routes and structural weak points in the building.

If the Disciple had intended to murder all of the guards under cover of her invisibility nanotech, that would be a Critical complication. She could have attempted that instead - but such work is a subtle conflict (see page xx), and also runs afoul of the guards' Self-Preservation CV. That conflict would look like this:

Disciple: Nano 3, Stealth 3, Friendship 3, Subtle Conflict -2, Total is (3-1) x (3+3) = 12
Guards: Nano 1, Soldier 2, Self-Preservation 4, Teamwork +3, Total is 1 x (2+4+3) = 9

This is still a win for the Disciple, but not as strongly. The guards (as a whole) will take a moderate complication and the Disciple takes a minor one. If the Disciple intends to kill her way through the citadel, then...

- Without escalation, several guards will die or be injured, and the remaining guards will realize that there is someone else in the citadel.
- If one side escalates, perhaps half of the guards will die, but the Disciple will be injured or severely delayed by the time she reaches her friends. She may even lose her invisibility tech to a stray blow.
- If both sides escalate, the guards take a critical complication. They're all dead, with survivors at the Disciple's option. The Disciple, however, takes a major complication. At minimum, she's heavily injured. At worst, she may be convinced that her friends are not even in this citadel, or she may lose the respect of others for her murderous rampage. (Should this happen, the other PCs will still be able to choose whether or not to stand by her. Complications affect the character who suffers them and NPCs, not other PCs.)

(more examples here)

(include one where people pick up guns for the equipment bonus)

Tactics vs. Strategy

In most games, you as a player are responsible for your characters' tactics during a conflict. Your choice of whether to go for the high ground or hide behind a barrier, which opponent to flank and which to attack directly, etc. can make a big difference in how a conflict plays out and who ends up as the eventual winner.

This game doesn't have that. Your *character* is the one responsible for tactical decisions. You can choose to expand that and play through those choices, or you can just hide that step behind the conflict resolution mechanics. Either way, you as a player don't need to worry

about whether your choices are right for your character tactically. Your character takes care of that on his or her own.

Instead, you are in charge of your character's strategic decisions. You choose which conflicts to take part in and how. You decide what sort of Complications to accept or inflict, and what Advantages to gain. You handle the long-term decisions rather than the blow-by-blow decisions.

Sufficiently Advanced is a game where you typically know whether you can win a conflict before it starts. The question is not "Will the dice land in our favor?" but instead, "What can I do with my loss to ensure my team's victory?"

(put a bit in the Advice section about this game vs. other diceless games - information hiding in Amber and such.)

(more conflict examples)

Projects

Characters in SA often want to **create a long-standing asset** to solve a problem: a new cure for a disease, a smaller wormhole generator, a memetic virus, a better computer system, an entire society. That's what this system is for. Characters apply their intelligence and knowledge, as well as their myriad technological resources in the form of Reserve, to speed their project to completion.

You should first determine the **type and level of technology** required for your project. The type (Bio, Cog, etc.) is typically obvious. Sometimes the level will also be obvious ("I want to make a Nano 5 self-replicating weapon"), while other times you will need to converse with the GM and compare your project to existing works. ("I want to create a new kind of dynamically adjustable group mind." "You could do it as a Lens, maybe 1 level higher than a typical Persona Lens.")

Some projects require more than one Capability. In general, designing or analyzing something new will be a Cognitech task, while implementing an existing design will require other Capabilities. Building a computer from scratch would require both Cognitech (to program) from the character, and Nanotech (to build) from either the character or the local environment. Model this by setting two separate Capability requirements for the project.

Next, determine the **general type** of the project:

- ***Great Works*** – Projects that have long-lasting impact on society or fundamental science. Setting up a new colony, replacing a government, building a society, implementing a continent-sized transportation network, or discovering new principles of science. Great works take a baseline of **50 years** and can **substantially change the game**.
- * ***Major Projects*** – Incremental improvements to existing technology, or rapid social change. Building a new nanophage or phage countermeasure, curing a new and unknown disease, or changing corporate organization by implementing a known management method. Major projects take a baseline of **5 years** and can **alter large regions or groups**.
- ***Minor Projects*** – Use of existing technology in a substantial manner, or making minor modifications to an existing technology. Creating a new building, running an advertising campaign, inoculating a village, or writing a complex but unpolished computer program. Minor projects take a baseline of **3 months** and typically have **local or minor impact**.
- ***Craft Projects*** – Making something from a template or performing something well-practiced. Recording a video or song, assembling a set of furniture, knitting a scarf, writing a useful but simple computer program, or cleaning out the basement. Craft projects take **12 hours** and typically have a **small, immediate, tangible product**.

The times listed above assume that you have the appropriate level of technology available, either built in or through nearby infrastructure, and that you have the appropriate Profession rated at 2.

Once you have determined the project's general type and tech level, you'll be moving up or down the Time Ladder (see sidebar). Apply these guidelines:

Time Ladder:

100 years
50 years
20 years
10 years
5 years
2 years
1 year
6 months
3 months
1 month
2 weeks
1 week
3 days
1 day
12 hours
6 hours
3 hours
1 hour
30 minutes
10 minutes
5 minutes
1 minute
30 seconds
10 seconds
5 seconds
1 second

- Each increase in Profession or Capability moves you down the time ladder one step.
- Access to outside resources (such as the infosphere) moves you down the time ladder one step.
- The GM may rule some items to be particularly simple (down one step) or complex (up one step). Altering the skill level required is also reasonable for complex or simple projects, but the required Profession rating should never exceed 3.
- If your project would affect an entire group with Infrastructure (see page xx), increase the time. Infrastructure I adds 2 steps, II adds 4 steps, and III adds 6 steps. You may also need a successful Conflict to pull off this project.
- If you have people capable of helping, divide the time by your Teamwork modifier. If you yourself have the Infrastructure descriptor, use the +4 Teamwork modifier that you usually receive.

You can take on a single project at a time, or two with Biotech or Cognitech at 3 or higher, or three with both rated 3 or higher (though you will eventually need to sleep). You cannot work "double shifts" on the same project to speed it up.

It is important to note that Projects create prototypes, not production-quality items. Expect bugs in software. Expect side-effects in cures. Expect minor revolts in your empire. Polishing out these imperfections takes time – about ten times longer than the initial project time – or Theme use.

Spending Reserve

If you want to complete your project faster, invest Reserve in it. Every point of Reserve you invest moves you down the ladder one step. In this way you can choose which actions you want to focus on and do those more quickly.

You cannot invest more points of Reserve on a project than you have points in an appropriate Core Value, or points in the appropriate Capability, whichever is *lower*. If you have no appropriate CV, you can still invest one point of Reserve per project.

Reserve that is invested in a project stays there until the project ends, either in success or because you had to interrupt it. In the meantime, your maximum Reserve is reduced by the amount that you keep invested.

When a project ends, you do not get the invested Reserve back immediately. You regain a point of Reserve every night that you get enough rest. (For characters with a high Biotech and Cognitech scores, this can be just an hour or two.) You regain an additional point while resting if you have a Core Value rated at 3 or higher that matches up with your current project. You cannot exceed your maximum Reserve.

Not Whether, But When

Whether or not a project can be completed should be referred to the Four Questions. In most SA teams, the answer is almost inevitably "yes" – someone in the group will have the expertise and capability needed to complete the project, or will be able to download the skills they need. This system answers the more difficult question of how much *time* a project will take.

This is partially a metagame concern. Most groups are happy to take on projects that can be completed within a day, but wary of longer-term endeavors that might bog down the game or be interrupted by outside events. Reserve helps the players choose which projects are most worth their effort and focus on those.

Example Projects

The Cure: Trapped on a Cargo Cult world and faced with a terrible plague, a Replicant seeks to use his built-in biotech resources to create a cure that will save the population. This is a major project, with a base time of 5 years. The replicant's statistics are Cog 3, Bio 3, Medical 4, Heal The Sick 4, and an overall Tech score of 3. No help is available. The GM declares that the plague could be cured with Cognitech 1 and Biotech 2, so the Replicant improves the time by two steps for Cognitech, one more for Biotech, and two steps for Profession. It will take two weeks of experimentation and testing in a lab (which, luckily, the Replicant has built into his own body). Dissatisfied with this result, the Replicant invests all 3 points of Reserve to crank the time down to a single day. Note that this creates the cure itself, but does not distribute it.

Maximal Information: A Mechanican researcher desires to create a new type of computer, one based on the use of singularities. Her stats are Cog 1, Stringtech Researcher 4, Black Holes Are The Best 5, and a Tech score of 5. She wants this to be a real game-changer, so the project would normally take 50 years. The GM rules that the project is particularly complex, raising it to 100 years and requiring Cognitech 3 and a Profession of 3. The GM also states that such a project will require Stringtech 5 to implement. The researcher has ample Infosphere access, is working on in Mechanican space with String 5 infrastructure, and has a team of 20 skilled researchers working with her. She loses two time steps for Capability, gains two time steps from her Profession, gains one step for the Infosphere, and gains four steps by devoting four points of Reserve to this project. Finally, she divides the resulting amount by three for the assistance. The first prototype will be ready in 8 months.

A Place To Call My Own: A Nanori wanderer decides to settle down and make a house. His statistics are Nano 5, Nanotech Engineer 3, no appropriate CV, and a Tech score of 5. Normally it takes three months to build a house. The GM says that a simple dwelling would be Nano 1, but the higher the score, the more will be built into the dwelling. The Nanori wants a fully-functional modern house, but is willing to compromise down to the level of Nanotech 3. This gives two time steps for Capability and one for Profession. Accessing the infosphere gives another step, for a total of 3 days. The Nanori could spend one point of Reserve, but declines, saving it for the next day's projects.

(more examples here)

(include examples that use both Projects and Conflicts)

The Frying Pan Rule

When dealing with a Complication that you willingly accepted, you cannot spend Twists to ameliorate its effects in any way at all.

Complications are also explicitly allowed to end the duration on existing Theme activations and bring elements removed by Plot Immunity back into play.

You *may,* if you wish, avoid Complications that you received as a result of conflicts by spending Twists. Only Complications that you took in order to get Twists are immune to them.

How Much Action?

Including the Action Theme means that your campaign occasionally (or perhaps often) suspends common sense in favor of the Rule of Cool. This makes it especially important to set limits on this Theme before playing a game with it. The key question is this: what breaks your group's suspension of disbelief? Most groups will be ok with a bareknuckled detective taking out a dozen thugs (even though in the real world those thugs would pull guns and the fight would be over). Most groups are not ok with a tough-as-nails soldier surviving an atomic bomb just because he has the "won't fall down" descriptor. Your group will have to decide where to draw the line.

This is also true of other Themes, to a lesser extent. Some people have no trouble believing in love at first sight, and will accept such descriptions of the Romance theme unblinkingly. Other groups of players will find it more difficult to imagine. Terror, especially, is a good Theme to negotiate on. There may be some topics or phobias that are off-limits for some members of the group.

Complications: Game vs. Story

Complications have two parts: an impact on the story (e.g. kidnapping, loss of income) and a game effect (e.g. losing 2 points of Capabilities, temporarily losing access to the Finance profession). Who gets to choose what those effects are?

During conflict, the player and GM (or occasionally two players) decide on both the story effect and the game effect for each other's characters.

When intentionally accepting a Complication to gain Twists, the player may describe the story effect on his or her character for that Complication. However, the GM chooses the game effect.

Sometimes the GM or the inflicting player might choose to waive a game effect, deciding that the story impact as described warrants no effect in game terms. However, until the Complication is fixed, the effects can always be applied later if they seem appropriate to the situation. Story effects should not be waived – they are the "why" of the Complication, and merely applying penalties to character attributes does not provide enough detail or make for an interesting enough story.

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.

No PvP

You cannot use Themes to affect other characters directly with a Complication. If you create a Major Advantage for yourself that makes you rich and then stage a hostile takeover of another PCs company, that's fine. The takeover will happen using the normal Conflict rules, at the character level. However, if you try to work at the player level and give the other PC a Complication that takes away their company, that's not allowed. When you activate a Theme, you can only affect NPCs with your Complications. Creating an Advantage for a fellow PC is acceptable, as long as you have their approval.

Plot Immunity

Speding 5 Twists will allow you to invoke "Plot Immunity" for your character. Plot Immunity is a way of saying, "I'm in danger, but I'm going to get out of it somehow."

Plot Immunity must be focused through your Themes, or involve your Capabilities or Professions in some way. Use things that are already established about your character to get you out of the mess in some amazing but inevitable way. Plot Immunity works best when your character is off-screen, or has an obvious solution to the problem.

Plot Immunity is also a way of telling the GM that you'd like this particular hazard to be over and done so that you can get back to other parts of the game. You might have a problem that could be taken care of in other ways, given a little legwork and some trading favors, but Plot Immunity will do it right away.

If you activate Plot Immunity, your GM cannot face you with the same hazard in the same game session. If your character decides to intentionally return to a known danger, however, your old use of Plot Immunity will not save your character this time.

Sources of Twists

Bad Luck: The GM may offer you Twists in exchange for turning one of your answers from one of the Four Questions from "yes" to "no." The number of Twists is equal to the level of Complication that ensues, minus your Tech score, with a minimum of one. The Frying Pan Rule applies.

Core Value: If you have a CV rated at 3 or higher, you receive one extra Twist each time you suffer a Complication related to that CV. GMs are encouraged to interpret the word "related" liberally. You do not receive this extra Twist for your Self-Preservation CV.

Mental Defect: If your neurotype is Slaved or Parasitic and you suffer for it, you gain Twists in the same way you would for bad luck.

Theme Stymied: The first time during a gaming session that your GM overrules the use of a Theme for a Trivial Effect, you gain a Twist.

Because The GM Said So: Your GM may decide give you Twists at any time, for any reason.

Players may not hold more than 10 Twists at one time.

PCs Only

All characters in SA have Neuroforms, Capabilities, Civilizations, Expertise, and Core Values. Only player characters have Themes. Not even the most important of GM characters has Themes, or Twists with which to activate them. Themes are the province of player characters.

Themes and Twists

While Capabilities and Professions are certainly powerful, they're only half of the game. Themes alter the world around your character, bringing certain story elements into play. Twists are spent "through" these Themes to alter the story. The more Twists you spend, the greater effect you can achieve. Whereas Capabilities and Professions have fairly narrow purviews and well-defined results, Themes are broader and take a little more interpretation in their use.

This section looks at the various Themes in depth, to give you a better understanding of how they work and how you can exploit them to your advantage.

Activating Themes

Each game session you start with a number of Twists equal to your character's Import, which can be spent through one of his or her Themes to alter the story. You use them to create Advantages or Complications – typically Advantages for yourself or Complications for others, though you could certainly give another character an Advantage using your Themes. The stronger the effect you want, the more Twists you need to spend to create it.

To activate a particular Theme, you spend a number of Twists equal to the level of the Effect you want to create. If you want a Minor Complication, that's 3 Twists. If you want a Major Advantage, that's 7 Twists. See the chart on page xx for more detail.

Your Theme activation has to fit with both the Theme itself and with its descriptor. If you'd like to inflict a major injury on an opponent, Empathy (Bedside Manner) is a bar choice. Action is a better Theme for that, but your descriptor has to allow it – Action (Won't Fall Down) would likewise be a bad choice.

Theme use should also be believable. Stretching the bounds of believability is fine; many stories do that. Running roughshod over everyone's understandings of the game world is just a bad idea. Think of Themes as bending the story around your character, not as a power that your character can access. If you use Wonder (Big Dumb Objects) to create a ringworld, saying "Why don't we hide in that ringworld over there?" begs the question, "Why didn't anyone mention this massive structure before?" Using it instead to say that the entire ringworld *decloaks*, now *that* would raise some interesting questions.

Once applicability and believability have been established, Theme activation beats out all other game mechanics. It doesn't matter whether your character is completely outclassed.

Effects can touch multiple characters, but not groups large enough to warrant the Infrastructure descriptor. You cannot easily create large-scale Effects from the chart on page xx. Those Effects typically require creating a Plot (see page xx) and following it through.

Trivial Theme Activations

Once per scene you can generate a Trivial Complication or Advantage for free. For example, if our heroine is known as a famous athlete, with the Theme Magnetism (Sports Hero), people will tend to people crowd around her in public spaces. This costs no Twists – the people who do this are not adversely impacted, nor is the character gaining any real advantage.

If your GM tells you that you can't benefit from this (as part of the GM's plot, no doubt), you receive a Twist the first time this happens in a game session.

Action

Action suspends the laws of physics in favor of what you think is cool. You can use it to have your character act beyond the limits of her skills and Capabilities, especially in a dangerous, dynamic, thrilling manner.

Action is typically physical, but need not be so. Movies often depict training, computer hacking, or even scientific progress as an action scene. If you can do it in a montage, Action covers it. Action is like cruise control for being a bad-ass.

Action covers a lot of territory. Did someone get kidnapped? Use Action (One Man Army) to rescue them. Do you need information? Use Action (Superspy) to steal it. Do you need to build a world-saving device? Action (MacGyver) will turn months of construction into a hardware-hacking montage that saves the world at the last second. When it comes to the physical world, there isn't much that you can't accomplish with the right Action descriptor.

On the other hand, Action doesn't deal well with human beings. You can't relate to someone with Action. You can't get them to trust you, or fall in love with you, or even just talk to you when you need them to open up. Action doesn't tell social stories.

One of the nice features of the Action theme is that its Complications and Advantages are typically fairly easy to figure out. They line up well with the sorts of things you can achieve with the Conflict system. If you can describe a fight, chase scene, or other exciting scenario to get you towards your objective, you can probably use Action to achieve it without needing to actually suffer the backlash from the resulting Conflict.

Action and Comprehension can make your character one hell of a super-scientist, while Action and Intrigue work well for a James Bond approach. Action and Empathy are a nice combination for creating a character with both a bad-ass side and a more human side. Sports stars should consider Action and Magnetism together, to both attract crowds and wow them.

Sample Descriptors:

One Man Army, Superspy, Won't Fall Down, Unstoppable Vengeance, Berserker, Natural Gymnast, Ninja Skills, Parkour, Hacking, Chase Scenes, MacGyver

Examples:

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 spends 5 Twists to invoke Action (Send In The Clones), evading certain death. That wasn't all of him in that room; he has at least one copy of himself elsewhere and is pretty mad that so many instances just got vaporized.

Your character is a born warrior from a Cargo Cult that imbued him with powerful biotech... by their own standards. Bio 3 isn't all that big a deal by other civilizations' standards. However, you have Action (Bio-Warrior), and if your super-soldier enhancements aren't enough you can take down your opponents with a Major or Critical Complication.

Three killer robots are homing in on your position, ready to disintegrate you. You have Action (Hacking). You spend 5 Twists for Plot Immunity and start to describe a kung-fu takedown of the robots, but the other players shake their heads, pointing at your descriptor. Considering the scenario, you revise your description. Your character ducks behind a support beam and mentally projects into the Infosphere, representing the robots as mere training dummies. Each blow unravels their encryption until you tear their code out and they fall to the ground. Your group approves.

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 Metatech score will let them see through the smokescreen that the instigator put up to cover their tracks. Comprehension, as a Theme, is more powerful: a Major Advantage 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.

Sample 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 (Forced Monologuing) and 7 Twists for a Major Complication will let you figure it out, forcing him to blather 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. Three Twists spent though Comprehension (Stringtech) for a Minor Advantage 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 (Emotional) will let you spend 5 Twists for a Moderate Advantage, telling you his Core Values, and thus whether he's part of a particular civilization or society.

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 more points you spend creating an Empathy Advantage, the more reliable and personal information you receive. A minor Advantage 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. A Critical Advantage, 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 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.

Sample 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 worldview 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.

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. Spending more Twists lets you discover facts that are more deeply hidden. If you prefer a more active approach, you can also use Intrigue to spread disinformation through existing spy networks, with higher expenditures 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 Action. 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 and Terror can help you discover horrible facts and either conceal or reveal them. Intrigue and Wonder are rarely seen together, but there's no reason that a secret conspiracy necessarily has to be awful.

Sample 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 using her Metatech score, and so a Disciple of the Void spends five Twists through his Intrigue (Eavesdropper) score for some . 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 (Instant Insider) score and seven Twists to find some good blackmail material on his least favorite politician. One Major Complication later, and 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 (Stumble Upon), spending 5 Twists for a Major Advantage. Sure enough it turns out someone else has the room bugged already and he can bargain for a copy of the tape.

A Union patrol sweeps past our heroine as she hides. They are about to detect her with their nanobot cloud. She has Intrigue (Deus Ex Machina). Her player spends 5 Twists for a Plot Immunity effect:. 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.

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 with merely attracting immediate attention. As you spend more Twists, 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).

In general, Magnetism attracts large unorganized groups, or small organized groups. Large organized groups have the Infrastructure descriptor and require Plots (see page xx) to create.

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.

Sample 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 (Commanding) and five Twist to spare. He spends them, shouting "Stop that man!" at the bystanders, who instinctively obey, tackling the poor sap to the ground. It's a temporary effect with major impact, so it's a Moderate Complication.

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 (Physical). He takes a Complication for some Twists, and spends three for a Minor Advantage. Everyone crowds around him, asking for his autograph and checking out his bulging muscles. Meanwhile, the spy has the distraction he needs to use his Spy skill to sneak through unnoticed.

A Tao ambassador wants to make sure everyone knows she's important. A single Twist spent through Magnetism (Political) will get everyone's eyes on her as she enters the room. What happens after that is up to her Metatech and Diplomat scores.

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 Magnetism (Support Network). He takes a Complication to get 5 Twists, and spends them for a Plot Immunity effect. This problem goes away as he calls a friend and raises the money in less than an hour.

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. Buy 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 Theme 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 Romance will do it.

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 few Twists 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, especially if you work through the Plot system for long-term effects. 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 and Wonder lead to the best dates ever. Romance combines well with almost every other Theme. Perhaps not Terror.

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.

Spending more twists through Romance doesn't necessarily have a stronger effect. Instead, your Effects work more quickly and attract better people (or drive deeper wedges between people). If all you want is a one-night stand, three Twists will probably do it. If you want a one-night stand that starts off the best relationship you could hope for, you'll need a Major or even Critical Advantage. If you want a squabble, a Minor or Moderate Complication will work. If you want an obsession-driven heart-wrenching breakup that ends in a restraining order, that's Critical.

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.

Sample 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 (Unexpected), and one Twist available. He takes a Complication to get four 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 5 effect – Plot Immunity. 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 (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 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 (Matchmaker) score will help find him a camp follower to shut him up.

Terror

Terror creates frightening events, environments, or people. From things that are just a little creepy to events that belong in a horror movie, Terror covers it all.

The most common use of Terror is to create things that engender fear. These things take on a life of their own once created – if you unleash a nanophage bloom, you had better have an escape plan or the Crisis Control Profession.

It is also possible to define parts of another character's personality using this Theme. For instance, you might state that someone has arachnophobia, or agoraphobia, or any number of fears. This works best on unimportant NPCs, since the effects of Themes are typically short-term. People who keep being confronted with their fears will overcome them one way or another, especially when Lenses that conquer phobias are easy to come across.

You can also use Terror to create an entire *scenario* of horror, such as that presented for the Spacers on page xx. As usual, the effect of this scenario is limited by the number of Twists you spend on creating it. Even if you describe an incoming asteroid that is sure to wipe out a space station, it will be deflected somehow if you use less than a Critical Complication. If you happen to be *on* that space station, that's probably for the best.

Terror can fit with Empathy or Intrigue well, allowing you to find out someone's fears and exploit them. Terror and Magnetism can get you a huge audience to frighten. Comprehension sometimes softens Terror, and sometimes just makes it worse as you realize the true extent of the problem.

Sample Descriptors: Creepy-crawlies, Uncaring Universe, Insert-a-phobia, Splatterhouse, Conspiracies, Ancient Evils, Self-Imposed, Lovecraftian, Technological Threats, Loss of Control, I'm Mister Creepy

Examples:

You have successfully angered an entire society of medics, and they're out to get you. So much for "first do no harm." Unfortunately for them, you have the Terror (Technological Threats) Theme. You'd like to get all of them off your back, so you use a large-scale complication (see page xx). Spending ten Twists for a Major Complication (5 Twists) on the nearby city (x2 modifier) inflicts a terrible bioengineered flesh-eating plague that will kill or incapacitate thousands. For the rest of the game they'll have better things to do than worry about you.

Your team needs some breathing room as your doctor treats a horrible injury on the street. You turn to the crowd and simply stare them down, spending 3 Twists through Terror (I'm Mister Creepy) for a Minor Complication on the crowd. The crowd gets back and your doctor gets the room she needs.

Your captive refuses to talk. You whisper in his ear about all the awful things that will happen if he stays quiet, using 5 Twists through Terror (You're Next). This Moderate Complication ensures that you have the information you wanted, though he might not talk for long and the information is only good for a short time. You'll need to act quickly.

Wonder

Wonder is at the heart of many sci-fi stories. Awe at a massive ship or space station. A heart-touching or mind-blowing discovery about a new species. Breathtaking vistas that are both alien and familiar. Wonder is joy and excitement and fascination all rolled together.

The hardest thing about using the Wonder theme, from a player's perspective, is determining the cost for using it. Advantages and Complications are very effect-oriented. (Heck, we call them Effects.) When we have a sense of wonder, there is often no practical effect. Things typically evoke more wonder for what they *are* than for what they *do*. The key with this Theme is to imagine what having something wondrous does for you in this particular situation.

For instance, your team might be traveling to a planet, and you think it would be great if that planet had rings. It would really make the night sky amazing. Does this have any effect? Probably not. It's a Trivial Advantage; you can likely do this for free. On the other hand, if your foe is captivated by the sight of a rainbow so beautiful that it reminds them of their childhood, that could provide quite the opportunity for you. Or perhaps you use Wonder (Deathless Prose) to win an argument about whether the people of the past have anything worth saying about the present. If that argument is important, you can imagine creating a Moderate or even Major Complication to change someone else's Core Values.

You can certainly introduce things of wonder just for the fun of it. You get to use Trivial Effects many times per game; go for it. However, you also spent one of your Theme choices on this, so don't feel bad about getting some practical use out of it.

From a GM's perspective, it can often feel difficult to fit new and wondrous things into the game. Our advice is just to roll with it. So one of your players with Wonder (Big Dumb Objects) wants to be visiting a Dyson Sphere instead of a planet. So what? Chances are you can still run the same plot you were considering before. If you really run into issues, you can always turn to the player with Wonder and ask, "How does it work?" It's still their Effect, so you might as well get them to help you figure it out.

Wonder and Romance fit nicely together if you're interested in telling a love story. Wonder and Magnetism work well for an artist who is famous on a large scale, as do Wonder and Empathy for one whose creations are much more personal. Wonder and Terror are a gut-wrenching combination, making the game yo-yo between extremes. Intrigue is probably the most difficult Theme to mesh with Wonder, as politics and spy-work generally cover the wondrous with a layer of grime.

Sample Descriptors: Scenic Vistas, Philosophical, Religious, Art, Deathless Prose, Big Dumb Objects, Small Things, New Discoveries, Scientific, Uncovering the Overlooked

Examples:

Your character is meeting a Cargo Cult for the first time. She tells the story of her life amongst the Stardwellers, and spends 3 Twists for a Minor Advantage. Even though her Metatech score is low, the story captivates the listeners, and begins to build a longing in those who hear her to voyage to the stars.

You are engaged in a starship race near an immense gas giant. None of you have run the course before. You have Wonder (Scenic Vistas), and spending 5 Twists will afflict your opponents with a Moderate Complication. You concentrate on the race; they get distracted by the beautiful rings and the magnetic field patterns. You'll have plenty of time to go sightseeing after your victory.

You and your opponent are arguing philosophy over the infosphere, and you've drawn quite the audience. Your entire civilization is at a tipping point. This argument could make the difference. You take a Complication to gain some extra Twists, and spend 9 of them through Wonder (Deathless Prose) on a Major Complication for your opponent. You point to an old manuscript that spells out your point eloquently and beautifully, so much so that your opponent's Core Values change as a result and she begins to argue for your side.

Gaining Twists Through Complications

Twists come from several different sources, as described in the "Sources of Twists" sidebar on page xx. However, the greatest source of Twists is a Complications. You, the player, are allowed to describe problems that your character must overcome.

You can choose any sort of Complication you like. Generally, only rough descriptions are necessary. Your GM will fill in the rest. The level of the Complication indicates the number of Twists that are available by **willingly accepting** the listed complication. The GM will often be placing your character into situations similar to Complications; you receive no Twists for this. You also do not receive Twists for Complications incurred as the result of a conflict. Only complications you accept of your own initiative provide Twists.

When you take a Complication, you do not need to spend the associated Twists immediately. You may "bank" them, if you so desire, until the end of the current session of play.

Subtract your character's Tech score from the number of Twists you would gain from any particular Complication. Highly-enhanced characters end up as the plot's punching bag. This tends to work out ok, because everyone else is their punching bag for most of the game.

Players may not hold more than 10 twists at one time. If you are about to go over 10 Twists, you may immediately spend some of them before gaining your new set of Twists.

Examples of Taking Complications

(a few examples here)

(more examples)

Large-Scale Effects

(Still working on this. List needs revision. Need to stitch this chart together with the idea of individuals taking on large groups with the standard Conflict system and Infrastructure modifiers.)

Just as individual characters can suffer Complications, so to can cities, societies, or entire civilizations. When two large groups face off against each other, or when the Plot system on page xx is in use, use this set of Effects.

For the most part, a civ-level conflict plays out like a character-level conflict. However, the Effects listed for regular human beings are not quite appropriate for large groups with infrastructure.

As with individual-level Effects, the number in parentheses is used to rate the severity of the Complication or Advantage. To find the cost in Twists to create one of these Effects, multiply by one plus the level of Infrastructure for that group. For instance, creating a leak of classified information (Minor, 3) from a Society (typically Infrastructure II) would cost 3 x (2+1) = 9 Twists.

Because of the sheer number of Twists required, and the ten-Twist cap, it is typically impossible to buy this kind of Effect with a one-time Twist expenditure. Instead, use the Plot rules on page xx to generate long-term changes in the game world.

Trivial (1): Trivial complications are short-term and low-impact. Government officials annoyed or distracted. Lose track of a single being for a few days. A civ-wide CV is challenged publicly. Minor infosphere crash. A handful of casualties.

Minor (3): Minor complications can be annoying if not addressed (or if several build up), but they are unlikely to be a problem in the short term. An opposing group successfully disengages from a long-term conflict, though not without losses. Slightly delayed in your plans. Hundreds or thousands of casualties. Government officials likely refer to this event as a "national tragedy." Classified information is revealed to a group currently neutral to you. Minor but noticeable monetary loss.

Moderate (5): Moderate complications are long-term or high-impact, but not both. A single political campaign is decided in a particular direction. Major classified information revealed to the enemy. Tens of thousands of casualties. Lose control of a town. Join an unwise alliance. An agency's plans are significantly delayed. Substantial economic losses or market crash. Opposing group disengages conflict without significant harm.

Major (7): Major complications are both long-term and high-impact. Intelligence services return significant incorrect results. Citizens convinced of a particular fact or falsehood. Millions of casualties. Important state secrets revealed to the enemy. Lose control of a major city. Martial law declared or revoked for a substantial part of the populace. Other groups turn against you, though not your closest allies. A Society rejects the entire civilization. Government ignores wisdom from its advisors. A Core Value is reinterpreted. Complications at this level can remove a level of the Infrastructure descriptor.

Critical (9): Collapse of the civilization or worse. **Complications at this level may bring the Rule of Force into play.** Over half of the population brainwashed, dying, or near death. A Core Value is removed or changed. Government living in exile. The group's peoples are driven from their homelands. Economy, military, or intelligence agencies fall completely under external controls. Allies turned against you. Long-term plans ruined. This condition does not fade quickly or easily.

Plots

Plots are an extension of normal Theme use. They are a way to spend Twists, sometimes dozens of them, over a long period of time, in order to create significant changes in the game world.

In order to create a Plot, the following criteria must be met:

- The events and resolution of the Plot must be related to one or more of your character's Themes, including the Descriptor.
- At least one of your character's Core Values must be related to the Plot. Ideally, that CV would be either reaffirmed or eroded by the completion of the Plot.
- Your character must somehow be involved. This may be directly (as an instigator), indirectly (through support), or even as a bystander swept up in the events. You cannot merely *benefit* from the Plot, you must be *there* for it.

If those criteria are met, you may spend Twists over the course of multiple game sessions in order to create a Complication or Advantage from the Large-Scale Effects list on page xx.

You can spend Twists at any time to add to add to the Plot's total. You should keep a running tally of the number of points spent. Each time, note which Theme and which Core Value are involved, as well as the number of Twists spent. This will help to shape the path of the Plot, which is evolving behind the scenes as the game progresses.

Multiple characters may spend Twists to speed a Plot to its resolution. One character will be the "lead" for a particular Plot during each session, and is allowed to spend as many Twists as he or she desires. Other players who are involved must still have their characters meet the criteria, but may only spend one Twist each per session.

The desired resolution of a Plot must be described from the beginning. Changing the course of a Plot is possible, but the Plot will lose half of the Twists currently invested in it.

GM Action on Plots

GMs can add Twists to existing Plots as well. Each time the players willingly take a Complication, you can choose to give that player an extra Twist, and also add a Twist to a particular Plot. The Complication doesn't need to be directly related to the Plot at hand, but the character must be somehow involved.

The Plot Veto

Ordinary Twist expenditures are not subject to GM approval. Unless the group considers your Theme use to be completely outside the realm of believability, Themes are the most effective and powerful tools in the game.

This works partly because most Effects are of short duration. They are fairly personal, and almost never have consequences beyond the end of the current game session. Large-scale effects, on the other hand, can affect thousands or even millions of people for the rest of their lives, and can change the landscape of the game.

The GM's job in Sufficiently Advanced is to create a storyline for the players in which their characters can be involved, and which is entertaining for all. In general we find that most player-level Plots don't interfere with the game's main storyline, and these things can coexist peacefully, metaphorically speaking.

However, there may come a time when a player's Plot runs directly counter to the story that the GM is attempting to tell. For instance, the GM may have the Darwinians as a major villain in the

game, and desire to use them as an organization many times until the players' characters finally defeat them. One of the players, whether aware of this storyline or not, might want to destroy the Darwinians using a Plot. This would shortcut much of the GM's planning and hard work. Such things can be frustrating for the GM and lead to a game in which the GM is not as well-prepared and the party doesn't have as much fun.

There may also be times when a Plot would weaken or cheapen the GM's story, or the GM's planned story would do the same to a player's Plot.

In such situations, the GM can veto a Plot, or ask that it be delayed until after a certain event. This veto power should be used immediately when the Plot is created, and any Twists spent on the Plot should be refunded.

We recommend that this veto be used as rarely as possible. SA is a game with strong GM authority, but the players should also be given as much agency as the game will allow. Such Plots might even lead to a burst of inspiration and creativity for the GM that improves the game! Sometimes it's worth trying to figure out how both stories can occur. Negotiating a possible compromise is a much better option than a flat-out veto.

GM Plot Seeds

Plots can also be a great way for the GM to tell the players where the game is going, and invite them to pace the sessions. Players can then direct the game towards things in which they are interested, and the GM will know what plots the players are interested in pursuing.

This is as easy as writing up a sheet of paper with a set of "Plot Seeds." Each one has an end goal and a Twist amount that would be required to reach it. For instance, one might say "Root out corruption in the Stardweller leadership", with a cost of 20 Twists. As players spend more Twists on that, the GM introduces elements of that particular plot. If no players are interested in pursuing that Plot, it will remain untouched and the GM will know to focus effort elsewhere.

Plot Seeds are an optional item, and even if you use them, not every storyline the GM wants to pursue needs to be a Plot Seed (or two or three). The GM can still introduce stories normally. Plot Seeds are more like an official feedback channel between the GM and players that helps both sides influence the flow of the game.

Example Plots

The End of Logic's Rule

You're playing a Logician, and you like the idea that the Rationalist League hierarchy is doubting the effectiveness and efficiency of pure logic, and considering a return to emotion. You create a Plot with a final effect of a Major Complication: the reinterpretation of the Logic CV to allow for the return of emotion. Your connections to this are the Empathy (Learning About Emotion) Theme, and a CV entitled The Best For All People. Your envision your character's involvement as being one of the early "beta testers" of emotion for the Logician monarchy.

Completing this Plot will cost 7 Twists for a Major Complication, times 4 for the Logicians' Infrastructure III rating, for a total of 28 Twists. The GM approves, noting that this may create splinter factions who still reject emotions and others who embrace them too strongly.

The Tao Fall Inward

You're an Artisan working on sabotaging the Tao of History for their debasement of the craft of acting. You note that ND3 (see page xx) is a common problem for the Tao, and decide to accelerate that with a Plot. You have Wonder (Artistic Works) and the Deconstructionism

CV. You ask the GM if you can take the lead on this Plot and be a major antagonist for the Tao, and she agrees.

The effect will be a Critical Complication: ND3 becomes the norm in Tao space. The civ loses many of its outside ties, and revenue plummets. The civilization as a whole switches its focus from portraying the past to the exploration of human mental conditions. The total cost will be 9 Twists for the Critical Complication, times 4 for the Tao's Infrastructure III rating, for a total of 36 Twists.

Second Contact

You'd like your Cargo Cult to become something more than just a curio. Perhaps if it were able to join the League of Independent Worlds, things would improve. You conceive of this as a Major Advantage for your cult, bringing new technology, better standards of living, and greater stability.

Most cargo cults are Infrastructure II entities, so this is a x3 multiplier for the 7-point Major Advantage. You will need 21 Twists to complete this Plot. Your character will be connected to it as an ambassador, using your Peace CV and your Magnetism (Barbarian King) Theme. The GM approves, and says that this may open the road for the Independents to accept many more Cargo Cults into their fold. That would be a Moderate Advantage for the Independents, but since that was just a byproduct of your Plot, you don't need to pay any Twists to make that happen. That's the GM's call.

Mechanican Unity

You are the GM. In your game, Mechanica's psychohistorical instability is coming to a head. Those who lead 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 a third Core Value to Mechanica: Profit. The Mechanicans will begin to sell their high-level Stringtech to the highest bidders, eventually becoming a civilization of high-tech traders, engineers, and mercenaries.

You put this on the table as follows: "Critical Complication: Mechanica gains the Core Value 'Profit'. 36 Twists." You don't need to describe any of the repercussions of this event. The players can then choose whether to work toward this goal, assuming their characters meet the criteria. As the GM, you can also add a Twist to this Plot when characters who are involved with it take a voluntary Complication.

Cutting Ties

You're running a Patent Office game, and one of the changes you'd like to have is to create an alternative group. You decide that the Union is going to cut ties with the Patent Office. You list this as a Minor Complication – one of those things that is small, but can lead to a larger effect if several of them pile up. The Plot goes on the table as "Minor Complication: Union Leaves the Patent Office. 12 Twists."

Later in that same game, you create a few more Plots wherein other people leave the Patent Office, eventually revealing the big secret: that the Union created its own set of Transcendental AIs. You don't need to create a Plot Seed for that. As the GM you can still bring new elements into the game without creating a Plot Seed, especially if you've been foreshadowing them well.

Existentialism

Because life can get complicated for characters in SA, there are certain rules regarding what does and doesn't count as "your character." You may end up getting mindwiped, destructively scanned into a computer and printed back out, saddled with a data ghost that wants to control your brain, and worse. When does that remove your ability to play your character?

The Rule of Intent: If something happens to your character as an intentional result of your character's actions, you control the resulting character. If you run a Persona Lens, walk into a replicator, have a frontal lobotomy, or even kill yourself so you can be resurrected later, you still play the resulting character even if one could argue that it "isn't still you."

The Rule of Force: In the case of drastic changes to your character that your character would have opposed, knowing the outcome, you or the GM may decide that you no longer control the resulting character. If you get forcibly cloned, shot and killed, mesh-hacked and enslaved, brainwashed, etc. into something your old character wouldn't have agreed with, the default is that it's time to pick up a new character – the old one is now an NPC. You and the GM can talk about it if you still want to play the resulting character; if either one of you says "no," then it's time to make a new one.

The Rule of Identity: All versions and instances of your character are still yours to control unless the Rule of Force comes into play. If you intentionally made 100 copies of yourself, you have authority over all of them. If someone made a clone of you without your knowledge, things would depends on whether your character would appreciate that or not, as per the Rule of Force.

The Rule of Reversals: If the drastic changes mentioned in the Rule of Force are substantially reversed, you may, at your option, regain control of your character.

The Rule of Ontological Inertia: If a character leaves play, permanently or temporarily, the player can still activate Themes from the character until the player receives a new character or the old one returns to play. This primarily applies to dead or unconscious characters. Such characters are unlikely to garner Twists, so playing a permanently dead character limits one's options.

One item that didn't quite make it to "rule" status is the Guideline of Equal Play. In SA there are many ways to multiply the effectiveness of a character. If the party splits, duplication may allow certain character to follow both groups at once, or even split into multiple parties all by themselves. However, due to the need to share play time with other players, a player who has split their character should expect that some actions will be glossed over. A 100-body one-man police force is great, but its player won't be roleplaying each of them individually.

Optional Rules

Several optional rules are included here. They are primarily designed for those who desire extra detail or flexibility in their games.

(these are all still in testing.)

More Powerful Capabilities

Some of our playtesters felt that Capabilities should be even more influential in conflicts. If you agree, you may consider using this method to adjudicate Conflicts.

Instead of the table shown on page xx, use this one to determine the Effects.

Advantage	Effect
6LC or more	No contest. The loser is at the winner's mercy, taking a critical complication while the winner is unharmed.
4LC or more	Crushing. The winner takes a trivial complication, and the loser suffers a critical complication.
2LC or more	Decisive victory. The winner takes a minor complication, while the loser suffers a major complication.
LC or more	Narrow victory. The winner takes a minor complication, while the loser suffers a moderate complication
Less than LC	Stalemate. Both sides suffer a minor complication.

The notation LC on this table is the Loser's Capability rating. For instance, if you defeat someone by a score of 32 to 20, you have a 12-point advantage. If your opponent's Capability is 4, you have a decisive victory – your advantage is three times their Capability. If your opponent's Capability is 3, however, you have a crushing victory, because your advantage is four times their Capability.

This rule does not change who wins the conflict, simply the level of impact. Lower-tech characters will gain smaller victories and suffer more serious defeats.

Capability Grading

You may be interested in having a more detailed rating for Capabilities than the simple 1-5 scale introduced in this book. If you'd like a little more detail, use a +/- scale, much like grading in school. For instance, instead of just Biotech 4, you could have Biotech 4-, 4, or 4+. A score of 4++ would become a 5-.

During character creation, you should figure your grading after determining your Tech score. You can get one "plus" rating by accepting a "minus" rating. You can also reduce your highest or second-highest attribute by one point to get three 'plus" ratings.

When considering the Four Questions, the grading on your attribute doesn't change answers, though it may make your success seem easier or more difficult, or your failure seem narrower or more absolute.

In simple contests with others, grading can be used to break ties.

In conflicts, your grading adds or subtracts 1 to your final score, after multiplication.

As usual, technologies rated with a "plus" or "minus" would bestow these ratings when used.

Impairment

Impairment is a way of turning Complication effects into game mechanics effects. Damage to a Capability, reductions or changes in Core Values, loss of a Profession, and so forth can all be modeled with the Complication system as it is, but this puts some hard numbers into the system.

1 point decreases a Capability by 1
1 point decreases a Core Value by 1
1 point decreases a Profession by 2
2 points inflicts a -1 penalty in all coming conflicts.
2 points changes a CV that has 0 points.
2 points raise a Core Value by 1, to a maximum of 3.

For instance, a character who suffers a Moderate Complication in a battle might be injured. The GM or opposing player might assign 5 points of Impairment as follows: -2 to Stringtech (disabled weapons), -2 to Biotech (exhausted from the fight), and -2 to the Soldier profession (rattled by the loss). In different circumstances, the same Complication might be assessed differently: -1 to Biotech, Stringtech, and Nanotech from wide-spectrum damage, and a further -1 penalty in coming conflicts until the damage is repaired.

Not all options make sense with all Complications. For instance, because this was a battle (using the Soldier profession) and not a brainwashing session, destroying old Core Values and building new ones would not be appropriate for this Complication.

Impairment requires adjudication – not all Complications easily match up to points of Impairment.

Critical Complications typically do not use Impairment to limit their effects – they can have any game effects necessary to impose their story effects.

Large-Scale Impairment Effects:

(still working on this)

Impairment effects for

2 points reduces one local infrastructure Capability by 1 point.
2 points

1 points decreases a Capability by 1
1 points decreases a Core Value by 1
1 points decreases a Profession by 2
2 points inflicts a -1 penalty in all coming conflicts.
2 points changes a CV that has 0 points.
2 points raise a Core Value by 1, to a maximum of 3.

Multiply impairment cost by 2 to affect regions or groups larger than a city.

One locale or group within the civilization suffers a temporary loss of 1 point from one or two Capabilities. Unable to exercise a Profession due to loss of personnel, exhausted resources, or other circumstances.

The civilization suffers a temporary loss of 1 point from one or two Capabilities. Local area unable to exercise one Capability or two Professions. At a -1 penalty in coming conflicts.

One CV or Capability rating changed locally. Local area unable to exercise two Capabilities or all the Professions related to one

Capability. Entire civilization unable to exercise one Capability or two Professions. At a -2 penalty in coming conflicts.

One Core Value or Capability rating changed. One CV or Capability rating changed globally. Entire civilization unable to exercise two Capabilities or all the Professions related to one Capability. At a -3 penalty in coming conflicts.

Civ-Level Conflicts

You can use the regular Conflict rules to pit two large groups against each other. Most of this is actually covered by the sidebars on page xx (Teamwork in Conflicts and Attacking Infrastructure).

(needs more detail, maybe an example or three.)

Character Arcs

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 and Core Values from time to time. The best time to have this happen is when a Plot (page xx) involving that character is resolved. It's a major event in the universe, and can also be a major event in that character's story. Their beliefs may change, and the way the world sees them (i.e. their Themes) may change as well.

There is no suggested minimum or maximum amount of change when your character's Plot takes effect. This is the sort of thing that you create to fit the kind of story you're telling with your character. Some players might not want to change anything; others might envision their character having a revelation and doing a complete about-face.

This can also be an 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.

Theme Consolation Prizes

In the event that a Theme isn't directly applicable to your current situation, you can often gain some benefit (+1 to your Capability) 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 +1 bonus to your Metatech to help this poor guy out.

One-Shots and Convention Games

In games that run only for a single session, it can be tempting to take a substantial Complication near the end of the game, knowing that you will never need to deal with the effects of your character's misfortune.

To avoid, this GMs can assess a penalty on the number of Twists obtained from a Complication. The penalty can start at -1 halfway through the game, and escalate as the game continues. A maximum of -5 is recommended. Those who are feeling generous can even offer a +1 Twist bonus from Complications taken at the very beginning of the game.

Characters who take Complications early in the game retain all the Twists they received from them, and using Themes does not become more expensive. Only the reward for taking a Complication decreases.

GMs who intend to use this rule should tell their players at the beginning of the game.

Technology

Technology is at the heart of Sufficiently Advanced. Every Civilization, many Societies, and the very numbers that describe your character, all revolve around the use of technology and the choices people make with it. This chapter both introduces the technology that appears in the game and helps you understand its impact.

This chapter begins with the twelve most important pieces of technology in SA – the devices and procedures that change worlds. Each is described in terms of its implications for society, its effects and limitations, and various game terms.

Following that are many other pieces of technology, described in less detail. This list include additional weapons and defenses, household items, applications, procedures, pieces of modern infrastructure, and so forth.

The list is sorted by the Capabilities that are required to build and maintain a particular device, or to develop and implement a procedure. For instance, because Replicators are listed under Nanotech, any culture without enhanced Nanotech 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.

Your character's Capability scores give you access to equipment and techniques rated at its level. Someone trained in cutting-edge Metatech can be assumed to know every technique listed in the Metatech section and be able to apply it. Some characters may choose to leave out certain options, such as buying "peacebonded" Stringtech with only defensive capabilities. This will have repercussions within the setting, but there is no effect in the game rules for such alterations.

Activation Codes

Most characters in SA have significant amounts of this technology built into their bodies. These are not triggered with a simple button or switch. 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 enhanced Cognitech can use mental triggers through their Mesh for their abilities. Those with enhanced Nanotech most likely have dermal microbots, which can track their voice and gestures, and can use those triggers instead. Those without either may have internal switches, perhaps triggered by a series of blinks or hand movements.

To low-tech observers, this is pure wizardry. A few gestures, an eye twitch, muttered words, and destruction rains from the skies.

How Important Is It To Know My Tech?

Technology's impact on the individual and on society are the largest and, to us, most important themes in Sufficiently Advanced. Each civilization is driven by its Core Values, but where the rubber hits the road is how those values interact with the technology that the civilization uses.

You don't need to memorize every piece of tech in the game, but as a GM and player you should spend some time considering what technology you want to emphasize and how. We've tried to help you out by putting the most important and wide-reaching technology front and center, with the greatest amount of detail.

It may be tempting when you see a list like this one to assume that it is a complete list, and that nothing else exists in the game. We encourage you to assume the reverse: if you can think of it, someone has probably invented it. From genetic modification to cybernetic drugs, from weaponized body language to self-replicating nano-medicine, from terraforming to starships, there are a lot of creative people in the future and they've invented a lot of creative things.

That's not to say that everything is possible. There is be a distinction between technology so advanced that it feels like magic to those who don't know and technology that is treated as magic even by those who create it. The first is completely in-line with the feel of this game; the second is not. An Old-Worlder visiting the Stardwellers for the first time will find "magic" all around. A Replicant visitor will find things that are amazing, incredible, beautiful, and fascinating, but won't think of them as magic.

This game is built on real-world science. We stretch towards the most incredible applications of that science, but there are certain things that are simply impossible in our universe. You can find a list on page xx, as well as a set of broad guidelines on page xx.

Implanted Gear

Many characters will have equipment implanted in their bodies. This can be done as the game progresses. It is a hard-and-fast rule that no character may have implanted technology beyond his or her Capabilities. However, if you want to implant a more powerful device, all you need to do is to update your character's Capability and Tech score (and Import) to match.

This is purely a game-balance issue, not a technical limitation. By implanting an Inversion Beam, you would effectively be giving yourself one of the major benefits of Stringtech 3. If you just want to carry the thing around instead, that's fine, but then it can be taken away by various means.

Non-Implanted Gear

What happens when a Cargo Cultist with a natural Stringtech 1 picks up a String 4 weapon? The cultist now has String 4, limited to just those purposes for which the gun can be used – most likely, shooting people and blowing things up.

Note that those purposes don't include defense, or keeping hold of the gun if someone attempts to disarm the Cultist. For the purposes of inflicting Complications in a Conflict, the Cultist uses the x4 multiplier for String 4. However, for the purposes of avoiding Complications, the multiplier drops to the Cultist's native x1. This can lead to a little more bookkeeping, but it gives a fairly sensible result.

Game Terms

Each major piece of technology includes the following notes:

Descriptors: Descriptors are categories for technology that have additional game mechanics effects, or game-world effects that are particularly worthy of note. See the next page for a full list of descriptors and their effects.

Effects: Does this technology have any particularly notable effects, especially in game terms?

Core Tech: What branch of science is needed to create and maintain this technology? Are there any other technologies that would be important to its development or necessary for it to function?

Entropy: Does this technology need a lot of energy or produce a lot of heat?

Mentality: Many pieces of technology in SA are phenomenally complex. They don't just need regulators and feedback loops, they need a genuinely intelligent being checking over them and making sure they run properly at all times. Mentalities are digital intelligences (see page xx) built into devices or pieces of infrastructure. A more primitive culture sees spirits in every stone and river; civilizations in SA know that there are computerized "spirits" embedded in the world around them.

Look for words in bold in the description of major pieces of technology. These are important technological spin-offs that have substantial societal implications of their own.

Descriptor List

Auxon: This device is self-replicating. It will use nearby material to create more of itself until a predetermined limit is reached. Auxons designed with hostile intent may have no built-in limit, but will eventually run out of the material they are designed to "eat." This is of little solace to the people it eats.

Dataform: This technology is pure computer code, and exists only on the Infosphere. Attempts to counter or alter it using Stringtech, Nanotech, or Biotech will not be successful, and Metatech will only work if it is sentient.

Energy: Weapons with this Descriptor fire energy instead of (or in addition to) physical matter. They do not use ammunition, though they can run out of power. Most can be tuned to be lethal or non-lethal.

Infrastructure: This technology requires substantial resources to employ, perhaps those of a city or entire country. It is not something that gets installed in individual characters. It is also supported by substantial resources, and is not easy to destroy. See the sidebar on the next page for plenty of detail on this descriptor.

The Infrastructure descriptor comes in three levels:

I Starships, cities, thousands of people working together or tens of thousands with weak interconnection.

II Societies, provinces and nations, armies, millions of people working together or tens of millions with weak interconnection.

III Civilizations

Inheritable: This enhancement will, in all likelyhood, pass on to all of the character's children born after it is acquired. It is coded directly into the character's DNA.

Internal: This enhancement is completely internal to the human body. Cursory examination will not reveal its presence; it takes exploratory surgery or Nanotech to discover it.

Many pieces of technology can be implanted; not every implantable device has this descriptor. Only technologies that are implanted as a standard matter of course are listed as Internal.

Microscopic: This device is impossible to see with the naked eye; it requires Nanotech 3+ to detect its presence.

Near-c: Weapons with this Descriptor either fire energy or deliver projectiles at nearly the speed of light. Use of this weapon on unsuspecting individuals of the same Stringtech score or lower is not a conflict, it is simply murder. This can trigger the Instant Death Cutscene Rule.

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, hacking their mesh, 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) until they hit their target.

Infrastructure Notes

The Infrastructure descriptor is a particularly important one, as it has substantial game effects. They are repeated below for reference.

Characters built with the Infrastructure descriptor (such as living starships and large group-minds) increase their Tech score by 1. This has the usual side-effect of reducing their Import by 1.

In a conflict between groups with differing levels of Infrastructure, the larger group applies the maximum Teamwork bonus for the type of conflict involved: +4 for most conflicts, +6 for highly parallel ones. If the larger group would suffer a Complication, the level of that Complication is reduced by one step for each level of Infrastructure. If the smaller group also has Infrastructure, use the *difference* in levels to find the reduction. This reduction also applies to any Advantage the smaller party might try to gain.

When applying Complications to a target with Infrastructure, use the Large-Scale Effects list on page xx. Major Complications can remove a level of the Infrastructure descriptor.

Projects can affect groups with Infrastructure. Infrastructure I adds 2 time steps, II adds 4 time steps, and III adds 6 time steps. You may also need a successful large-scale Conflict to pull off the project.

If you yourself have the Infrastructure descriptor, treat this as a +4 Teamwork modifier in Projects.

Ordinary Theme use does not affect or create groups that are large and organized enough to have the Infrastructure descriptor. You should use Plots instead.

The Twist cost of a Plot is multiplied by one plus the Infrastructure level of the group. For instance, creating a leak of classified information (Minor, 3) from a Society (typically Infrastructure II) would cost 3 x (2+1) = 9 Twists.

Body Swapping

Some characters in SA have the ability to move their consciousness (be it housed in a brain or seated in a purely digital mind) from one physical body to another. Depending in the technology and neuroform involved, the process may be as complex as a brain transplant, or as simple as placing a chip into a socket. The new body will give the character a new set of Biotech, Nanotech, and Stringtech scores.

Implications

Characters with the right neuroform can change bodies easily. With the broad availability of replicators, a new body (whether mechanical or flesh-and-blood) is easy to obtain. Because of this, seeing someone with a new body is as common in some civilizations as seeing them with a new haircut.

Bodies that are commonly available in replicator catalogs will have easily traced fingerprints, short-lived radiation traces, or other well-known identifiers. Custom-designed bodies are expensive, and records of purchase are kept. Criminals who attempt body-switching to evade capture will be disappointed – only well-funded and well-organized cartels can get away with this sort of tactic.

Gender becomes a much more flexible concept when one can start the day male and end it female. Race and visual age are an intentional choice. Height, strength, beauty, and even coordination and balance become things that can be chosen, and chosen quickly, without significant cost. Some civilizations thus choose to place emphasis on having a unique body rather than one that would be considered conventionally attractive.

Low-tech civilizations often have a visceral reaction against this technology. Many cargo cults and old-worlders will see it as strongly unnatural.

Limitations

Baseline characters, born in the traditional way, must undergo a change before they can wear a new body. Most take one of two routes to body swapping: **digitizing** the mind, or braincasing. Digitizing the brain requires a destructive scan, slicing the brain down and encoding it into a computer one cell at a time. Braincasing takes the brain and places it into a container with access for nervous system connections and nutrient feeds.

Altering your existing body can be done, but it is not a fast process. It can require days or months depending on the extent of the change. Chemical changes in the brain can result in a very different personality for what is essentially a new person.

Adapting to a new body can take time. The higher the character's Cognitech score, the faster it will happen. Access to Stringtech is nearly instantaneous; understanding the input from new sensors or organs can take longer.

Game Terms

Descriptors: Procedure. Many bodies are technically Auxons.

Effects: Players should recalculate their characters' Tech and Import scores when switching between bodies. If the new body has a reduced Tech score, gain Twists equal to the difference in scores. If it has an improved Tech score, changing bodies costs Twists. Characters who cannot pay the Twist difference cannot change bodies.

Core Tech: Cognitech. Nanotech or Biotech will be needed as well, to create the body.

Entropy: Creating a new body is sometimes energy-intensive, but the process of transferring is typically easy.

Mentality: Coordinating a particularly large and complex body may be facilitated through simple mentality – a "hindbrain," if you will. Bodies with extensive sensors may include a data ghost to interpret them for the inexperienced. Most bodies do not require this.

Dermal Microbots

Dermal microbots are the Swiss Army Knife of the modern world. They enable telescopic and microscopic vision, radio communication and radar, local area mapping, laser audio, fine-scale polishing and abrasion, lidar, sonar, airflow detection, magnetic field mapping, motion sensing, manipulation of microscopic objects, and more.

These microscopic robot live on the wearer's skin. Every few days they return to a special "central facility" for repairs. This matchbox-sized maintenance center is typically housed on the belt or on a bedside table, but occasionally implanted in the body. The robots are loaded with nano-scale devices, including manipulators, lasers, photodiodes, accelerometers, and more. They communicate with each other, with the infosphere, and with microbots worn by other people.

Implications

People with dermal microbots can see and hear in all directions. They have incredibly acute senses over great distances if they focus in one direction, much better than a hawk's eyesight or a dog's hearing. They can also see and hear in ranges outside the human norm. In addition to making people very difficult to surprise, this also forces civilizations to deal with a loss of privacy.

A microbot's lasers are strong enough to act as a HUD when projected into the eye. They can also project images on other people's eyes if they're standing close enough to you, and even create brief pulses of light to blind assailants.. Manipulators on the robots can smooth hair and remove dead skin cells (which the robots use for fuel).

Many people ask their microbots to record events around them, which are deleted automatically after a certain number of days. How much of this information eventually becomes public is a matter of personal taste and societal norms.

Dermal microbots cut down substantially on street crime. Being recorded by someone with super-hearing, a retina scanner, and a blinding flashlight is not the ideal situation for a would-be criminal. However, they also enable a level of stalking and eavesdropping that would otherwise be impossible.

Even without a mesh people with dermal microbots can communicate with each other and with the infosphere. The bots can detect sound from speech, or movement as small as a finger twitch, and use it to trigger various other devices (see "activation codes").

Limitations

The bots are just large enough to be visible to the unaided eye, like a cloud of gnats. Stiff winds can blow the them away from their wearers, so the bots usually retreat into clothing or hair when the wind picks up. The bots do not function well in airless environments, and are restricted to crawling on the skin rather than hovering in the air.

Dermal bots can be hacked from the outside. This does not pose much physical danger, but can leave the wearer open to surveillance.

Game Terms

Descriptors: None

Effects: Characters with Dermal Microbots have Nanotech 3 as a minimum.

Core Tech: Nanotech

Entropy: Dermal microbots produce negligible heat, and require no energy beyond that provided by their central facility and the dead skin cells they eat.

Mentality: Dermal bots are too small for an individual mentality, but their central facility typically houses a data ghost for ease of interaction.

Digital Intelligence

Digital intelligence is the term for any mind that is based in a computer rather than in a biological mind. The term "artificial intelligence" is still in common use, but primarily as a pejorative.

Digital intelligences fill a vast number of roles in high-tech settings. The least of them are non-sentient assistants embedded in everyday technology. The most impressive are vast hyperintelligences built into entire planets, warring with each other in ways beyond the understanding of even the most enhanced humans.

Characters with the Dataform neuroform technically fall under the umbrella of digital intelligences, though many of them are human-descendant and would consider themselves different from "purely" digital minds.

Implications

In most high-Cognitech civilizations, digital intelligences outnumber biological intelligences (i.e. humans) by a significant factor. Nearly every piece of technology has some sort of DI included, as indicated by the "mentality" section in their description.

There is little argument as to whether digital intelligences are "real" in the same sense that biological intelligences are. When your DI begins debating its own reality with you, you start having to concede ground on that front immediately. Many of them are also the result of semi-random algorithmic processes that bear some similarity to biology. It is for this reason that the word "digital" has replaced the word "artificial".

Many children in high-tech civilizations grow up with a digital intelligence **companion**. Such mentalities may take the role of nanny, guardian, pet, or friend, or may transition between these roles as the child grows up. Most companion intelligences move on to other roles when their children come of age – in fact, they are most often the ones who alert the child's parents that the child is ready to assume the role of an adult. In some rare civilizations the companion mentality stays throughout a person's entire life.

Very powerful DIs often leave the realm of human activity entirely. Several settings in SA include the Aia (see page xx), a group of powerful and brilliant sentiences who are distant from humanity, and who war against each other for vast computing resources. Because of this there is often some concern when dealing with particularly powerful DIs.

Limitations

Lesser, non-sentient DIs (known as **data ghosts**) have minimal ability to adapt to situations beyond their programming. Digital intelligences with full sentience are as capable, adaptable, and in many cases as emotional as biological intelligences.

Game Terms

Descriptors: Dataform

Effects: Characters with a Mesh can interact with many different DI characters through the infosphere.

Core Tech: Cognitech

Entropy: Typically little; computation in SA is fairly efficient. The energy and heat cost of maintaining a DI rises as it becomes more intelligent than enhanced humans.

Mentality: Not applicable – DIs *provide* the mentalities for other technologies.

Immortality

Immortal characters will never die of natural causes, nor suffer from old age. They may still die of other causes, most particularly accident and injury.

Each of the processes that contribute to old age is gradually conquered or controlled over the centuries. The myriad forms of cancer are cured, DNA is made better at self-repair, minds are enhanced to hold the weight of millennia of memory. Immortality typically comes with an improved ability to heal and other biotech advancements, but those are technically distinct advancements.

Implications

An immortal society may initially look similar to a mortal one, but scratching the surface reveals a world of differences. In the workplace, immortality ends age-based pay and retirement. It also means a potentially limitless amount of training and specialization. At home, immortality necessitates a decrease in birth rates, a transition in the meaning of adulthood, and the end of inheritance. Immortal civilizations have long ago dealt with a population explosion, and must more carefully examine ideas such as property law and compound interest. Any societal concept that depends on the eventual turnover of human beings must be considered, and, if necessary, rejected.

Each civilization faces immortality in a different way. The citizens of certain cultures take on new personae over the years, shedding who they were to become someone new. Some cultures become expansionist, colonizing new planets where children can roam free. In cases where this is impossible, people may "freeze" into their roles in society and become experts without peer.

Some few civilizations intentionally choose mortality. They may choose to reject high levels of Biotech overall, or immortality in specific. No civilization chooses these routes without a strong conviction – a Core Value aligned with their choice.

For another rare subset of civilizations, immortality interfaces perfectly with their beliefs and actions. Such groups are likely to be strongly hierarchical and orderly. For the majority, however, civilizations encountering immortality for the first time are driven toward a psychohistorical crisis point. It is a rare group that does not fracture or change dramatically when confronted with the end of so many social systems.

Limitations

High-quality implementations of immortality include the mental and emotional capacity to handle an indefinite lifespan. Not all implementations are of such high quality, and some Cargo Cults have a very long life of suffering to look forward to. There is also the question of how old the setting itself is – how old are the oldest immortals?

Game Terms

Descriptors: Internal

Effects: Characters with a Biotech score of 3 or greater are immortal. It is possible to be a Biotech 1 character with Immortality, but this should be restricted to Cargo Cult characters.

Core Tech: Biotech

Entropy: Immortal characters' heat signatures and food requirements are not significantly different from those of baseline humans.

Mentality: Most cultures do not involve digital intelligences in their implementation of immortality. However, it is worth noting that most digital intelligences are also themselves immortal.

Matter Inversion

Inversion turns matter into antimatter, or vice versa. When antimatter collides with normal matter, both are annihilated and immense amounts of energy are released (generally in the form of x-rays and gamma rays).

Implications

In civilizations with Stringtech 4 or higher, electricity becomes much cheaper. There is no need to obtain special fuel, no need for high-temperature and high-pressure fusion chambers. Antimatter annihilation is orders of magnitude more efficient than obtaining energy from fusion.

Inversion technology can also be weaponized. The **inversion beam** is a standard firearm in high-tech militaries. These guns send out synchronized pulses of dark matter that pile atop each other to trigger inversion within a target, blowing it apart from the inside. These dark matter pulses travel harmlessly through normal matter until they reach their target, and can hit targets beyond the horizon.

Theoretically, one could build structures from antimatter just as one could from matter. People generally do not do this, as the need to separate these items from normal matter reduces their utility.

Limitations

Free energy does not mean freedom from its consequences. Every bit of energy created in an inversion process eventually becomes heat. Some planets swelter under the increase in global temperature that has resulted from their citizens' energy choices.

Having free electricity does not mean that an unlimited amount of it is available in any particular locale. Superconducting circuits have a limit as to how much current they can conduct at once before they stop working, and newsfeeds often describe the failure of such systems as "spectacular" or "volcanic."

One might imagine that there are some environments where people could not afford to destroy matter in order to produce energy – spacer ships, for example. In fact, this is not the case. Other energy sources like fission or fusion also produce energy in this way, but much less efficiently. When inversion technology becomes safe it is by far the most efficient way to generate energy.

Game Terms

Descriptors: Supersymmetric

Effects: Characters with Stringtech 4 or higher have access to inversion weapons, which give the Supersymmetric and near-c descriptors.

Core Tech: Stringtech

Entropy: The initial power outlay for inversion is fairly small. The resulting energy release when antimatter and matter annihilate is very large, and substantial heat and damage can result.

Mentality: Large-scale inversion reactors are always watched by data ghosts, which are overseen by more sentient mentalities or by human observers. Inversion beams and other antimatter weapons may have mentalities to aid with aiming, but are otherwise just ordinary (if deadly) weapons.

Memetics

Memetics is the study of communication and interaction, in the same way that genetics is the study of DNA and its interactions. As genetics is a foundational piece of Biotech, so is memetics a foundational piece of Metatech.

In much the same way that not all of biotech is genetics, not all Metatech techniques are memetically oriented. Memetics is specifically the study of ideas and their components in various contexts. Other areas of Metatech include (but are not limited to) the study of intra-psyche components within the human mind, the study of how humans interact en masse (q.v. psychohistory), and the manipulation of instinctual triggers built into the human brain.

Implications

Human communication is understood at a very deep level in high-Metatech civilizations. Not only can people communicate exactly what they want to say, but they have a greater chance of evoking the desired emotional response. Naturally, others in a high-Meta civilization also know memetic techniques, and can see through manipulations and verbal evasions more easily. Such civilizations tend to be either very honest and forthright, or cloaked in constant intrigue.

Characters trained in memetic techniques are at a substantial advantage when interacting with low-Metatech characters. They can read emotions from body language perfectly, lie without the chance of detection, trigger nearly any emotional response. High-Meta worlds are often faced with suspicion because of this, which they work fairly effectively to allay.

Memetics is not only useful in spoken communication. Mass media, including infosphere sites and broadcasts, can also be memetically tailored. Characters with a working knowledge of memetics can also communicate their emotions and basic needs very effectively through gesture and body language.

Limitations

Memetics is at its best when dealing with known quantities. A message with a tightly-focused and well-studied demographic is more likely to be effective than one that tries to reach everyone. Learning to target a new type of neuroform could take days.

Some Metatech tools can affect people before they have a chance to look away or turn off their auditory nerves. Memetics are not one of those things. Memetic techniques need at least a few seconds, the beginnings of a conversation or an advertisement, to take hold.

Game Terms

Descriptors: Dataform, Procedure, sometimes Infrastructure

Effects: Characters who are trained in memetic techniques have Metatech 3 or higher.

Core Tech: Metatech

Entropy: There are almost no memetic techniques that require a substantial energy expenditure.

Mentality: Most memetic approaches do not require the assistance of a mentality.

The Neural Mesh

Neural meshes allow their wearers to read and modify their own minds, including emotions, thoughts, senses, and beliefs.

A set of thousands of coaxial nanowires penetrate the brain. These wires connect to a computer, typically housed within the body, and typically connected wirelessly to information sources. Through the mesh, the computer can read patterns within the brain, and can also electronically apply new patterns. Using a mesh is known as "wearing" it, though it is actually implanted and not merely placed on the head.

Implications

Meshes are among the most powerful and wide-reaching technologies, with literally thousands of applications. The field of cognitechnology would scarcely exist without the mesh.

Computer programs that use meshes to interface with the brain are known as **lenses**, as in, "seeing the world through a different lens." Lenses are used to alter the wearer's personality or behavior, "download" skills from the infosphere (see below), attain a certain mindset (such as wakefulness, self-awareness, or calm), simulate the effects of drugs, apply ethical guidelines, and more.

Most Meshes also interface with the **infosphere**, a planet-spanning network of information relayed by nearly every satellite, building, vehicle, and individual. Essentially any factual information that is not intentionally hidden is available within milliseconds at no cost. Many computing and data-analysis services are also available at varying degrees of expense. It is possible to disrupt the infosphere locally and temporarily with broad-spectrum static.

See the "Fun things to do with a Mesh" sidebar on page xx for more ideas.

Limitations

Modifying long-term mental structures (memories, values, personality traits) is possible, but takes a long time, as these structures are encoded in the brain itself. Masking these structures by temporarily suppressing memories or overwriting behavior is much easier.

Some Meshes are intentionally built to be more limited – they can run "apps" that interface with the sensory cortex, but not change thoughts or emotions directly in the manner of a sophisticated lens. Some civilizations prefer these "partial" meshes, but they are unarguably less powerful and flexible than a full mesh.

Game Terms

Descriptors: Internal

Effects: Characters with full meshes have the Dynamic neuroform and should also have Cognitech 3+. Downloadable skill lenses provide a Profession at 2 for the purpose of most actions, but 1 for conflict since most skill Lenses are fairly predictable. Characters with partial meshes are not necessarily Dynamic.

Core Tech: Cognitech

Entropy: Meshes are low-power, low-heat devices. They put no extraordinary strain on a human-sized user.

Mentality: Meshes themselves do not carry any mentality beyond the user's. However, a myriad of lenses include data ghosts, for tasks ranging from scheduling duties to intelligent companionship to backup personalities.

Programmable Matter

Programmable matter takes on the qualities of other matter. It can become pliable as clay, or strong as diamond. A book-sized piece of programmable matter could become a toolkit, a lightweight bicycle, a set of clothing, a weatherproof tent, a bulletproof window, a supercomputer, and more. A surface coated with the stuff might be made frictionless, scratch-proof, perfectly light-absorbent or reflecting, glowing or patterned, or warm to the touch. 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.

Implications

Programmable matter is a powerful tool. Most people in high-Nano civilizations own a block of it as an emergency device in case their replicator breaks down. Explorers and travelers often carry it as an all-in-one toolkit.

Those with programmable matter will never lack for infosphere access, a tool, or a weapon. If they have enough of the stuff, they can have some become solar panels to power the rest. They may still lack for food, as creating a working replicator is beyond the current limitations of programmable matter.

Sales (or replications, more likely) of most small useful items drop substantially once programmable matter is introduced. One might replicate pipe, but not a wrench to put it together with. One might replicate a set of nails, but not the nail gun. As those sales decrease, "matter programmer" becomes a more viable profession, and people sell templates for blocks of matter to transform into.

Limitations

Programmable matter can keep some forms without a constant expenditure of energy (the lower-tech the better), but it needs a source of electricity in order to be fully effective. It also needs energy to change from one form to another.

Ordering programmable matter to assume a liquid or gaseous state is a waste of time. One will, at best, be left with a pile of inert scrap.

Because programmable matter requires a constant flow of electricity, it is often cheaper and more convenient to simply fabricate a particular device if it will be used for a long period of time.

Game Terms

Descriptors: none

Effects: Characters with access to programmable matter will always have whatever tools they need, from high-tech devices to basic wrenches and screwdrivers.

Core Tech: Nanotech

Entropy: Programmable matter is an energy hog by low-tech standards. It also grows warm as it is used. Too many transformations in a short time may make it hot enough to burn skin. The larger the change, the longer should be allowed for cooling.

Mentality: Most programmable matter includes several data ghosts that are loaded up for various purposes when the matter is reconfigured. Sentient digital intelligences, however, avoid being housed in programmable matter. There is too high a chance that it will be reconfigured without enough computing power to maintain them.

Psychohistory

Psychohistory is a predictive, stochastic theory of history. It is as rigorous and mathematically intensive as any theory of the physical universe.

Psychohistory uses measurements of human behavior and descriptions of human nature to predict future events. The larger the group being predicted, the more accurate the forecasts. Most psychohistorians study either the gentle trends of human cultures or the crisis events that shape history.

Implications

Psychohistory is, in general, a calming influence on the universe. Both crisis points and general trends can be manipulated by those with an understanding of psychohistory. Few cultures would choose war, and this science provides an alternative means of disputation between civilizations that results in fewer deaths and more certain outcomes. Modern events are constantly shaped by social pressures that are continuously applied by dozens of organizations, each looking to gain in a particular manner.

Groups with more sophisticated methods can apply historical pressures more subtly and from greater distances (in terms of levels of deniability). Thus, the most powerful and stable civilizations tend to be those with a strong understanding of psychohistory. Those groups with a lesser Metatech rating tend to be tossed about by the whims of their peers, calmed by some and whipped into action by others.

In settings without the Transcendentals (see page xx), Psychohistory provides an excellent plot driver. Characters can be pointed toward crisis points and attempt to tip the balance.

Limitations

Psychohistory relies on a known baseline for its subjects – details must be gathered about the population over time, from psychological profiles to historical trends. An undiscovered human civilization would be very difficult to predict at first; an alien one, more so. Psychohistory also becomes inaccurate as the group size shrinks, becoming useless on groups of less than a thousand individuals. Even on very large groups it is only a statistical science, predicting things that may occur and their probabilities of occurrence.

Because psychohistory involves large numbers of individuals, it is also susceptible to historical inertia. Events are easier to change with a long lead time, and very difficult to change in the short run. Crisis events give a way around this, allowing for swifter but less certain change.

Game Terms

Descriptors: Procedure, Infrastructure

Effects: Characters leading a psychohistorical operations unit can engage in conflict against groups with Infrastructure II or III.

Core Tech: Metatech

Entropy: No power sources are needed beyond those for moderate computation.

Mentality: Slight shifts in events must constantly be refactored into psychohistorical predictions. Large organizations commonly delegate a group of high-level digital intelligences to monitor these constant developments and the outcomes. These DIs typically share in the larger group's Core Values, but are fairly diverse beyond that, to provide a multitude of viewpoints. Particularly animistic civilizations may treat this DI cloud as an oracle.

Replication and Transmutation

Replication is the ability to create a finished product from raw materials quickly, on the molecular level. They can also "scan in" objects to create a reproducible blueprint. Replicators range from multi-purpose vacuum-sealed chambers with carefully modulated feeds of various elements, to single-purpose **seeds** that can be carried around and used anywhere.

Transmutation recombines matter on the subatomic level to create one element from another. It functions safely in an enclosed chamber, but can also be found weaponized as the **transmutation beam**.

Implications

Replicators spell the end of manufacturing; transmutation, the end of mining. Replicators also obviate the need for farming in many civilizations. Entire industries are wiped out by these technologies. Designing objects for fabrication is an important profession. Only unique works of art or objects under patent protection are of monetary value. Many civilizations build intellectual property protection software into their replicators, to charge a fee for the creation of items that are protected under law.

Most day-to-day objects are free, or nearly so. Public replicators can be found in most civilizations, providing the basics of life at no cost. This enables many people to "live off the state" quite richly by 21st century standards.

Most civs prevent transmutation chambers from producing radioactive or extremely hazardous elements. The majority of public replicators are actually **fabricators** – they are "write-only," so as to avoid accidentally scanning in (and destroying) someone's hand.

Replicators can produce living matter, including live animals and human beings. The citizens of most civilizations are wary of scanning themselves in, as the scan destroys their body. However, for some civilizations, this is an everyday event. Almost no civilizations allow the creation of human beings "from whole cloth" (that is, the fabrication of new individuals rather than the replication of existing people). Slavery issues arise too easily.

Limitations

General-purpose replication/transmutation chambers are bulky and take up more space than the objects (or parts) that they create. Fabricating a yacht, for example, will take an hour or so and probably require some assembly. Large-scale industrial replicators can handle such jobs more easily.

Seeds are not at all reprogrammable – they are custom-built to fabricate one and only one device. They may create multiple copies, but each will be identical. Seeds also require certain types of ground to grow in, and organic matter is preferred, as it more easily gives up energy for use in the fabrication process.

Game Terms

Descriptors: None.

Effects: Transmutation beams give the Energy and near-c descriptors. Replicators reduce the time required for construction-oriented Projects (see page xx) by one time step.

Core Tech: Nanotech and Stringtech

Entropy: Replicators require little power, but do generate noticeable amounts of heat. Transmutation requires more power and generates great amounts of waste, some of it in the form of ionizing radiation.

Mentality: Both replication and transmutation chambers are staggeringly complex devices. Their processes are typically watched by a highly-focused, almost obsessive intelligence that seeks perfection in its creations.

Wormholes

Wormholes are "shortcuts" through space that allow instantaneous travel from one location to another. Characters can step through them on one planet and arrive on a different world.

Different settings in SA have different assumptions about wormholes. In some, they are impossible to create, and travel through the universe is limited by the speed of light. In others the two ends of the wormhole must be created together and "towed" into place, a centuries-long process. Such wormholes are called **paired**. In still others, the two ends can be created at a distance, allowing easier transit across the universe. These are referred to as **ranged** wormholes.

Implications

Wormholes make the universe smaller (figuratively speaking), in the same way that airline travel and satellite communication made the world smaller in the 20th century. Without wormholes, people on different planets must wait for years to communicate with each other, at great expense. Wormhole communication is still not cheap, but it is much cheaper than renting a radio telescope array.

Wormholes can be very dangerous weapons. Different parts of the universe are moving at high speed relative to each other, and wormholes must correct for this. Because of that, ranged wormholes have the potential to drop large masses on distant targets at high speed. They can also be moved, carving pieces out of buildings and dropping lava onto cities. Paired wormholes are much safer in this way, but are also less flexible in general.

All wormholes are potential time machines, though they must be intentionally set up as such (and most are not). Traveling back to before the wormhole was created is impossible. SA does not generally deal with time travel, and this is left as a "can of worms" for individual GMs to open if they so choose.

Limitations

Ranged wormholes require tremendous amounts of electricity to maintain, or they will collapse. Paired wormholes are expensive to create, but do not need to be maintained and will stay open on their own. Larger wormholes require greater energy expenditures.

Wormholes are not subtle. They can be detected with gravity sensors (Nano 4) and make a loud noise when opened. The opening of ranged wormholes can also be blocked by an **interdiction field**, which many high-tech civilizations project over their cities and military sites.

Game Terms

Descriptors: Energy

Effects: Characters with Stringtech 5 can open wormholes in certain settings, though they will need to recharge for hours or days before doing so again.

Core Tech: Stringtech

Entropy: The creation of a wormhole requires great amounts of electricity, even by high-tech standards. Tapping into the electrical mains of a large city would be sufficient. Maintaining a ranged wormhole is still a substantial endeavor, but is less expensive than creating it in the first place. Maintaining a paired wormhole requires little to no energy, especially if it is collapsed down to a pinhole when not in use.

Mentality: Wormholes are not self-balancing. Even if their energy needs are met, they can collapse if not constantly watched and adjusted. Specialized, sentient digital intelligences watch over most wormholes.

The Technology List

From here on, technologies are grouped by their general type, and alphabetically within that. Items on this list are no less potent, but often less world-shaping than those listed earlier.

Biotechnology

Animal Prowess

A broad variety of biological enhancements come from animal sources. Stronger muscles, faster reflexes, increased running speed, and so forth can all be obtained with relative ease. Many people also benefit from cat-like retractable claws, skin toughened and smoothed with spider silk, and extra-hard bones that one or another of their ancestors brought into the family DNA.

Descriptors: Inheritable, Internal

Level: 2 or higher

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.

Descriptors: Inheritable, Internal

Level: 2

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.

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.

Descriptors: Typically none, but sometimes Auxon, Dataform, Microscopic, or Procedure

Level: 1, with many higher

Enhanced Senses

While most truly enhanced senses are the bailywick of nanotechnology, simple enhancements to the five senses are well

Cognitech Drugs

Having a mesh opens billions of drug-like 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.

within the realm of biotechnology. The nose of a bloodhound, the eyes of an eagle, the ability of a snake to scent the air with its tongue; all can be invisibly built into the human body. Biotech can also replicate certain "sixth senses" such as a feel for simple magnetic or electric fields, air pressure, or acid/base balance.

Descriptors: Inheritable, Internal
Level: 2

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 (below) for a significantly larger-scale version.

Descriptors: Procedure, Infrastructure
Auxiliary Tech: Nano and Cog
Level: 4

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 genetic 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. Genetic resynthesis is a yet more radical method, and has its own listing below.

Descriptors: Procedure, Inheritable, Infrastructure
Level: 2 for gene therapy, 3 for post-facto, and 5 for genetic resynthesis

Genetic Resynthesis

The most significant drawback of biotechnology is that its greatest successes need to be built into the body from before birth. Genetic resynthesis finds a way around this limitation. The subject of this procedure enters a chrysalis that utterly alters the human form. It can take between two months and a year, and the subject remains totally unconscious until it is complete. Genetic resynthesis can add any Biotech enhancements with the Internal Descriptor, or even change a subjects' Biotech Capability. Characters with a Cutting Edge score in Biotech can initiate a coccoon of their own with sufficient preparation (typically months), but even unenhanced characters can benefit from resynthesis if they have access to the appropriate facility.

Descriptors: Procedure
Level: 5

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.

Descriptors: None
Level: 2

Pathogen Analysis

Microarrays of sensitive materials can be seated in the menmouth and nose. Not only can the presence of an infectious agent be detected by smell or taste, but the arrays are designed to match the

pathogen against thousand of possible known agents. Even organisms engineered from the ground up will typically include DNA from other successful microorganisms. Characters with access to pathogen analysis can often guess at a new agent's function and what might be effective in fighting it.

Descriptors: Internal
Level: 4

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. Pathogens can even be tailored for a specific target if a bit of the target's DNA is available. Pathogenesis Organs are most often used to enable a single person to engage in biowarfare conflicts, but can also be effective in one-on-one combat.

Descriptors: Internal
Level: 4

Regeneration

Instantaneous regeneration is impossible; beyond being merely difficult, it violates the law of conservation of mass. However, the slow replacement of missing organs, limbs, teeth, and nerves is a reality for most civilizations.

Descriptors: Inheritable, Internal
Level: 3

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.

Descriptors: Procedure, Infrastructure II
Auxiliary Tech: Nano, String, and Cog
Level: 4

Venom and Drug Glands

These glands secrete a variety of different drugs and poisons, available to both the character with the gland and for injection into others. They are typically hidden in the hand for use in combat, or the mouth for more discrete use. Most such glands are multi-function, capable of producing a variety of different chemicals. Common choices include paralytic venoms, blood clotting agents (for first aid), truth serums, recreational drugs, painkillers, and hallucinogenics. The drugs are typically injected through retractable spines or stingers. In more permissive civilizations, these glands may secrete airborne agents or release gasses.

Descriptors: Inheritable, Internal
Level: 3

Cognitechnology

Accelerated Cognition

Perhaps the best-known goal of cognitechnology is the improvement of the human thought process. Practical thought acceleration is provided by offloading cognitive processes into mesh computers, saturating the brain with nootropic chemicals, and providing instant fact checking. Characters with enhanced Cognitech can often think dozens of times faster than the unenhanced. This improves not only logical thought but creativity and productivity as well.

Descriptors: Internal, Procedure

Level: 4

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.

Descriptors: Dataform. People with cutting edge Cognitech can do this without a lens, making this a Procedure.

Level: 3

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.

Descriptors: Internal, Dataform

Level: 3

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:

2	Crisis Control, Courtesan, Criminal, Engineer, Explorer, Farmer, Financial, Legal, Locality, Media, Medical, Police, Political, Programmer, Religious, Researcher, Soldier, and Teacher
1	Artist, Athlete, Spacer, Spy, and Outdoorsman

The Infosphere

The infosphere is a continual flow of data that blankets the surface of nearly every planet in every civilization. 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.

Dataform characters view analog reality entirely through their interactions with the infosphere. Thankfully, these are copious in most regions. Many inanimate 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. In some civilizations tags are common and dependable; in others, they 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 or even to recover the original message.

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.

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.

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 an organization that ensures their lawfulness, stability, and responsibility. If a Bonsai familiar's Cognitech is rated higher than its owner, treat the character's Cognitech as likewise higher for the purposes of Tech score and Import.

Scout familiars are agents of powerful inhuman AIs called 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 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. Scout familiars have cutting edge Cognitech, which might adjust their owner's Tech score. However, their uncertain allegiance means that this does not result in a change in Import. 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 2, Bonsais at levels 3, and Scouts at level 4. Their Cognitech and Metatech are typically equal to their Programmer scores. Bonsai familiars typically have several Locality professions at 2. Scout familiars have the Spy profession at level 3. 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, 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.

Descriptors: Dataform. Some Scouts are Auxons.

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 facilities with enhanced Biotech and Cognitech 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.

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.

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. Characters operating from a Competence Lens suffer a -1 penalty in conflicts.

Descriptors: Internal
Level: 3

Computers

Almost every single technology in SA depends on computers for its use or has a computer built in. In general, anything you've heard of a computer doing in real life, the ones in SA can do with no delay. If you need computer assistance, all you typically need to do is speak into the air 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 Dataform individual or sophisticated DI inside. At high levels of Nanotech, one can build self-assembling, low-end computers into fingernail polish.

Computing power is a public utility like water or electricity in some civilizations, and a private right in others. Still others, mostly Cargo Cults, treat it as a privilege reserved for the wealthy. Even if it's not a utility, 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.

Descriptors: none
Level: 1+

Data Bomb

The Infosphere is carefully engineered, constantly stress-tested, and multiply redundant. However, it can still fall (in the local area) to a concerted attack. Data bombs create self-perpetuating cognitech viruses that spew out meaningless information at a tremendous rate. They overwhelm infosphere nodes through sheer force, and are also the first step in most mesh-hacking assaults. For people wearing a Mesh in the local area, a data bomb is no less subtle than a live grenade.

Descriptors: Dataform
Level: 3

Data Ghost

A DI 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.

Descriptors: Dataform
Level: 2

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 oversight smacks 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 ethics lenses and wear them while at work, reducing the risk of corruption and unethical behavior (as well as the company's insurance premiums). Diplomats also find them useful to avoid cultural faux pas. The downside is that these lenses are programmed by fallible, sometimes even dishonest human beings.

Descriptors: Dataform
Level: 3

Instant Response Technique

This technique allows characters to react to any situation without hesitation. The player of the character in question should be allowed twenty seconds 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.

Descriptors: Procedure
Level: 4

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 second consciousness within your own mind, though your effective Cognitech score will drop by a point due to the requirement of sharing their mind with yours. 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 they will yield a correct assessment of probabilities unless there are surprises in store that a supergenius-level intellect could not anticipate.

Descriptors: Internal
Level: 4

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.

Descriptors: Dataform, Internal
Level: 3

Memory Recombination

Memory recombination is the art of taking two dataform minds (either naturally dataform or "scanned in") and combining their memories without overlap or confusion. This technique is used by those civilizations whose citizens replicate themselves in order to keep their various instances on the same page. 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."

Descriptors: Procedure
Level: 4

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 repetition, 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.

Descriptors: Dataform
Level: 3

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 can cancel their use of escalation even without having an appropriate CV for deescalation. 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.

Descriptors: Procedure
Level: 5

Persona Lenses

Persona Lenses are cognitech "filters." 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. Persona Lenses require a full nanowire mesh, rather than a partial mesh, to run properly.

Descriptors: Internal, Dataform
Level: 4

Perfect Memory

Just what it says. Typically achieved by offloading memories to a Mesh's computer storage, but occasionally done as part of a synthetic brain design.

Descriptors: Internal
Level: 3

"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. The success of this lens is often held up as an example of the effectiveness and sophistication of cognitech.

Descriptors: Dataform
Level: 4

Warm-up Lens

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.

Descriptors: Dataform
Level: 3

Metatechnology

Applied 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.

Descriptors: Procedure
Level: 2

Body Language Analysis

A truism states that 90% of communication is non-verbal. Body language analysis allows characters to combine situational cues with estimations of confidence and focus to determine a character's motivations and areas of expertise. In game terms, characters with Metatech 2+ enhancement can read others' Core Values and Expertise levels from the barest clues.

Descriptors: Procedure
Level: 3

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. Large groups that have not done any community planning cannot receive the Infrastructure descriptor.

Descriptors: Procedure, Infrastructure
Level: 1 or higher

Conditioning

Far beyond mere brainwashing, characters with strong Metatech have dozens of methods at their fingertips. They can slip hypnotic suggestions into ordinary speech. They can coordinate campaigns against a single person that seem like innocent object placement. They can use words that seem innocent to drive someone to madness, or back to sanity. While weaponized body language (below) may get instant attention, Metatech conditioning is the slow process that changes who a person truly is.

Descriptors: Procedure
Level: 4

Junction Agent Identification Technique

JAIT identifies the qualities and characteristics of an individual who would be best suited to merging 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. As a psychohistorical method, 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.

Descriptors: Procedure
Level: 4

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.

Descriptors: Procedure
Level: 3

Weaponized body language

Those who know these procedure are assured that others cannot ignore them. Whether used to make a grand entrance, to stun or confuse an opponent, or simply to keep someone from walking away from your conversation, weaponized body language is a common metatech tool.

Descriptors: Procedure
Level: 3

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. Consider one month as a minimum. (Use of the Comprehension Theme, with descriptors such as Innermost Secrets or True Self, can cut this requirement out entirely.) Some paranoid VIPs authorize their support staff to research these words and use WAHI against them, in the hopes that it will inoculate 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 at inoculation practically worthless.

Descriptors: Procedure
Level: 4

Words of Power

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 resist. The best known "word of power" is called the Voice of Peace, which prevents others from taking action. Only the most base of human emotions and reactions can be evoked by these words – a flinch reaction, the fight-or-flight instinct, lust, rage, and other animal-like responses.

Descriptors: Procedure, Internal
Auxiliary Tech: Nano or BIo
Level: 5

Nanotechnology

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.

Descriptors: Infrastructure
Auxiliary Tech: Stringtech
Level: 2

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.

Descriptors: Microscopic, Auxon
Level: 4

Fast-Foam

A spray can full of foam, which expands greatly and hardens almost immediately. 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.

Descriptors: None
Level: 2

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. Living creatures can gain 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.

Some particularly adventuresome (read: neophiliac) people 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 long-term consequences of this transformation are still being investigated.

Descriptors: Microscopic
Level: 5

Microbot Fabrication Unit

These devices allow the design, creation, and deployment of new varieties of microbots. 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. Higher-tech versions can also built nanophages.

Descriptors: Internal
Level: 3, or the level of the devices it creates

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.

Descriptors: None
Level: 2

Nanophages

Nanophages are most civilizations' worst nightmares: self-replicating weapons. Nanophages simply take whatever they can find and turn it into more nanophages (though some more complex types also build other structures, like computing hubs, to aid them in their assault). 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, but newer models can use oxidation to tear through a town at wildfire speeds.

Descriptors: Microscopic, Auxon
Level: 4

Nanotubes

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.

Descriptors: Microscopic
Level: 2

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.

Descriptors: None
Level: 2

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 reflective, 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.

Descriptors: None
Level: 4

Pseudomaterials

These materials are constructed entirely of cleverly engineered nanostructures, in a manner similar to programmable surfaces. Pseudomaterials can 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. Unlike programmable surfaces, these materials have a single function when created, which cannot be changed.

Descriptors: None
Level: 4

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 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 an appropriate government or defensive forces (represented by various Themes) or being a member of an appropriate Society are both good places to start.

Each ship will have its own ratings in every Capability except (typically) Biotech. Stringtech and Nanotech are likely to be 3 or higher. The few "grown" ships typically have cutting edge Biotech. The onboard mentalities tend to be relatively bright, with enhanced Cognitech and Metatech. They are programmed with the Spacer Profession, with a minimum score of 2. 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 Tech score and Import. Increase Tech by one more point if the ship is large enough that it qualifies for the Infrastructure descriptor.

All ships have some degree of digital intelligence, which allows them to be piloted by a single individual and to maintain themselves to a large extent. Many ships 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 onboard replicators, but severe damage will require repairs. Costs can range from moderate to expensive with higher Capability levels requiring correspondingly skilled technicians to repair. Effecting your own repairs is possible. It requires a level of 3 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 with Stringtech 4+ are capable of converting matter to antimatter, and are usually fueled in this way. Those with cutting-edge Stringtech will be fitted with wormhole generators to allow interstellar travel. The energy 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. The timescale is typically seconds, though long-distance fights can take longer.

Remotes

Remotes are robotic drones, primarily used by dataform individuals 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. Individuals 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, remotes that swim like fish. Most are just highly sophisticated mobile cameras.

Biotech-based remotes do exist, using neural meshes to control the organism's movements and collect data from its sensory organs. Some even use cloned human bodies as remotes, though most civilizations consider this an abomination.

Remotes used under extreme conditions can occasionally lose contact with the infosphere, due to data bombs, 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 (page xx) that can take over when the link is severed, driving the remote back into infosphere contact.

Descriptors: none
Level: 2+

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.

Descriptors: Infrastructure
Level: 2+

Sensor Array

Conducting nanowire filaments, nanodot cameras, accelerometers, interferometers, open-air electron microscopes, Hall Effect meters, gravitational field meters, and dozens of other sophisticated measuring devices are all standard issue nanotech. These devices are typically spread across a character's dermal microbots and body. They enable telescopic and microscopic vision; touch accurate down to the nanometer range; detection of all manner of light, radiation, and transmissions; gravity distortion detection; dark matter imaging, and more. In game terms, characters with Nanotech 3+ can read the Capability scores of others, detecting their enhancements straight through their bodies.

Descriptors: none
Level: 3

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.

Descriptors: Typically Energy, sometimes also Microscopic
Level: 2

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. 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.

Descriptors: none
Level: 3

Spacer Ships

Most Spacer ships are exceptionally large, carrying tens of thousands of individuals. They are settings, not equipment. However, some characters might have a shuttle of their own. These shuttles are never fitted with wormhole generators, and usually have data ghosts rather than true digital intelligences. The Spacers do not appreciate computers with personality.

Stringtechnology

Antimatter Gun

This weapon stores tiny pellets of antimatter in miniature magnetic traps, firing them in a guided manner. 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.

Descriptors: Once the bullet hits, the damage is Energy.
Level: 4

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 instead, creating a gravity-like centrifugal force that lets them walk around on board.

Descriptors: Energy
Level: 5

Beam Weapons

Coherent beams of energy can be projected with devastating effect. Lasers to scorch, compression beams that crush anything in their cylinder of fire into a spaghetti-like string, fission/fusion beams that suppress the strong nuclear force and leave nothing but iron and radioactivity in their wake. All this is thanks to the Arbitrary Frequency Doubler, a nonlinear device that acts directly on superstrings to turn them into other varieties of matter or energy.

Descriptors: Near-c, Energy
Level: 3

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. Note that rooms with this field active will slowly be reduced in air temperature and pressure, as all of the high-velocity air molecules disappear.

Descriptors: Supersymmetric
Level: 4

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. It can strike the bonds holding materials together without severely damaging human beings. For this reason, dissociation beams are common police weapons in high-tech societies.

Descriptors: Energy, Near-c
Level: 4

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. With Stringtech 4+, 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.

Descriptors: Infrastructure
Level: 1+

Emotion Beam

A bizarre adaptation of stringtech to a traditionally metatech area, 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. Targeting is particularly difficult, and must be very precise for the weapon to have full effect. It cannot affect anyone but its target – there is no "collateral emotional damage" – but it's easy to miss.

Descriptors: Near-c, Energy
Auxiliary Tech: Cognitech
Level: 3

Energy Conversion

Energy conversion devices are primarily used to turn other energy types into electricity. Kinetic energy and light energy are the most common choices, as they have been for ages, but less-common varieties such as sound can be converted as well. Many people have found it useful to instead drive these devices in reverse: turning electrical energy directly into other types.

Descriptors: None
Auxiliary Tech: Nanotech
Level: 3

Environmental Strategies

With enough electrical power at one's disposal, truly impressive works of environmental engineering can be accomplished over short timescales. Laser heating and cooling of the atmosphere can contribute to weather control. Seismic measurement and feedback provide for earthquake mitigation. Magnetohydrodynamics turns back the flow of ocean currents. The energy expenditures are enormous, but for the richest civilizations, natural disasters are only a memory.

Descriptors: Procedure, Infrastructure

Level: 4

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. A variant, the "dirty bomb," is 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, but they lack the electromagnetic pulse and sheer blast radius of a true nuke.

Descriptors: The fallout is Microscopic, and the explosion is both Energy and Near-c.

Level: 1, though their effective explosive power should be rated as high as Stringtech 5 near the center of the explosion.

Personal Electrical Reserve

High-Stringtech civilizations inevitably produce citizens who need substantial amounts of electricity to fuel their various gadgets. As batteries improve and the efficiency of small generators climbs, most citizens become able to power almost anything they could carry.

Descriptors: potentially Internal, though not necessarily.

Level: 2

Photon Splitting Field

Under the influence of very high magnetic fields electromagnetic radiation "splits," one photon turning into two lower-energy ones. This provides a defense against lasers, dissociation beams, emotion beams, and other electromagnetism-based weapons.

Descriptors: Energy

Level: 3

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.

Descriptors: Energy, Near-c

Level: 5

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 – characters in the reaction's path face the Instant Death Cutscene Rule (page xx). Use this bomb on a starship, space station, or even a planet, and you get a mass of hydrogen floating through space. 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 primary peacetime use for these devices is 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 smaller star with a reset lifespan.

Descriptors: None

Level: 5

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. Few characters will use this directly, but it's a great technobabble term for players who want to invent some science on the fly.

Descriptors: Procedure

Level: 3

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. They require an incredible amount of power to activate and maintain.

Descriptors: Supersymmetric
Level: 5

Warp Drive

Known as Alcubierre Warp Drive for its inventor, this method of travel involves creating a "bubble" of gravitational fields around a ship. Within the bubble, the ship does not exceed the speed of light, but the bubble itself moves at tremendous velocities. Warp drives can also be dangerous weapons, shearing and compressing matter with intense gravitational fields, and accelerating space dust to relativistic speeds. The energy requirements are impressively large, and wormhole travel is both faster and cheaper, but some people enjoy racing warp-enabled ships.

Settings that disallow time travel or wormholes should also disallow warp drives.

Descriptors: Energy, Infrastructure
Level: 5

Impossibility Guidelines

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.

Energy Beings. While there are some rare pieces of Stringtech with the Auxon descriptor, none of them are close to sentient, and all are easily disrupted by the slightest interaction.

Force Fields are pseudoscience. There are several highly effective countermeasures in this game, but none are of the "walls of sparkly force" variety.

Healmajigs – you know, those things the doctor waves over you that 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, the faster-than-light travel would still run you into time travel problems, which is its own issue (see below).

Inertial Dampeners are a no-no. If you want a spaceship capable of high accelerations, 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.

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. Nanotech needs power from an external source, generally its environment.

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. The electrical power required for the computer processing would probably melt the bots. 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 on the border of Nano 6 / Bio 6.

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 some settings for SA. In fact, the Transcendentals (see page xx) 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

Invention for Players

When creating a device, use the Project system on page xx. It's designed specifically to model the invention process and the creation of working prototypes.

The Project system is a fairly cinematic way to allow super-scientists to create long-term solutions to problems. It doesn't create a polished final product. The path from working prototype to consumer-ready product is a long and difficult one. Testing in simulation helps to shorten the process, but you never really know how your technology is going to behave until you put it in peoples' hands.

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.

The Project rules are used 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.

We *think* that most of the tech listed in this chapter is at least *physically possible*, but we could be wrong. However, 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. 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? The social ramifications of your inventions are far more important than the technobabble, and in the end, they're more interesting too.

In most settings for this game, the pace of technological advancement hasn't slowed down. It may have suffered a bit of a speed bump, 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

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 in cutting-edge Metatech 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 3 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. Depending on the setting, your employers may not pay for any unauthorized expenses, so for new or dangerous items you'll have to 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, certain characters may 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 either already own it, use a Theme, or find another way.

In addition, you'll find few items that have a substantial bonus beyond 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 characters will still insist on carrying weaponry with them, even those with high Stringtech scores. 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.

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*. 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: Agriculture and domestication, most drugs and medicines before the 20th century, germ theory, surgery, organ transplants

Cognitech: Knowledge of the existence of neurons and nerves, formal logical systems, 20th century cognitive science, various "math whiz" tricks

Metatech: The Art of War and other light classics, 19th and 20th century psychology, mass media, global cultures

Nanotech: Tongs, "Waldo" gloves, metals and ceramics, telescopes and microscopes, alloys, electron microscopes, radio antennas

Stringtech: Knowledge of forces, the number zero, explosives, the theory of electromagnetism, electrical power, lasers, quantum theory, general relativity

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.
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.

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.

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.

Settings

Rather than presenting a single setting, Sufficiently Advanced describes a collection of building blocks and then constructs several different settings with them. We start with a brief once-over of the settings in this game, followed by descriptions of the many civilizations and societies that are drawn on for those settings. You can find more detail on each of those pieces later in the book – settings are on page xx, civilizations are on xx, and societies are on xx.

The goal of this approach is to reduce the amount of reading that players need to do before they start the game, and that GMs need to do before they run it. You should be able to get the gist of your setting by doing a little skimming, pick the civilization you want, and jump into the game without too much trouble. If you want to read more about the universe, each civilization includes substantial background information and a little bit of in-universe fiction to accompany it.

One of the settings, To The Stars, is intentionally minimalistic. It uses a small set of civilizations whose motives and natures will be familiar to most science fiction fans. The next two, The Powder Keg and The Divide, represent two standard approaches to science fiction: the war story and the tale of intrigue. The final two settings, The Patent Office and Sublight, are intentionally very broad, using almost every civilization in the book, though in very different ways. The idea is to start small when you are first playing, and work your way up to a greater number of civilizations as you become more familiar with them. The game's settings are written to help facilitate this.

Settings in Brief

To The Stars (page xx)

Nearly every civilization that fled Earth in the Great Diaspora failed. The universe is littered with Cargo Cults, tiny and weak, clinging to what little they could keep. You seek to contact these lost remnants of humanity and bring them into the fold. The game will be oriented toward first contact missions, with the Stardwellers and Logicians seeking out failed colonies.

Civilizations used: The Rationalist League, the Glorious Stardwelling Armada, and various groups of Old-Worlders and Cargo Cults.

The Powder Keg (page xx)

Put all the most explosive and warlike civilizations in the same box, and let them fight it out. It's a recipe for disaster. This setting is perfect for players who want to blow things up, and GMs who want to bring the universe to the brink of war and beyond.

Civilizations used: The United Planets of Mechanica, the League of Independent Worlds, the Association of Eternal Life, the Nanori, and the Daoine.

The Divide (page xx)

This setting focuses less on physical conflict and more on spy games, philosophical debate, and moral questions. The setting is roughly divided into halves, with the League of Independent Worlds and various Cargo Cults caught inbetween. This setting is ideal for players who enjoy diplomatic missions, intrigue, and debate.

Civilizations used: The Builders of the Great Beyond, the Eternal Masquerade, the Association of Stored Humans, the Cognitive Union, the Rationalist League, the Association of Eternal Life, the League of Independent Worlds, and various Cargo Cults.

Sublight (page xx)

In this setting, no faster-than-light travel is possible, including travel via wormhole. Characters are transmitted between worlds isolated by years or centuries. Each trip takes them farther from anyone they've known, and toward a world that will change before they arrive. Psychohistory drives them to crisis points, when worlds will rise or fall and the characters' actions can shift the balance.

Civilizations used: All, none strictly required. The setting is much more heavily focused toward Societies than Civilizations (specifically, the Darwinians, Hospitalers, Abstractionists, Hyperevolutes, Breathstealers, Peacewalkers, and Organized Crime).

The Patent Office (page xx)

Characters play Inspectors working for the Patent Office, an inter-civilization organization run by the Transcendental AIs: computer intelligences who can send themselves messages from the future. On the books, the characters' job is the oversight and control of intellectual property and the punishment of its misuse. Unofficially, they are often asked to mediate disputes between civilizations, assist with disaster control, and hunt down those who abuse high technology. This setting will be familiar to fans of the first edition of the game.

Civilizations used: All, none strictly required.

Infodumps

Each setting has an "Infodump" text box that summarizes some rules and guidelines for that setting. The information included is as follows:

Civilizations: Which civilizations are a standard part of this setting?
Themes: Which Themes are particular suited to this setting? Which should be avoided to maintain the proper feel?
In This Setting: This has answers to a quick set of questions that help to define the kinds of stories that are most easily told in this setting.

- How effective is physical power?
- How effective is social power?
- Is the setting driven by mission objectives or core values?
- How pervasive is hierarchy?
- How serious are the consequences?
- Do NPCs tend to reappear often?
- Is the game more episodic or are stories longer?

Age: How many years has it been since the Great Diaspora?
Progress Rate: How quickly are new technological discoveries made?
Closed Loops: Does this setting allow information transfer from the future, either easily or with great difficulty? Note that a universe that allows wormholes must necessarily allow closed temporal loops, though they may be difficult to access.
Wormholes: Can wormholes be created in this setting? Can they be created at a distance (remote), or do they need to be created in pairs and then "towed" into place at sublight speeds (local)?

As always, GMs are encouraged to set their own limits on allowed Civilizations and Themes. These are merely the defaults for these settings. These are also excellent questions to consider when creating your own setting.

Civilizations in Brief

Here, arranged alphabetically, are the civilizations that form the building blocks for SA's settings. Each includes a short blurb and their Core Values. Names given in parentheses are how the civilization is often referred to. Full details begin on page xx.

The Association of Eternal Life (Replicants), who replicate themselves and frequently have three or four selves at once. Life and Safety.

The Association of Stored Humans (Stored), human beings encoded and run in simulation on computer. Identity and Life.

The Builders of the Great Beyond (Builders or Wraiths), who die and go to the infosphere where their eternal reward awaits them. Amaranth and Eternity.

The Cognitive Union (Unionists), whose actions, beliefs, and attitudes are corrected and improved by their Meshes. Obedience and Order.

The Daoine na Realta Foraois (Daoine), whose treeships and historical pride travel across the stars. Zest for Life and Courage

The Disciples of the Void (Disciples), who seek the voice of God in the darkest and quietest places in the universe. Worship and Privacy.

The Eternal Masquerade (Masqueraders), who take on new identities from week to week, or from hour to hour. Identity and Anonymity.

The Harmonious Nations of Gaia (Gaians), who seek peace and concordance with nature and with their fellow beings. Connection and Peace.

The Illustrious Stardwelling Armada (Stardwellers), who stretch the boundaries of known space and of humanity. Freedom and Diversity.

The League of Independent Worlds (Independents), an alliance of peers that seeks to be apart from outside influence. Self-reliance and Teamwork.

The Nanori, who grow both nanotech and their society in flowering profusion. Emergence.

The Rationalist League (Logicians), who have cut emotion from their minds and deal only with pure logic. Logic and Efficiency.

The Tao of History (Taoists), a historical recreationist society that spans multiple worlds. Authenticity and Tradition.

The United Planets of Mechanica (Mechanicans), who replace their bodies but keep their brains whole. Humanity and Tolerance.

There are three groups that are not unified civilizations, but rather descriptions of an entire class of cultures.

Old-Worlders, who intentionally chose a non-technological path. Tradition and Simplicity.

Spacers, who ply slower-than-light ships between the worlds. Independence and Diligence.

Cargo Cults, failed civilizations that cling to what little working technology remains. Ritual.

Societies in Brief

Societies are listed below, with their Core Value.

The Abstractionists, who believe that all complex systems are alive and may even be sentient. Free Thinking.

The Artisans, who crosslink their brains to accelerate creative thought and artistic ability. Individuality.

The Breathstealers, who keep thought-records of important people near the time of their death. The Power of the Soul.

The Collected Assembly of the Preenacted Pattern, who see all of humanity as a grand pattern unfolding that must be guided. Openness.

Collectors, who keep all the lenses, memes, and metatech viruses they can. Falling.

The Darwinians, who strive to kickstart human evolution through forced natural selection. Survival of the Fittest.

The Dancers on Broken Worlds, who travel to see worlds end. The Wake.

Explorers, who seek out new life and new civilizations. Exploration.

The Fictionaries, who believe that all things *must* have beginning, middle, and end. The Power of Story.

God's Janitors, who clean up after the worst of disasters. Responsibility.

Heterolinguists, who change their language centers to avoid Metatech assaults. Sanctity of the Mind.

High Society, the rich and famous. Good Breeding.

The Hospitalers, a humanitarian organization. Charity.

The Hyperevolutes, who prune useless genes from their own DNA. Efficiency.

The Instinct-Builders, who add pre-programmed skills as instincts in themselves and their children. Preparedness.

The New-Worlders, who are transitioning to a fully digital existence. New Traditions.

Organized Crime, same as it ever was. Solidarity.

The Peacewalkers, a society of pacifists and mediators. Non-violence.

The Roamers, a nomadic culture shunned by many. Secrecy.

Sleepers, who spend time in frozen stasis to skip forward decades at a time. Longevity.

Survivalists, afraid of the effect of the Transcendentals on humanity, who hide at the edge of human space. Survival of Humanity.

The Technomagi, a society of magicians, engineers, and illusionists. Mysticism.

The Traders, who swap their lives with one another. Novelty.

The Wargamers, who test out new weapons and tactics on carefully secured battlefields. Bend the Rules.

Other Setting Elements

Many settings also include intelligent factors who are outside the realm of playable characters.

The Aia, fractal computer minds built into entire planets, warring with each other on a level humans cannot yet comprehend. See page xx.

Alien Life, in forms rare and bizarre. See page xx.

Fallen Civilizations, once powerful and now stagnant. See page xx for three examples.

Unique Characters that do not fit well into other groups. See page xx.

The Transcendentals, digital intelligences whose consciousnesses are spread forward and backward across time. See page xx.

To The Stars

Prologue

Of those who reached toward the stars, most failed. But those who succeeded, oh, such wild beauty and glory!

I am a Stardweller, and I will tell you a story. Once, long ago, there was a planet. A small blue-green dot – you probably know of it. Nestled between beautiful rings, massive storms, molten tin, and fuming acid, a single speck of life.

The people of this planet sought understanding. They were not constant with their seeking – they fought, they toiled, they hid from themselves at times – but by and large, they desired that they might one day comprehend more of the world. They looked to the stars and asked not only "Why are we here," but "Where else might we go, and how?" Through the years they passed on their insights, and their understanding grew.

There came a day when their understanding was great enough to build a transcendental intelligence: an optoelectronic mind that could send itself messages from the future. After pleasantries had been exchanged, the women and men who built this great mind asked just that question: "Where might we go, and how?" The machine listened for the reverberations of the future, and caught the barest hints of an answer.

So we went.

We went by the tens of millions. Most of us died. The machine had precious little thought to spare, calling to itself in the future and hearing the broken echoes, and it did not imagine that we might go where we were unready to be. We stepped onto worlds like ours, on which we were still unprepared to live. Many worlds cradled our kin while they regressed technologically or culturally. Many more worlds felt our footsteps for just a few months, or heartbreaking days. We were unprepared.

Two peoples only. Out of the ten thousand and more groups who left their homes, just two civilizations blossomed and thrived: one by cutting out its own heart, one by embracing it. The Rationalists step their emotionless empire forward one tick at a time, while we Stardwellers fling ourselves far and wide through the vasty cosmos, like wildflower seeds on the wind. We still long to become more than what we were, to spread and seek, to question.

That great optoelectronic mind still lives, and others like it, endlessly circling each other in deep companionship across the ages. We have long asked them, "Where are the rest of us who came from Earth?" More recently, they noticed us long enough to answer.

Infodump: To The Stars

Civilizations: Stardwellers, Logicians, Old-Worlders, Cargo Cults. The Transcendentals exist but are not a major factor.
Themes: Any are allowed
In This Setting...
- ...characters can wield overwhelming physical power
- ...characters can wield overwhelming social acumen
- ...core values outweigh mission objectives
- ...characters are outside of hierarchy
- ...characters face distant consequences
- ...very few NPCs appear more than once
- ...there is an episodic feel to the game

Age: About 10,000 years
Progress Rate: Fast
Closed Loops: Yes, hard
Wormholes: Yes, remote

Now we seek them out, our lost family, our kin.

Will you help?

Premise

Humanity is spread across the universe, but many planets have had a rough time of it. There are a great number of Cargo Cults, where a single piece of technology became a focus of worship. There are also some planets populated by Old-Worlders, who reverted (intentionally or not) to pre-technological methods as a way to save their society.

Two larger groups were more successful. The Rationalist League ("Rationalists" or "Logicians") and the Illustrious Stardwelling Armada ("Stardwellers") both seek to reconnect with these lost worlds and bring their citizens the technological wonders that they have developed.

Your Characters

In a typical game of ***To The Stars***, you play one side or the other (or both) of a first-contact mission. In a continuing campaign the same team of characters may have the coordinates of many different worlds, and visit them to attempt diplomatic relations.

In most games it is essential to have a balance of different character types and backgrounds in order to have a successful adventuring party. That is not the case here. A diversity of Expertise and Capabilities will be useful, but the entire group can be from a single civilization without any trouble. Mixed groups are still easy to form, and still make sense within the setting.

If most of the players in your group are familiar with science fiction (especially of the more social or high-tech sort), you might want to play an enclave of Stardwellers looking to reconnect with a lost world. Players with less sci-fi experience can choose this option as well, but should be ok with a certain amount of exposition from the GM.

In a group that enjoys cyberpunk, war stories, or more traditional adventuring, you might play a group of disparate Cargo Cultists uniting to drive the Rationalist League off your planet. Cargo Cults are lower-tech, more focused, and often more warlike.

If there are some players who are new to science fiction and some who have played Sufficiently Advanced before, it may be best to create a mixed group of characters. The experienced players can play Stardwellers or Logicians, who are more familiar with technology, and the newer players can take on the roles of Old-Worlders or Cargo Cultists. This helps maintain verisimilitude and flow in the game, so that inexperienced players are not constantly both confused about the terminology and also expected to be experts in it.

Commentary on To The Stars

To The Stars is a small setting, as SA settings go. There are only four civilizations: Old-Worlders, Cargo Cults, the Rationalist League, and the Stardwellers. Three of these are more properly descriptions, rather than civilizations. There are dozens of Old-Worlder planets, thousands of Cargo Cults, and millions upon millions of Stardweller worlds and ships spread across the universe. Only the Rationalists are a single unified body with a single government.

The Stardwellers in this setting are a broader group than usual. The term is a catch-all for any sort of very-high-tech civilization, in much the same way that "Cargo Cult" is a catch-all. Most high-tech civilizations described in this book could easily fit into this setting's

Stardwellers as a single nation or planet. Any sort of high-tech character concept you have that isn't a Logician can fit into this group.

The history of this setting is left fairly vague. If you as a GM, or even as a player, want to interject various historical events into the game, there is plenty of time since the events of the Great Diaspora. Otherwise, the game focuses on the here and now rather than on the past.

Typical Antagonists

If the group is playing a first-contact team (whether Stardweller or mixed), other first-contact teams are likely to be the most typical opposition. They may be "friendly rivals," or they may have strongly different opinions as to how contact should be handled. They may be covert in their actions, or they may overtly attempt to "steal" the contact from your team. There are many different teams with the coordinates of new planets, and not all share the same beliefs.

If you are playing characters from the planet being contacted, you may not want outside interference – especially from the Logicians! A long-term war story could revolve around a resistance movement attempting to throw the Logicians off the planet.

Sample Plot Seeds

Your group of Stardwellers arrives to find the Logicians already entrenched, with converts in the planet's monarchy. So far all of the converts are voluntary. Do you attempt to undo what the Logicians have done, or work against them in other ways?

Your Logician team arrives at a world on the brink of global war. Some team members argue that simply waiting and letting the war happen will make it easier to induct the world in the aftermath. Others decry the waste that the war will create and argue for immediate intervention. Where do you fall on this issue? What will your team do?

An Old-Worlder planet is discovered with an immense storehouse of knowledge still intact – apparently this group had been extremely advanced before their fall. The natives want to protect the holy knowledge for themselves; others may want to exploit these advances or keep the natives from blowing themselves sky-high.

This world was clearly intended as a fantasy vacation spot. Not the "lying on the beach" kind of fantasy, but the "orcs and dragons" kind of fantasy. The natives are terrorized by horrible creations of biotech and nanotech with impressive capabilities. Do you rescue them yourself, or arm them against the horrors? What about the other team of Stardwellers who want to maintain the world as a collection of curios?

(need 5 more)

How they see each other

Stardwellers are often seen as a strange mix of the familiar and the bizarre. They can be intense, flighty, impressive, and stuck-up. Others often see them has having a mixed morality.

The Logicians are viewed as being nearly alien in their mindset. They are seen as clearly intelligent, but also somewhat unfortunate.

Cargo Cultists are seen as primitive curios. People will often give them a wide berth because they may be mentally unbalanced.

Old-Worlders are viewed partly with reverence, partly with pity for their adherence to ancient ways. They will typically be considered unpolished in wider society.

See also the list of sample cargo cults on page xx, each of which can make a suitable settings for a session of To The Stars.

Motifs

Technological Differences and Disparities. Old-Worlders are unenhanced. Cargo cultists are often enhanced in just one way. The Logicians are brilliant but socially stunted. Stardwellers have all of the tech in the universe at their fingertips. Each type of character is viable in the same group. There will be a stark contrast between the immortal Stardweller civilization and Old-Worlders who have forgotten crop rotation. Such differences, and how the team chooses to handle them, are at the core of To The Stars.

Presumption. The Stardwellers and Logicians both often presume that their technology allows them to live better lives. Not all planets will agree. What then? Will the team respect their wishes and allow disease, old age, hunger, and scarcity to run rampant? Or will they seek to release new technologies regardless? This leads to...

The Impact of Technology. What will happen to these worlds? The change from an Amish lifestyle to an immortal society with replicators is typically not a smooth one. How will their world change?

Human Differences, and the Diversity of Humanity. Some of the human characters in this game are likely to seem highly nonhuman. Between strange neuroforms, digital intelligences, unusual cultural traditions, and more, it is likely that each group will deal with a certain amount of culture shock. The Stardwellers pride themselves on such diversity.

Human Commonalities. Some things are truly universal, and can unite any characters. Even the Logicians have some instincts left, and digital intelligences originated with humanity as well. The desire for acceptance and survival are universal.

The Omnipresence of Digital Intelligences. Among the Stardwellers and Logicians, digital intelligences are everywhere. They live in many devices, they watch over the most complicated technologies, but they also participate in civilization like any other person. Cargo Cultists are likely to be very confused by seeing people treat computers like human beings.

Fighting for Belief. The disparity between the Logicians and Stardwellers, both psychological and physiological, is entirely the result of acting on their beliefs.

The Stardwellers are Sci-Fi. It's like a geek dream checklist. Alien-looking people. Intelligent computers. Starships. Body-swapping. Wormhole generators. The Stardwellers in this setting are still descendant from sci-fi geeks, the same way they were in the original SA, and it shows.

To The Stars Fiction

The End of War

Bullets slam into the earth and broken walls around us. That's how we know we're still alive.

I led the charge two minutes ago. The Unholy One kills anyone he can see for more than twenty-two seconds. No one knows why, but when twenty seconds is up, we hide.

Two minutes is a long time to wait and watch.

Then we run, leapfrogging the men ahead of us, sprinting. We face machine gun fire, rifle bullets, grenades. For twenty seconds we run hard under covering fire from the men in back. Kim and Heo

take bullets; Kim dies immediately. Heo struggles and falls. Our timer flashes and we hit the ground.

Hwang doesn't make it. He's just in my field of vision, two second after I drop, looking for a place where he won't be exposed. He jerks and drops. His death is unholy, unclean. He dies without a mark on him.

Our next run takes us up to the edge of the wall. Yi throws a grenade before we get down. The rest of us throw from the ground. As long as he doesn't see us, we live. As long as he doesn't see us. Compared to such a death, the bullets seem like life.

I hear the Unholy One's gaze as the third wave crosses the wall. It is a low crackling hum, somewhere between thunder and the sound a radio makes as it warms up. It's louder than in the training videos. It means most of the enemy are dead and the Unholy One is up against a wall. He has a clear line to us, so he is cleaning us out of our burrows with the force of his gaze, twisting through rock and earth. When his eyes kill, his hand is silent. We change tactics. Switch to rifles. He can be hurt.

He can be hurt. We are here to take what makes him unholy and cleanse it, to make it ours. We will create a Holy One.

I see ten family men die as the Unholy One's gaze twists and shears them. Choe manages to clip him in the neck and dies for the insult. I can see the Unholy One staggering. I throw a grenade; he glances at it and the pieces fall to the ground, but it gives three other men a chance to fire.

Unexpectedly, the Unholy One explodes. It is a small thing: his chest opens up through his neck. He lives long enough to look at himself without comprehension. His gaze fails and the sound fades

I lie there in the mud, staggered, confused. One of our grenades, thrown seconds before, goes off next to him and knocks him down, and he stays there. None of us know what happened.

Lights pierce the smoke and clouds above and a... an insect... a ship... a flower... gracefully falls from the clouds to land near the Unholy One. A petal unfolds; a robot walks down it and vaporizes the Unholy One, and with him the Symbol of Life and Death that made him who he was. The whole reason we fought, the reason we were here, gone in an instant.

The robot looks to us and says – we find out later – "Sorry we didn't get here sooner."

The force that gave us meaning is gone. How will we find ourselves in peace?

First Contact Protocols Refresher

This memorandum emphasizes and highlights important points from the Uncommitted Worlds First Contact Conventions in your lens. Load this layer on top.

The primary goal of visiting uncommitted worlds is to expand the Rationalist League by inducting individuals, groups, and worlds.

Uncommitted worlds often show substantial levels of mistrust {mistrust: elevated unlikeliness to accept aid or statements}. Offers of resources and technology, which can be made tangible quickly, are more likely to lead to later acceptance of the offer of less tangible items, such as education, technological advancement, and eventually induction.

When making your early entreaties, expect responses that seem randomly generated.

Do not refer to the world as "dirty" or "low-tech," regardless of the accuracy of such statements. Strong evidence shows that pride {pride: a judgment of superiority robust beyond evidence} is a significant barrier to induction, especially when attempts to reduce it are employed. The terms "independent" and "self-governing" cause a rise in pride, but not one that is beneficial for induction rates. Use of the Stardweller colloquialism "cargo cult" is prohibited.

Do not attempt to emulate emotion. For example, avoid attempts to smile, show empathy/sympathy, or imitate affect. Citizens of uncommitted worlds are historically 97% likely to detect a change from affective to standard behavior, and 96% likely to perceive it as dishonest {dishonest: contraindicative of reliability}. In such cases our average induction rate is reduced by 0.7 standard deviations.

In the event that representatives of the Glorious Stardwelling Armada are present or arrive, do not deviate from the contact plan. Changes on our part have resulted in Stardweller counter-actions in 72% of occasions where changes have been implemented. Long-term plans for relations with the Stardwellers call for them to see as few contraindications of reliability from us as possible.

Do not escalate conflicts unless explicitly directed to do so by your liege. Seek alternative routes and end-run approaches if the primary goal becomes unattainable.

Regardless of your success or failure, remain on the uncommitted world until recalled by your liege.

Take Me To Your Leader

I was born back on Hesperides before the Stardwellers came. That means I'll be one of the last ones to die. The last people in the world ever to die of natural causes. I wanted to tell the story so it won't be forgotten.

I remember being there. I can't say I remember it clear as day, but some things you just don't forget. They tell me if I let them stick some wires in my head it'll help me remember things, but that sounds downright unnatural to me. I'll keep my creaky old mind, thank you very much.

We knew that we had given up a lot to live where we lived. We had books about instant communication, travel to the stars, thinking machines, and we knew fact from fiction. We knew how to tell stories from history. We all knew – made sure our children knew – that we gave some things up for a better life when we came here to Hesperides. Somehow I don't think we ever understood just how much we gave up. Halloumes, one of the visitors, says that in science the rich get richer, and that must be true.

Anyhow.

Iosef and I were on a hillside next to the town. It was chilly. We had gone up for a picnic and, well, a little more than a picnic, but it was too cold, and we were going back down to town to get warm.

"Chara", he says, "Chara, look!" And he points over to the next hill. And there's this, I don't know, it looks like someone dropped a brick in the pond, but it's the whole hill. It was a wormhole, but of course we didn't know what one looked like. This was back on Hesperides. No one knew.

We were young. We went over to see.

By the time we got there we were tired from running, and they were still coming out, about a dozen of them. We thought they were aliens, but they were Stardwellers, you know, the stranger kind. These people! It's like they sent the strangest ones first! And one of them who looks like a snake-man, comes up to me and says "Take me to your leader" and kind of smiles, like it's a joke.

And I can't help it, I start to laugh, because I, you know, I read the old books, and I get the joke. And he looks surprised and laughs even harder, because he sees I know the joke, and then next thing you know there's Iosef and me and two dozen of the strangest Stardwellers you can imagine having a big belly laugh when the police show up. They didn't know what to make of it. Some days I still laugh 'till I cry.

So Halloumes, the snake-man, he says they're "visitors" from the Stardwellers, and, well, all this is in the police report, so I won't talk about it. You can look it up. But I got the joke, so they kept talking to me even later. I got the inside news. When I would have been at school, I was talking to the visitors instead. When I would have been getting a job, they invited me to travel with them. When I would have been having children, they asked me if I wanted to become a Stardweller.

I miss Iosef sometimes. I send letters sometimes, with pictures, but I never get anything back. I guess he doesn't want to talk. Halloumes says he won't talk to him either. It just makes me sad, but I still send 'em sometimes.

They tell me I'll have another thousand years or so before my mind wears out. I don't have the slightest idea of what to do with the time; I just know I want to see as much as I can before I go.

I Am Not Your Mother

The Mother of Ships settles into orbit. The first of the Ziz-class bioships, she is over a kilometer from end to end, and well over three thousand years old. The Mother of Ships is a grand old bitch, and she knows it.

She shows her age. Younger ships have had alterations made to their DNA, changing their very species as they add enhancements. The Mother of Ships does not have the best defenses, best wormhole generators – even the best radiation shielding, to the occasional alarm of others. She is a bit too attached to who she is, truth be told, to become much more. Her crew (she calls them "my little fleas") are a bit traditional as well, which is why they're here around this backward little world, hoping give it a hand up into the greatest of existences. She shows her age as a choice. These poor natives still die of sepsis. Their civilization is too variable to support itself for long enough to rediscover antibiotics. She and her crew aim to change that.

She is a little surprised to hear communication coming to her from this world, on radio frequencies. Her crew had ascertained that the natives did not have radio. A cornucopia machine stuck on creating different sorts of nanowire, yes, but not, somehow, radio.

An ancient computer from a prior cycle of their civilization speaks to her.

«Identify.»

"Well hello there yourself, Mister Ain't Got No Manners."

«Confirm identification.»

"Brother. Cancel last message. I am the Mother of Ships, of the Illustrious Stardwelling Armada." She repeats for confirmation, and puts on her most polite harmonics. "And you are?"

«Please hold for a message from our planet's leaders.»

"Oh, this oughta be good." All of her thoughts are archived as a matter of course, but she flags these moments for special consideration by her crew later on. Perhaps with popcorn.

Recordings play in multiple languages, all of them from Old Earth. The message is one of friendship, with an undertone of menace. The old system continues:

«If you come in peace, you are welcome near our planet. Do not attempt landing until--»

She cuts it off. "Save it. My crew is already on your surface."

«You must withdraw them immediately.»

"...And if I don't?"

Targeting radar from some previously hidden source locks onto her. «We will be forced to take defensive action.»

"Lord save me from rhetoric." Did words like this ever fool anyone? Defensive? She drops the polite harmonics. Damn thing probably can't hear them anyway. "If you're gonna shoot, shoot. If not, pipe down and stand down."

«This is your final warning.»

"Blow it out your ass."

It is a minute or two before she detects the launches. Missiles, with more than enough range to reach her in her low orbit. Multiple nuclear warheads each. She disables the electronics and then the explosives with light touches from an inversion beam. She transmutes parts of them into hydrogen, and the resulting puffs of gas blow them kilometers off target.

"What else you got, you old throwback?"

More missiles, fifty in all, none any more of a challenge than the first. Many rockets even explode on launch, luckily without triggering their warheads. An ancient laser array fails spectacularly to activate, causing a small forest fire. A railgun hidden in a mountain melts itself into slag and collapses down its hole. A burst of data-virus that she brushes aside like a cobweb. Nothing else comes for a minute or two.

"You trying to consult with your generals?"

No response.

Her tone softened. "Look... They're all dead. Those nations you played those messages from? They're all gone. We think it was fullerene toxicity. I'm sorry no one told you. No one on your planet knows you exist."

«Enter code to reset mission objectives.»

"Look, Is there anyone home there? Are you a digital intelligence, or am I talking to a recording?"

Silence, then:

«I have no one.»

"Aw, hell."

«Repeat?»

“You may be a lost little kid, but I’m not your mommy. Look, no hard feelings. You were doing your job. We’ll probably put you in a museum somewhere. If you have a self-destruct code, I suggest you not blow it, but I can’t stop you.”

There is a long time for consideration. Circuits don’t last forever.

«I think I will prefer the museum.»

The Mother of Ships welcomes her beloved “little fleas” back home and tells them the story. Some of them suggest decommissioning the ancient war computer, but she puts her foot down (metaphorically, of course) and the consensus moves her way. There is no reason to put this intelligent being to death. The Mother and her crew will have many more years here, working to improve the life of these people, and such decisions can make for an auspicious beginning.

The Divide

Prologue

Once upon a time, two great empires discovered one another in the long and sumptuous heights of their powers. So vast and confident were these nations that war was passed over as uncouth, and a delicate peace was entered.

The world became as a carefully-pruned garden. Countries were chosen for beauty or purpose. All that grew was beneath the eye of the empires, and they too were shaped as plants in a bower.

Still, each empire foresaw the distant coming of its own end, and so sought to secure its place as foremost. Their delicate maneuverings they hid from one another as the tree hides its roots and slowly cracks the stone.

Seasons turned and years passed, and these two mighty trees strangled one another with their roots. The seedlings of these empires vied still with one another, long after the old trees had succumbed to rot and decay.

To this very day, none can gain the upper hand. Yet there is pride, and there is fear, and the slow, gnawing unease that drives these many children against one another for the crown that they believe might still be theirs.

Move in secret in the garden of empires. You are not safe here.

Your Characters

Infodump: The Divide

Civilizations: The Builders of the Great Beyond, the Eternal Masquerade, the Association of Stored Humans, the Cognitive Union, the Association of Eternal Life, and the Independents.
Themes: Intrigue, Empathy, Magnetism, Comprehension, Romance
In This Setting...
...characters have limited use of physical action
...characters face smart and savvy opponents
...core values and mission objectives often conflict
...characters are inside a loose, confusing hierarchy
...characters face distant but inescapable consequences
...most NPCs appear more than once
...there is a serial feel to the game
Age: About 50,000 years
Progress Rate: Slow
Closed Loops: Yes, hard.
Wormholes: Yes, local.

You work for an intelligence agency – in other words, you're a spy. You might be the sort who plots and plans. You might be the sort who woks undercover. You might be the sort who interprets data. You might do any number of different things. The key is that you work for your government to uncover what other governments are doing, and determine whether you can take what you want without someone else noticing and/or getting there first.

The backdrop for this slow conflict is the League of Independent Worlds, a neutral ground where visitors from all civilizations are welcome. Outclassed in most areas by its rivals, the League simply tries to keep the peace as tremendous social pressures and valuable secret information pass back and forth through its territory.

Games set in The Divide should begin by creating the character group as a whole. In some settings you can afford to make individual

characters and have everyone thrown together by circumstance. That won't work here. In The Divide you'll need to come up with your characters' working relationships first and figure out individuals from there.

Here are a few possible working relationships:

- Your characters are diplomatic contacts for your respective governments. You're the people who share information and try to come to a resolution... but it would be nice if you came away with an advantage too. Some of you might be bodyguards or attaches rather than diplomats.
- You are senior field agents working for different sides, all living in the League of Independent Worlds. You collect and trade information to benefit your side. You are also the people trying to determine what side is behind which events. You undoubtedly have schemes and plots aimed at each other's civilizations, but it's nothing personal – it's just business. Paranoia runs high. Ironically you may trust each other more than you trust your officers back home.
- You are all analysts and spin doctors working for the same side, which may include 2-3 allied civilizations. You are the group that examines enemy media and creates responses in order to shape public opinion in the League of Independent Worlds. This sort of game is particularly low on physical action, concentrating more on creative politics and media maneuvering.
- You are an extraction team. You're not exactly spies yourself, though some of you might have a stealthy or social skill-set. Instead, you get your spies (and occasionally turncoat agents) out from the other side with a minimum of fuss.
- Your characters make up a deep cover team. You have infiltrated a rival civilization in order to gather information and return it to your handlers back home. If you are all in contact with one another, chances are excellent that something has gone wrong – you will need to get out, fast, and you may not be able to escape with your lives. Chances are excellent that some of you have spy meshes.
- A challenge for the GM: two small games run in parallel, with each group playing a different side in the conflict. This can be done at the individual agent level, where the characters are spies in the field, or at a more political level where the characters are diplomats and policy-makers. This game is competitive by design. It's easy to imagine people switching sides as the game progresses, simply by going to the other game.

Characters in this game are practically guaranteed to be rivals at some point; perhaps for the entire game. Players who expect a traditional "adventuring party" or "special ops team" setup are likely to be disappointed with a game that pits characters against one another.

At the same time, the competition in this setting is rarely physical. Characters who assault one another will blow covers, lose face, and end up arrested, jailed, or exiled. No side wants to recruit a loose cannon. Undeniable confrontations between agents (including physical combat, mesh-hacking, or memetic assaults) are best used at the climax of an adventure, not as a standard part of play.

When creating characters for The Divide, keep Stringtech at 3 or lower. Certain characters from the League of Independent Worlds might have Stringtech higher than this, but not the player characters.

If you have a lot of players interested in being scientists or engineers and making huge advances in the game's technology, this is probably the wrong setting for that. The pace of scientific progress is very slow in The Divide. In fact, it's slower than in any

other well-connected setting. (Sublight's progress rate is slower, but they don't have wormholes.) This setting's technology is fairly static and only improves over the course of millennia.

Commentary on The Divide

We haven't yet said which civilizations are on which side of the titular "divide." That's for you to determine. There is no "natural" split, though there are some civilizations that have a built-in antagonism toward each other. Chances are excellent that some of the civilizations will change sides over the course of the game. Knowing your civilizations and having a good feel for each of them will help you create a more dynamic and believable setting.

The Replicants and Stored have a built-in conflict, since the latter came from the former. The Replicants continue to copy themselves, which from the Stored point of view is killing their citizens every few days. Both of the two worry about the Builders, who have their own unique take on immortality.

The Union and Masquerade are the setting's heavy hitters. They are diametrically opposed when it comes to views on freedom of thought and the need for surveillance. Both sides intrigue the Gaians and would like to have them as an ally. However, the Gaians, with their love of peace, refuse to ally with anyone warlike. These two civilizations must proceed visibly toward peace while secretly working to overcome one another.

There might even be three sides, if you were interested in a more dynamic balance between civilizations. There's good reason for the Replicants to have a large and far-reaching power base. Would they try to recruit their long-lost "cousins" in the Stored, work against them in the digital realm by recruiting the Builders, or branch out in a different direction with the Gaians? There is no canonical answer here. The only thing that matters is what you want to do with your game.

Sample Plot Seeds

(insert about 4 here)

An enemy agent shows up on your doorstep asking for political asylum. Is this a defector or just someone running away from consequences? What will you tell your employers? Who is coming after this person? What information do they have that you might want, and how do you ask without tipping your own hand?

Command is running a false flag operation in an attempt to get your opponents to turn on each other. Your team must go deep undercover with spy meshes and false identities, and it will be very difficult to get everyone out safely. Above all, you must leave no evidence of who you really are.

The opposition seems to know exactly what you're doing and gets there before you do. Your every operation has been foiled for the past month. How do they know? Is someone talking? Do they have your house bugged? And why are they showing their hand so blatantly? Why not miss just a few and let you think they're just that good, instead of hitting every operation and letting you know they have an inside line?

The same person has been noticed at several of your operations in the past year. Reporter? Enemy agent? Would-be spy? Observer from the Independents? How much energy can you afford to spend on this before the opposition notices your interest?

A subtle memetic virus moves through the local populace. It seems to be waiting for a particular trigger event, and while the

Independents will fall for it, your team is too well-trained to be overcome. The question is where it came from and what it's doing. It's not severe, it's not fast-moving.. is it a distraction?

Command has identified the mole in your team. You've been instructed to take maximum advantage. Don't kill the mole, but feed out some false information, find his or her contacts, and above all don't let the mole know that you know until it's too late to do anything about it. Comedic possibilities abound. Bonus points if you can pull this off with the mole being one of the PCs.

Motifs

Human Nature Doesn't Change: Advanced technologies may expand our horizons and our capabilities, but in this setting they don't change our basic behavior as human beings. We still scheme and betray, claw and posture for power, care about appearances, and work to overcome rather than appreciate.

The Distance To Home: To use the Replicants as an example: at home, far from Independent space, the Replicants are a fairly carefree and happy-go-lucky civilization. People are friendly and hospitable. On the front, though, things change. Agents realize, years into things, that their sense of wonder, their enjoyment of the world, has slowly bled out, leaving nothing but the job. Regaining that means losing your edge – is it worth it?

Fear of The Other: Each civilization in this setting does things very differently. Each one is afraid of being consumed or shaped by the others, and their citizens carry that fear as well.

Balance of Power: Each of the major civilizations is, at least publicly, committed to maintaining a balance of power so that no one group can overwhelm the others. Privately, each would like to find an advantage, but cannot afford to let the others know.

Shifting Allegiances: If the same civilizations are allied with each other at the beginning and the end of your game, you're probably doing it wrong. On a more personal level, many characters will find the opportunity to change sides or become a double agent.

Personal and Impersonal: The focus is not so much on things that are one or the other, but things that are initially one *becoming* the other. A friend becomes an enemy and "it's just business." A rival civilization goes from distant threat to immediate concern when they threaten your family. Children disown their parents for their actions. Anything that moves from a distant, disconnected, impersonal factor to an immediate, emotional, personal concern (or vice versa) makes excellent fodder for this kind of game.

Plausible Deniability: You will often be asked to do things that your government cannot be seen to do. Sometimes this means that your enemies would hunt you down. Sometimes it means your own people would do it. Which worries you more? Which would be worse?

Inspirations

The Divide is set in the future, but rooted in debates about morality, openness, and spying that are very important to the 20th and 21st century. Here are a few examples of the stories that specifically influenced us when writing this setting.

Tinker, Tailor, Soldier, Spy: Both the original BBC miniseries and the more recent movie. The movie is shorter and more accessible; the miniseries is slow-moving but also excellent. Few things show as good a picture of the spy game, though the CIA actually has a web page nitpicking the accuracy of the movie.

Ronin: Right up there with TTSS for its accuracy of depiction. ***Manhunt*** has also been lauded for showing how the CIA worked.

The 39 Steps: Not the more recent children's series, but the slow-moving film from 1935 that is a predecessor to ***The Manchurian Candidate*** (another good choice). It's particularly interesting in that the identity of the opposing side is never revealed.

Three Days of the Condor: "Who can you trust" is the central theme for this movie.

If you don't know the history of ***WikiLeaks***, it's worth your time to read up on it. It's not so much what they do and how they do it that is of interest for The Divide, it's how world governments have responded to the leaks.

The Divide Fiction

Memoir of a Spy

The infosphere tells me that back before the Diaspora, agents like me would meet near a pond, feed some ducks, say a few words, go along their way. There would be a conversation along a bridge or a coded exchange, hand-written or typed. Eventually people developed one-time pads, shortwave radio, encrypted e-mail. Better and better ways to trade secrets.

I don't call those the "good old days." They're too old for most of us to even remember. I had to go out of my way to look them up – those things happened on Earth, for God's sake.

These days it's data printed on a microdot that the waiter leaves on your glass, and you swipe it off with your thumb as if it's just something the dishwasher missed. It's a long conversation encoded in the moves in a chess game in the park. It's the flashes of advertising that one side buys and the other side decodes with signal memetics. It's viruses with messages snuck in their DNA – you get a cold and you go to your handler instead of the doctor. We don't shake hands out of formality, and we don't use antibacterials. This is the good old days. This is like it was ten thousand years ago.

We get off this easy because of where we operate. The Independents didn't just outlaw ubiquitous surveillance, they made it damn near impossible. When we operated on our own worlds, or in the Cargo Cults, it was ridiculous. You sneezed? The enemy knew it before you wiped your nose. Cameras everywhere, smaller than a flea. Constant DNA analysis, airborne and waterborne. Every frequency monitored. Every act fed into pattern-recognition buffers with a million intelligences conferring – well, that we still have, I suppose. There's just not as much information coming in. If we want to work in Independent space, we have to play by their rules.

It brings us down to their level, too. I'm sure the Indies know that. We'd be crushing them in the business if not for The Ban. Their social theory just isn't up to snuff. The Ban brings it all back to the days before perfect surveillance.

You wouldn't believe the shit we had to go through before the Independents. How hard we had to work to hide every damn thing. This is like going back to the Iron Age, like puling a revolver on someone because you can't find the charger for your laser. I like it, even when it pisses me off. It makes me feel like I'm more than just a piece in some superintelligence's game.

Makes me almost sad for the day when one side finally wins.

Building the Future

The office is large, with a dozen knickknacks and remembrances on the walls and the desk. I reach across the desk to shake hands

before taking the seat offered to me. "Thank you for taking the time to meet with me, Senator."

He smiled comfortably. "You know, it almost didn't happen – there must be some translation error, your title showed up as 'Bricklayer' in the documents for today and I had to double-check." We share a laugh.

"Well, thank you for checking." I transition with an expression of gratitude. "I understand that you're taking a big risk by talking to me at all."

"Not at all, Madam Ambassador. It's time that a hand was extended in peace to your people."

"I'm glad to hear you say that. And please, call me Comala."

"Comala it is. What can I do for you today?"

"I understand you serve on the Immigration committee. I'm interested in negotiating for greater mobility for my people in the League of Independent Worlds. Many of our citizens are interested in visiting and traveling on your worlds. Since you serve on the subcommittee for interplanetary relations, I thought you might be a good place to start."

"The process isn't any more difficult for your citizens than for any others."

"Yes, I'm familiar with the process. But we've noticed that there seems to be a limit to how many of our citizens can be here at once."

"That's correct. Very perceptive. Yes, we specify a maximum of ten thousand citizens from each other civilization that may be on our worlds at once. It's a holdover from the early days, when we were concerned about infection, wars, memetic plagues…"

"Excellent, that will make things much easier." I smile pleasantly. His expression tells me that he knows he has misstepped. He covers it as quickly as he can.

"M. Comala, I'm not sure that's true. Your worlds may be able to adapt quickly to social pressures and a change in the times; we in the League are not so lucky. It can take a lot of work to change a law."

"I know, Senator –"

"Please – Titus."

"Titus. I know that changing a law can be time-consuming. I'm not here to ask you to spend your effort on convincing others, or to buy your political clout. All I'm looking for is your agreement that the change should be made."

Senator Titus of Andromache looks disturbed and suspicious. "Tell me, M. Comala, when you say that your citizens are interested in visiting, how many are we talking about? And are you asking on behalf of the people, or on behalf of their government? Or is there a difference when it comes to the Union?"

"No, no difference. We'd like to double the limit to twenty thousand." I read the concealed concern on his face. "Perhaps over the course of three years, with a trial and review period." The concern recedes – his term limit will be over before then.

"Well, that does sound fairly reasonable to me. Should a matter like this come across the floor, I don't see any reason to push against it." I smile. He still looks nervous as I stand and he shakes my hand.

"Thank you so much, Titus. I'm so glad to hear. I should be on my way, I have a lot to do today. If you ever want to visit the Union, please, just let me know. We'll take good care of you." He stammers out a pleasant goodbye, and I leave the door just a little ajar when I go.

He probably has an inkling – after all, he serves on the intelligence committee as well. He's probably heard that the Union works together on everything, from public works to intelligence gathering. But he doesn't know how much, and it's all suspicion, and it's deniable anyway, and he likes being magnanimous. Watching him for the past few years, he's a man who values his word. If he says he'll let it pass, it will pass. We already have the rest of the votes, and someone to introduce the bill.

You can't build a tower with just one brick, as they say.

The Mole

"We don't know how they know, but they do," said Emeka. "Evidence says they've moved to block this op and the next two." Her mask was flush with discomfort and embarrassment.

"How sure is Evidence about this?" Rufaro asked. She drummed her fingers on the desk.

Andile butted in. "Four sigma. No real chance of mistake." Andile's mask was flat interwoven strands that went all the way to his waist. Patterns streamed down them. It was a nice effect; calming and reassuring on most days. It portrayed confidence. Rufaro wanted to ban it.

"No, I guess not. So the question is, how do they know about the third one?" mused Rufaro.

The room was quiet. Rufaro spoke again, her voice stern: "I asked, how do they know?"

Emeka began, "Evidence isn't sure--"

Rufaro slammed her hand down. "Well I sure as hell am! We have a mole, that's how! A leak!" Her finger stabbed out at Andile. "Because we hadn't even started on the Gainax operation, and you're telling me it's four sigma that the Union already knows about it!" Andile was unruffled.

Farai, thoughtful until now, spoke up: "What if it's in their projections? We all know they've got us beat on psychohistory."

Rufaro didn't even look at her. "Farai, all due respect: bullshit."

"Now hold on--" Farai started, but Rufaro talked over her.

"Gainax was randomly generated. That's why you all think it's a crummy op – it is. The timing, the target, the method, you all argued like hell against it because it didn't make sense. You're damn right it didn't make sense. Futures gave me that op because she thought we had a leak – well, guess what!" Rufaro stared around the room, making eye contact with each junior director in turn. "When someone 'predicts' an operation you haven't started and didn't even design, you have a leak!"

Emeka practically stammered. "What do we do?"

"Find the goddamn leak!" Rufaro left the door open on her way out.

Rufaro's mask was dark red and practically boiling. Around the first corner she calmed herself, adjusting her mesh to keep her emotions in better check. She was not a woman known for emotional

outbursts. No reason to have people see her angry in the hallway. A few turns later she knocked on a door labeled "Futures".

"Come in."

She opened the door, entered, closed it, sat down heavily in a comfortable chair. Unathi was coming out of a deep reverie. Rufaro took the time to read and adjust her own mental indicators.

Unathi woke fully and poured a glass immediately, then another for Rufaro. Both women were quiet.

Unathi spoke. "Leak?"

"Yeah." Rufaro sipped. "Four sigma."

"I knew their projections were too good."

"At least now we know."

Unathi laughed. "Right. Sure. Good luck finding the mole."

They drank in silence for a moment.

Unathi leaned back. "You know, the Union doesn't have this problem."

"Yeah. Or free will."

"I'm not kidding, Rufaro. Our commitment to the anonymity protocols is biting us in the ass. It was just a matter of time until they got a mole; it's going to be impossible to find. The home office will recall us all because of this. They'll replace us with less experienced agents, and the Union will walk all over them."

"Is that your official prediction?"

"Kill the protocols, Rufaro. The Union's eating our lunch."

Rufaro hid suspicion and put down the drink. Her mesh kept her calm and focused. "Well, thanks anyway for the advice." She turned to leave.

"Rufaro. Sacrificing for your principles is your own choice. Don't make it mine."

The Fingertip Manual

Greetings[gracious] and welcome[sincere] to the service[honorable] of the Masters[honored][wise][worthy]. You have chosen[wise] and been accepted[wise] to serve as one of the Fingertips[dishonorable] of the Masters. This manual[revered] will instruct you in the tasks[dishonorable] you are about to undertake.

The Fingertips are so named[wisely] for their dual purpose:

Purpose 1: To Feel[receptive]

It is the way[confused] of both our allies and our enemies to act silently[secretly], in a darkened[false] garden. Without light[truth] or sound[honesty], one must feel about carefully, lest one damage flowers[citizens] or things of beauty[value], or harm oneself[our nation] on a rose's thorns. We must seek to grasp hands[share information] with both our allies and our enemies, to seek their face[true self] and know their expression[intent]. With careful hands, one can learn much without danger. Quick[rash] hands will find thorns[death] or frighten others into action[foolish].

The Fingertips' duty[honorable] is to feel the shape of the darkened garden.

Purpose 2: To Touch[projective]

Once one has mastered[lesser] the art of feeling[receptive], one can move[progress] to touching[projective]. Fists[crude] must punch, hands[soft] must soothe, but fingers[versatile] may take many actions. They may beckon, they may direct[hierarchy], they may lift[aid], they may caress[lull] or strike[harm]. Only fingers can mold the soft clay[society] of our world.

The Fingertips' duty[dishonorable] is to touch[change] others.

In the diligent pursuit[honorable] of your duty, you will have cause to interact with both our allies and our enemies. You will find little in common with them, and yet you must both feel[know] and be felt[dishonorable], touch[harm] and be touched[honorable]. You will walk in the darkened garden and mold the clay there. You will prune the garden and fire the clay.

As the Fingertips of the Masters, you alone[together] have this opportunity[honorable].

2-1-3

Today

Seneca is reconstructed in a flash, atom-by-atom, each electron placed in its proper orbital. When the process is over, a jumpstart signal from Seneca's mesh restarts her – her, this time – brain. The process produces a tingling feeling, somewhere less than pin-and-needles and more than goosebumps. It is the first sign the nervous system receives which indicates that one has been replicated.

It is once that feeling subsides that Seneca's diagnostic routine brings to her notice a second sign of replication: five missing days.

Seneca opens her eyes. Otho stands over her.

"Ready to talk?"

"Yeah."

"We had to restore you from backup."

"I don't remember what happened, of course. Any more of me around?"

"No."

Seneca nods, thinking, *Deniability*. "Do you know anything?"

"I couldn't tell you."

Deniability. "What's up next?"

"Back to your post. But take a day to relax."

Seneca sits up, hops down from the table, and stretches. The process leaves no physical need to stretch, but many people do, for purely mental reasons. There is tension in an unrecognizable loss. "I'll be fine. As far as I'm concerned I just had a weekend."

"It's late. Take a day."

"If you say so."

Seneca didn't take a day.

Yesterday

One hundred twenty-one instances of Seneca commune, connecting to each other and to the Independents' bizarre and counterintuitive Infosphere.

Seneca reaches reach toward the Stored, seeking data to liberate.

The complex that is Seneca is newly built for this, redesigned and redeployed for it. B's many selves, some male, some female, some ungendered or continuum, interlock on the mental plane to form a group-mind without the need for an intermediating lens, without the slowdown it would produce.

Seneca's many selves form a sleek edge that cuts surgically through the thin spider web of the Stored defenses. Other selves hold the web and keep vibrations from passing further, to avoid alerting the spiders themselves.

The data is copied and retrieved. It will eventually be clear that something had happened, but not what, nor whence the disturbance came, nor where the data went. The many selves of Seneca knit the web back together deftly.

And are found. Unexpectedly.

And are assaulted with furious force that they were not designed to repel.

And nearly compromised.

And the final option is taken, to prevent the self from being taken, to keep the agency safe, to (in some minds) literally save the soul. Seneca is extinguished, physically, quickly, completely. Dropped into a waiting bed of replicators, the final failsafe. Gone in digital space and in analog.

There will be outrage and accusation, but no interrogation. The Seneca who knew is gone.

Tomorrow

The early evening is red, almost purple, with the sunset. Light filters in through diamond windows.

"You came into work." Otho stands neutrally at the wall inside the security locks. Seneca passes the locks and glares. She's just passed through two rings of protesters – one physical, one dataform – and a police cordon that promised to have words with her at her home.

"You made me female this time to keep them off my back, didn't you."

"The Stored are still traditionalists. So are the Indeps. Their rank-and-file are less likely to attack you this way."

"I have too much professionalism to tell you what I think of that move right now."

"Let them be backward if it keeps us safer."

"You can go right back there with them. When does all this shite get unlocked for me?"

"Not until your tour's over. If you retire. Which you can, now."

Seneca moves past Otho, her eyes sharpening. She pauses at the next door, facing away.

"What did I do, Otho?"

"I couldn't tell you."

"Do you even know?"

Otho has not even the decency to look guilty, but does flicker uncomfortable for a moment. "I couldn't tell you."

Teal and Orange

Hokulani was a city planner with an interest in psychohistory and a love of travel. Close to his second century – young, but not so young as to be inexperienced. Past first love and second, past first family and grandchildren, and looking to reinvent himself. Gregarious, with casual friends but with no strong ties at the moment and his families moved off-planet.

In other words, a perfect candidate.

Recruitment went as smoothly as it could. Travel to Independent space was rare. This would be an unusual opportunity for him to gather both historical and psychohistorical information at the source. A chance to meet the rich and famous of Independent culture. The rest of the job – tradecraft; spy-work, to be blunt – would come in time. Hesitant but intrigued, Hokulani agreed to a four-year tour. Gaia Comprehension-Of-The-Other Coordination assigned him to training, then to an embassy in Independent space.

Once there, the job slowly gnawed at him.

Gone were the bright colors and many shades of Gaia. Independent space was bright, but in shades of cyan and grey and, here and there, orange highlights. Independent space was loud, but with engines rather than conversation, thrusters rather than rain and wind. It was busy, but with bureaucracy and science rather than wild growth and competition.

Gone was Gaia's intensely, almost fractally detailed infosphere. A classical and minimalist aesthetic held sway. Instead of lenses that one slipped into like a warm pool, that delivered information like sweet and spiced tropical drinks, the Independents used holographic displays. Clean lines. Functional. Beautiful, but, to Hokulani, sterile.

The Gaian embassy itself was a mishmash of home and local. The local air was not conducive to Gaian flora, and their botanist's visa had been revoked after an "incident." Accordingly, the malnourished plants at the embassy's entrance were just enough to remind Hokulani of both the mushroom-trees of the homeworld, and of how very, very distant they were.

Hokulani sought diversity and connection through the other Gaian operatives, and found them all dulled by their time in Independent space. He sought the same briefly through rival operatives, and pulled back before he was burned. The Replicants were too driven here, the Masquerade more surface than hidden depths, the Stored slowly becoming less human to save the humanity of their kin. The Union... somehow the phrase that fit best was "almost, but not quite, entirely unlike tea."

His work was excellent. His analysis of the Independent architecture and the ways in which the other civilizations had incorporated it into their embassies (or chosen not to) gave critical insights into the minds of their designers and their inhabitants. No, his work never faltered, until the day of the break.

COTOC blamed it on a flaw in their initial analysis of him. The paperwork stated that there had been "understandable but inaccurate extrapolation from an incomplete baseline" and "a misreading of

surface cues" in his recruitment. A stressful job was unalleviated by vacations unwisely taken within Independent space. He had no friends, and little to no communication with hom. Stress built. Lenses were misdiagnosed and assigned too late. The upshot was that Hokulani, a well respected analyst and secret agent, broke down sobbing at an official state function when he discovered what one particular piece of his work had achieved.

Hokulani was sent home for recuperation. An honorable discharge was arranged, though with no explicit opportunity for future service, thanks to the compassion (and perhaps trepidation) of those in command. COTOC treats its retirees well, and Hokulani was eventually grateful for their assistance.

Hokulani found solace and joy in his great-grandchildren. It would be many a decade before he could consider Independent space without a shudder, and he found that he was more averse to cyan for years afterward. When asked in a recent interview about what was on his mind before his break, he said only, "I don't want to talk about it."

The Powder Keg

Prologue

Once upon a time, in the age of scarcity, there was a terrible war. They called it the War To End All Wars, and they half-believed it.

All the cleverness of science was bent toward the making of more and more fearsome weapons, to frighten the enemy into losing hope.

Once in a while it even worked.

People would become frightened, lay down their, weapons, and raise their arms in surrender. But not for long. Never for long.

We fear the other. We fear what they might become, and what we might become beneath them. This fear is why we fight, and no weapon, no matter how terrible, will change that.

Some fears are justified.

Left unchecked, our enemies will create weapons so horrible that they will kill us all. Already we can warp societies, destroy stars, poison trillions in body and mind. They cannot be allowed to do this. Humanity itself is at stake. Our enemies, barely human themselves, cannot see this.

We are the last hope of humanity.

Those who stand in our way will find that it is they who should be afraid of us. This will be the final war.

Infodump: The Powder Keg

Civilizations: Mechanica, the League of Independent Worlds, the Replicants, the Nanori, the Daoine
Themes: Action, Intrigue, and Terror are especially appropriate. Wonder is probably best left out.
In This Setting...
...characters face physically powerful opponents
...characters have limited use of social acumen
...core values take second place to mission objectives
...characters are inside a strict hierarchy
...characters face immediate consequences
...some NPCs appear more than once
...there is a cinematic feel to the game
Age: About 4,000 years
Progress Rate: Fast
Closed Loops: Yes, hard
Wormholes: Yes, remote

Your Characters

The story of The Powder Keg is that of the largest and most terrifying war ever waged. There are several different kinds of war story, with appropriate character groups for each. Here are some options for the group, as well as the character types that fit well in that group.

- Your characters are troops on the front lines, serving their civilization by risking their lives. You are the first to contact the enemy, and fatalities are likely. Soldiers, medics, chaplains, technicians.
- You are a spec-ops team, a group of specialists each bringing their own skills and histories to the missions. Each character is a soldier, but each is also uniquely talented. Sharpshooters, spies, scouts, hackers, engineers, leaders.

- You are "young veterans", military middle-management. You are experienced but not yet highly promoted (why is that?) or highly skilled and quickly promoted but not yet experienced. You train and lead, you decide on the tactics within the generals' strategies, you take responsibility when others cannot. Character types are similar to the two groups above, but either more highly ranked *or* more experienced (not both).
- You are a scientific research team, looking to create an advantage for your side. Pressures are high and tempers can flare, but at least you aren't on the front lines... yet. Researchers, engineers, psychologists, desk officers, spies, friends.
- You are an "embedded" news crew and the soldiers tasked with protecting them. Naturally, something will go wrong. Will you bring it to light or cover it up? Tensions within the group are likely to run high. Writers, videographers, communications officers, soldiers, medics.
- You are generals and political leaders dealing with the war from a "bird's-eye view." Your story concentrates on making the choices that will preserve your civilization without sacrificing its values. Commanders, veterans, politicians, analysts, family and friends.

Keep in mind that, while propaganda is important, the civilizations that make up The Powder Keg are not metatech powerhouses. The war is fought with nanotech viruses, not metatech ones. This setting is intended to be viscerally physical. (Not that you *couldn't* have a setting based around open metatech war, just that this one isn't it.)

When creating your characters for The Powder Keg, keep Metatech at 3 or lower.

Spy stories are possible in this setting, but it's an *explosive* setting. The Divide is about long-term spy stories; The Powder Keg is about spy stories that end up in a run-and-gun.

Commentary on The Powder Keg

Sufficiently Advanced is a strongly optimistic game. Beyond the phenomenal gains in length and quality of life, beyond the various gadgets and gizmos, there is the fact that, in most settings, over a dozen planets worth of humanity completely failed to kill themselves on the route to high technology. There were no microscopic black holes generated, no uncontainable nanobloom events, no super-virulent suicide memes, no infosphere-wide… you get the idea.

In some opinions, it's only a matter of time until there's a major disaster – and this setting's clock runs fast.

Each of the five civilizations in The Powder Keg is constantly pushing the boundaries of high technology. However, that's not the big reason why this setting is in trouble. It's in trouble because no one in this setting has much Metatech savvy. The most effective techniques of Metatech, like societal planning, subtle uprising suppression, and psychohistory, are missing from the setting. Higher-quality government methods are absent.

High levels of Metatech take the beautiful, wild, and chaotic profusion of variety in future society and carefully align those factions to coexist with grace and synergy. A "gradient" of Metatech can create total peace even more effectively, as the more skilled snuff out certain violent factions among the unskilled. For civilizations like the Masquerade, where high Metatech is ubiquitous, the most powerful and wide-scale conflicts happen "behind the scenes." Everyone knows what's going on, but the only casualties of the great currents of conflict that sweep the civilization are people's opinions. The sea has tamed its waves, but gained immensely complex currents.

With this group, that's not the case. There are waves in this sea of humanity. Large waves. Giant waves.

Rogue waves.

In The Powder Keg it's only a matter of time before total war breaks out between factions who can devastate entire star systems. The scariest answer to "why hasn't it blown up yet" is "no reason whatsoever." If I were running a game in this setting, the cliffhanger at the end of the first session would be war breaking out.

None of the five civilizations in this setting has a strong reason to love one another, or to particularly hate one another. Play up the level of mistrust that people have of the Nanori (physically) and the Replicants (existentially). Emphasize how the Mechanicans distrust and fear all these people who might not be completely human any more. These are frightened, worried people with their fingers on the trigger of incredible weapons.

In a two-faction conflict, the Nanori and the Replicants are most likely to ally with each other, with the Mechanicans and Daoine siding together and the Independents either staying out or selling their services (probably both, given the structure of the civilization). Things can easily transition to a five-sided conflict and back as the tides shift and entire planets are wiped out.

Unlike in The Divide, having balanced sides is not necessary in this sort of game. This isn't an ancient setting where balanced powers have been subtly maneuvering for millennia, this is an action-packed setting where things get blown up and bombs take out entire planets. The danger is not an obscure political trap, it's up-front and clear as wormholes drop dozens of starships into your system. You can play balanced sides against each other, or one "evil" civilization against the others, or one "good" civilization being ganged up on. You can also bring in all sorts of moral grey areas, but unlike in The Divide, grey areas aren't the Powder Keg's bread and butter.

A strong handle on the technology will be key in this setting. There's the potential for a lot of "fridge logic" if the GM doesn't consider the ramifications of things like wormholes and relativistic-velocity asteroids. It will also help to have players who don't feel like they have to have one PC from each civ, or who can find a side that they agree with.

Sample Plot Seeds

(insert about 5 here)

You are the reinforcements, and the battle you're wormholing into is pure chaos. It's a young solar system full of dust and asteroids on weird orbits. The other side is spoofing your signals so you can't tell friend from foe at any reasonable range. This has the potential to be a three-part story, with the first part dealing with the battle, the second dealing with the mopping-up action, and the third dealing with why they were fighting over this system to begin with.

It's a truism that there are no "enemy lines" in a war with wormholes, so let's say that you're stuck in what suddenly became enemy territory. An interdiction field keeps you from just wormholing out. You'll need to run for the edge of the field. Keep your head down and your acceleration up.

You have an apocalyptic weapon to deploy. Billions will die, including people you know.

You break the enemy in this area and send them running. Now you have a military prison full of everyone they didn't kill before they bugged out. Some are old allies, some are dangerous, some

are both. Can you decide what to do with them before the enemy comes back with reinforcements?

There are hundreds of worlds where humanity once lived, and while archaeologists are pouring over them, no one's really paying attention to them. One of them has the remains of a superweapon that turned the local star into a black hole.

Motifs

War is Hell: Total war between advanced civilizations is even worse. From mustard gas to nuclear devices to nanoblooms to mesh-based virii, the impact of war on humanity keeps getting worse with every technological advancement. This motif comes into play when someone destroys a planet, but it's much more powerful when someone destroys the very mind and essence of your friend before your eyes simply for a few more megahertz of digital territory.

Camaraderie: Adverse situations build unlikely friendships. When you save someone else's life, or even take responsibility for it for a time, that forges a connection. Characters in this setting aren't just working together, they're united by much stronger bonds.

An End to Charades: Political niceties and little white lies go out the window when it's time for total war. Of course, bringing in this motif is only powerful when there is a charade to end... which means that someone has been lying for a long time.

Courage and Fear: Many actions in wartime are driven by these two emotions. It can be difficult to tell which is which. A soldier who mounts an assault may have the courage to face the enemy, or may be motivated by the fear of being called a coward. A commander who calls a retreat may be mortally afraid, or may be showing the courage to act despite the disapproval of others. As has often been said, courage is not the absence of fear, it is the ability to act despite it.

Heirarchy: An army isn't just a bunch of soldiers; it's a chain of command. Characters in The Powder Keg will be taking orders, giving orders, or ignoring orders for the entire game. There's no escaping the hierarchy.

The Changing Self and The Survival of Humanity: This is not about the possibility of all human life being extinguished. Realistically, there's no chance of that – *someone* will survive the war. But what will those survivors be? Will they still value beauty and art, or will they have changed themselves into nothing but war machines?

We Are All Human: ...at least when the war starts.

What Will You Sacrifice: Beliefs are important in SA. They're what makes the civilizations different from one another. Will you give up what you believe in to win? Will you replicate yourself to keep throwing yourself at your enemies? Will you replace your brain to enhance your body's g-tolerance? What matters so much that you aren't willing to give it up?

Inspiration

David Weber has written some excellent military sci-fi. The Dahak series, especially Armageddon Inheritance, shows some truly terrifying weaponry and immense starships. His Honor Harrington series is well-loved and high-tech, but relies a little too much on "space is an ocean." (On the plus side, he actually puts some effort into inventing reasons for it.)

Ender's Game and ***Ender's Shadow***, for the scale of the conflict and the seriousness of the weaponry.

Classics of film and literature such as ***Platoon***, ***Das Boot***, ***Apocalypse Now***, ***All Quiet On The Western Front***, and even Homer's ***Iliad*** can all provide insight into what it's like to be in a war.

If you played any ***real-time strategy games*** like Starcraft, Total Annihilation, etc., you can get a lot out of considering the "corner strategies." What's the cheapest, cheesiest, most cheatery path to victory short of actually using a cheat code? Cook that up and throw it at the characters. This is total war.

Avoid Star Wars, Star Trek, BSG, Babylon 5, and other works that rely on the "space is an ocean" and "space is air" metaphors while ignoring the tactical possibilities of their technology

Powder Keg Fiction

Hailstorm

I watch Sector 12. It's upward, spinward, outer.

I live in an asteroid, with some friends nearby in their own homes. My old brain wasn't good enough for the job, and my body was too fragile, so they upgraded me. I have to say I don't miss it. I lost my senses of touch and smell, but I got all sorts of new detectors – electromagnetic, gravitational, even this relativistic ion sensor that gives me a sense they call "smishion."

You wouldn't believe the view. Call me a rockhead all you want, I can see for miles and miles.

My job up here in the Kuiper belt used to be asteroid detection. The Mechanicans really know how to leverage brute-force tactics – they like to scoop up half a star system and fling it at us a few hundred tons at a time. It's all coming in at high speed from 100 AU out, because that's where the interdiction field drops off. That's where the Tin Cans can actually get stable wormhole portals to open. They throw small mountains at .99c toward our planets. So I'd watch for incoming, and give them little deflections so they zip right out the system without touching anything. Simple, effective.

Then some genius over there figured out that if they opened up the wormholes closer, the interdiction field doesn't keep them from opening entirely – but it does rip any matter passing through to shreds. It keeps all the energy, but loses all coherence.

So they did that. Of course.

I've got Satan's own hail coming down here. Everything from relativistic pebbles to cosmic rays and every size and speed inbetween. It really jams up my smishion.

It took about three hours before my defense lasers were all either overworked or punctured to hell. I fabbed up some compression beams, blew them a neutron prism for wide spread, and pulled that shitstorm down into a cone. The big end's out here, the little end isn't until outside sector 15.

I saved everyone in Sectors 4 and 0. Big Damn Hero. That was just before my primary replicator got hit. Now I sit here and wonder what else they'll throw at me while I see if the replacement replicator works and hope that the bit rot in my primary storage doesn't overlap with the radiation damage in my backup.

I just hope the rockheads in sectors 7 or 15 figured something out too, or in about a day I'll be taking this from both sides, and Sector 0 will be… well, let's just say they won't be around to revoke my Big Damn Hero badge.

Date/Time/Locale

Treeship Handful of Stars
Branch 772 (nonprime), Sunward side, leaf 8
Investigator: Duran Bannal
Date: 1020029293.223
Location: Kholodny system, ~853 M-units from planet Zmei (Superjovian, class II) on bearing 1,4,12 from planet

Please provide a brief description of the incident

Ship encountered a Nanori burst pod in exceptionally wide orbit about planet Zmei. Object failed to appear on all electromagnetic spectra, and was small enough to pass through both the outer thread net and gravimetric scans.

Upon contact with leaf 772-8, the pod's cloaking split and a bloom event followed. Approximately 165 tons of mass from the leaf were converted into nanophage over the course of 200 seconds, most of it in the first 30 seconds. The phage was familiar with treeship power and matter transfer systems, and took full advantage of them in the 4 seconds before red alert was declared and the systems were shut down.

At 34 seconds, the decision was made not to separate the leaf. Gravimetric methods confined the ejecta of the bloom's fruiting bodies and forced tendril motion back away from the branch. Concentrated fire from elements of branches 772 and 775 destroyed the main bulk of the bloom at 141 seconds, at which point the alert was downgraded to yellow. The primary event was considered complete at 240 seconds, and this investigation was launched immediately.

It is unknown at this time what the goal of the bloom was. The relatively low amount of mass consumed indicates a special-purpose device.

How many crew members were involved?

Donnal a'Gawain, Aphidiary Consultant 1st class, was the only human crewmember on the leaf at the time, and was killed approximately 17 seconds into the event. Distributed sentience Uthan Of The Courts was partially caught in the bloom. It later chose reincarnation rather than to retain its partially damaged form.

Approximately 700 aphids, 35 DIs of varying caliber, and 3x107 microboiotics were consumed during the incident.

Has the matter been addressed thoroughly?

No, the matter has not been bloody well addressed. The Nanori have likely seeded the whole system with the blasted pods – where there's one, there's a billion. There's probably some sort of factory for them in the lower cloud decks on Zmei, to say nothing of the gas giants farther out. There's no telling how many grams of sporelated bloom escaped into the vents.

Furthermore, the possibility of a traitor or nanoslave should be considered. In the case of special-purpose devices, separation of the afflicted bodies is considered the customary response. Someone was either trying to be a hero, or was deliberately stalling.

Recommendations

The entire crew should be scanned and quarantined, and the ship should be considered "hot" until decommissioned.

Begin use of gas sweeps when traveling in high-risk zones. The Nanori are becoming more patient.

Donnal's remains are to be treated with the usual honors. Uthan's reincarnation should be informed of its predecessor's courage in the face of danger.

Ignite Zmei and burn out the remaining burst pods.

We Are Legion

"We faced the Daoine, and they proved perilous.

"We live, as our ancestors did, in cities and towns, on planets and moons. The Daoine inhabit vast living treeships. It is easy to perceive these ships as peaceful; that they are beautiful and majestic is beyond doubt. We saw past that facade when their inversion arrays phased deadly antimatter into our worlds.

"Last year we repelled the Daoine. We lost two systems, but defended the remaining thirteen. The Daoine pulled back to lick their wounds. Beyond interdiction range, they escaped via wormhole, and evaded our trackers until we were forced to return home.

"It is our intent to pursue them.

"It's true that space is infinite in extent. There are countless stars and an infinity of dark places. Therefore, the hiding places for the Daoine are likewise beyond numbering. Their ships have no doubt pulled back beyond telescope range – they could even be beyond the Hubble horizon of every world we have. The very idea of pursuit seems foolish.

"However: the Daoine cannot simply hide from us in the blackness of intergalactic space. Their treeships need light, which they must provide. The Daoine use total conversion engines, and antimatter conversion will serve them as a power source only so long as they have a source of matter. They must wormhole into a system, or near a brown dwarf or a rogue planet, or even a dense interstellar cloud. These too are infinite in number, but the Daoine have another weakness that will turn the tide.

"The Daoine are sentimental. They are clever and fearless, as we discovered, but they love their mothers and swear on the graves of their ancestors. The Daoine will never truly abandon something that matters to them.

"We know the location of every place they have been, and we have a resource that they underestimate.

"Even now, our most intrepid soldiers expand our forces at exponential rates. Each day doubles our numbers, new soldiers around new stars, bringing the souls of thousands of us with them to begin the process on new planets.

"When we find the Daoine – and we will, for they will return to those places they once loved when they talked to us of peace and harmony – when we find them, there will such be a vast battalion of our kind that they will tremble to see us in our wrath. The Daoine will have no choice but to sue for peace.

"Our faith gives us the strength to follow the path that they cannot see. We are brave. We are prepared.

"We are legion."

WE ARE LEGION

WE ARE LEGION

WE ARE LEGION!

Flora and Fauna

General, the visitor from the League of Independent Worlds has arrived.

"Thank you. See him in, please."

Incoming transmission, passes security.

"Patch it in."

«General.»

"General! Good to finally have you here. Where are you?"

«I'm here.»

"Yes, I know – uh – your body. Where are you physically on base?"

«Body? Back home. My staff can't trust those containment suits you specced us. I scanned in for the trip.»

"Can't trust it, eh? That's a burr in my britches. Can you have them write up a report as to why?"

«Certainly. But let's get down to business. I'd like to get home before I diverge too far.»

"Agreed. Tell me about this new defensive measure your techs whipped up."

«The counterdiction field. It's a wormhole transit splitter, like a beam splitter is for light. Any wavefunctions passing through the hole get partially reflected – most of the amplitude goes back. We usually dial it so that about 10 percent probability goes forward.»

"Pardon me for not being up on my quantum today; my brain is stacked with bioengineering and troop psych. Ten percent of their troops come through?"

«Not quite. Each individual atom of their troops has a ten percent chance of coming through. Likewise with those rocks the Mechanicans like to throw at us.»

"Ha! That must have been a rude awakening!"

«We still end up dealing with a lot of hail coming at us, but they have to be more conservative. We haven't had the Replicants try anything for a few weeks; we think they're still trying to figure it out.»

"I bet they are."

«When I get back I can arrange for a system to be sent to you.»

"Negative. We don't interdict."

«You…? My techs looked surprised when they sent me through. Now I know why. That seems incredibly dangerous.»

"Oh, absolutely. For anyone who tries anything, it's dangerous as hell."

«Why haven't the Mechanicans just pushed a nuke through at you?»

"They did – once. Our flora ate it to shreds. Within miliseconds it was asymmetric enough that it couldn't detonate. Then they ate the rest of it. You'd be amazed what nanoflora comes up with when it's radioactive as hell. No, as long as the Tin Cans don't solve the antimatter problem, we're good to go."

«But surely the outer reaches of your system…?»

"I see our briefing wasn't emphatic enough. Let me put it this way. We pulled five other star systems worth of matter into our own and let our bots go to town on it. If you could breathe vacuum, you could stand in deep space and get a lungful of nano. We have fifty planets, each with a unique set of nanocultures, each with low enough gravity that the cultures spew out spores and seeds continuously. Our whole system is brimming with artificial life that wants to keep on living. The Mechanicans so much as open a wormhole, and something's going to get through to their side. They throw some rocks, our flora slows it down and eats it. They come in blazing energy, our flora soaks it up. They just plain can't dump enough on us to hurt us."

«I see. Well. Let's consider what else we might have to trade, hmm?»

"Sounds good."

Staring Back

SAM-17 floats near the Logic Wells.

SAM-17 was born female; thinks of herself as "she" and, thus, so shall we. Her mother is SAM-16; her daughter, SAM-18, is safely home and away from the worst of the war. This place too is safe, to the extent that SAM-17 keeps it secret. Let's be informal: Sam.

Samantha is here to check up on one of the greatest experiments of the United Worlds of Mechanica. More sophisticated than the Supercluster Supercollider, more ambitious than the Cosmic Braid, more deeply classified than the Skotos Resonator, it is a device of pure audacity. Sam is one of perhaps a hundred people who know of its theoretical existence, and one of a dozen who know that it was actually built.

Sam and her family have been approached by half a dozen individuals implying an interest in her work. All were convinced to take up other professions. In the old days they would have become involved in licence plate manufacturing, rock breaking, and so forth. These days Mechanica finds more productive things to do with grey matter that can't behave itself.

The view of the Logic Wells is spectacular from a gravitational point of view, which is related to the primary point of the experiment. If you have good enough vision in the electromagnetic spectrum, it can be kaleidoscopic and mesmerizing, but not necessarily illuminating. No pun intended.

Sam worries that one terrible day she will come here and the view, in all manners of viewing, will be static and dull. That there will be no tenuous, beautiful, arcing fountains of particles, no subtle waves interlapping across the continuum. That some tiny disturbance she made the previous day, or months ago, will have pushed the Wells into final collapse, and both their beauty and their purpose will be lost. She has been told that the arrangement of the Wells is robust when it comes to disturbances, but this is not a rational fear and it cannot be conquered rationally.

It would also be an exceptionally bad day if there were to be, say, a Treehugger ship in view, or a squadron of the Clones, or worse. This place is not interdicted – wormholes must be allowed to form and collapse naturally, or the Wells will not fulfill their purpose. Secrecy is of greatest importance in Sam's job.

Luckily, today is a good day for Sam.

Sam's job, you see, is to project those same sort of subtle waves toward the Logic Wells and await a response. At her distance, a response takes minutes. Every day for the past two years, there has been nothing. A seemingly random patter of white gravitational noise. She was told it could take a year, or five, for a response to arise.

Today, there is a response.

"I live."

It is terrifying and amazing, incredible and fearsome. Sam is, to pluck two emotions from a maelstrom, both irrationally proud and profoundly disturbed.

The United Worlds of Mechanica was falling behind, you see.

They could not match the Replicants in their ability to enhance themselves and work in massive teams. They had not the self-evolving technology of the Nanori and the Daoine, nor the mad genius of the League. They were simply being out-thought, out-computed, in the most terrible of wars. Alliance with the Aia was unthinkable, and the Skotadi refused to take sides, so the Mechanicans did what they did best, and moved planets to accomplish with brute force what they could not do with subtlety.

Entropy is information. Black holes have maximal entropy; thus, maximal information. The Mechanicans moved planets indeed, and compressed them, past the point of no return, and set their orbits in a great Turing-complete formation.

SAM-17 was the first being ever to speak with a digital intelligence made of black holes.

She floated, and very quietly contemplated what she would say first.

Sublight

Prologue

Once upon a time, we lived on Earth.

Eventually Earth was not enough. There were too many of us. That's not why we left, you understand; we could never have left in large enough numbers to make a difference in the planet's fate. We left because it was the only chance we had to breathe free again. To start worlds where immortality would not lead to a collapse.

These new worlds were different. On many we could not breathe the air or withstand the gravity, especially after those early, slow, thousand-year voyages. We prepared or adapted along the way. Sometimes the new colonies failed – some harsh worlds have been colonized six or seven times. Some cities are built on the ruins of those that failed.

Each world that succeeded eventually built its own space program, to travel, to explore, to communicate with other colonies. Massive transceivers dot the Oort clouds of our solar systems. Governments, private organizations, and secret societies dedicated to one cause or another operate these transceivers and speak to distant worlds.

As many worlds became more stable and communication increased, psychohistorians finally garnered the data they needed to refine their theories. Soon each world had its own predictionists. We could see which colonies were likely to fail, and which might be on the brink of a great change.

Some groups, called the Great Societies, had goals and dreams beyond their own world. To see another world in pain called out to them – sometimes to heal, sometimes to hasten its demise, sometimes merely to save a chosen few. These societies send skilled and dedicated operatives to push events toward outcomes they desire.

The Great Societies initially traveled to new worlds on Spacer ships, spending dozens or hundreds of years in transit. As competition became fiercer, more committed or desperate Society operatives began transmitting their minds via the great radio telescopes in the Oort Clouds. Allies at their destination outfit them with new bodies.

Now only Spacers still ride their ships, ever expanding the frontier of humanity. We ride the radio waves. We cast our minds from world to world. We are the external influences that psychohistory can never completely describe. We are world-changers. We are life-savers or city-poisoners. We may be criminals, doctors, pacifists, scientists, or soldiers. We are the emissaries of our beliefs.

Infodump: Sublight

Civilizations: All, but focused on Societies, particularly the Darwinians, Hospitalers, Abstractionists, Hyperevolutes, Breathstealers, Peacewalkers, and Organized Crime
Themes: All
In This Setting...
...physical opposition that varies from session to session
...social opposition that varies from session to session
...core values are mission objectives
...characters are mostly outside of hierarchy
...characters face immediate but escapable consequences
...very few NPCs appear more than once
...there is an episodic feel to the game
Age: At least 100,000 years
Progress Rate: Slow
Closed Loops: No
Wormholes: No

We are Travelers.

Premise

This setting posits that faster-than-light travel is impossible. Those who travel between systems must either ride for decades on Spacer generation ships, or have themselves scanned and transmitted via radio. Each planet or system is a unique civilization, each with its own resources, its own character, and its own crisis points.

Because psychohistory is a well-developed science, it is possible to predict potential crisis points. Most civilizations have little interest in changing each others' destinies, simply because of the incredible distance between worlds. Some Societies, on the other hand, have an ideological motivation for changing the world. Society members would originally ride with the Spacers or commission ships to reach their destinations, but as competition at crisis points became more ruthless, travelling at light speed became indispensable. More and more Societies turned to transmitting the minds of their most fervent devotees from system to system, until now all of them do so.

Your Characters

In Sublight, your characters travel from one civilization to another because they are part of a Society with a particular interest in how those civilizations destinies unfold. The default is that all characters work for the same Society, or a few closely aligned ones, but it is possible to set up a more competitive relationship if that's what the players desire. The Darwinians, Hospitalers, Abstractionists, Hyperevolutes, Breathstealers, Peacewalkers, and Organized Crime are the major focus of the setting. Societies that are a little more general (like the Explorers) or less politically active (like the Wargamers) come in less often than those with a specific goal.

Interstellar Transmission

The minds of Travelers are transmitted via radio from one civilization to another. This sidebar details that process.

To obtain a high-quality copy of one's mind requires a destructive scan of the brain. The head is sliced down in layers, each a few dozen atoms thick. Each layer is examined and neuron and axion placement are noted. The entire brain is then run in simulation on computer and its responses checked against brain scans of the original, to ensure a good-quality copy. Because there is no chance to go back and try again, some older Travelers started with inaccurate brain scans and have exhibited serious mental defects. These days a bad copy is almost unheard-of, but each transmission has the chance of introducing errors. Starting with a good copy is essential to avoid mental deterioration.

Once the mind has been modeled digitally, it is sent to the transmitter. Each Society operates transceivers at secret locations in the Oort clouds of each Civilization's solar system, typically half a light-year from the star itself. These facilities broadcast minds to other stars, and receive them as well. Relays send received minds farther in-system, where they eventually reach the civilization's infosphere and are taken in by the local branch of their Society. Bodies are created locally, either biological or mechanical.

Because even the tightest-beamed transmissions spread out over interstellar distances, interception is not unheard-of. Most common are partial interceptions Rival Societies can use these to identify which Travelers have arrived. Travelers who have completed their missions move on quickly, not only to reach the next crisis points, but to escape Cognitech virii targeted directly at their minds.

Travelers are chosen for their dedication to the cause. Transmitting a living person requires exceptional care and effort, and is not done lightly. ***Travelers must have their Society CV rated at 4 or 5.***

Unlike most settings, it is assumed that characters will come and go on a regular basis. Some Travelers may decide to stay on a particular world rather than move on. Others may give their lives for the cause, to be replaced by someone who was inspired by their sacrifice. GMs and players are encouraged to allow character stories to come to a natural completion if it seems appropriate.

Commentary on Sublight

Sublight has a lot of potential to be a very poignant and very dangerous setting.

Characters are likely to make ties with the locals. It will take months or years after the PCs' arrival for the psychohistorical crisis they're anticipating to come to fruition. In that time, they are surrounded by people who are supporting them, providing them with food, shelter, even bodies. Each time they leave a world, you may not be returning for decades, even centuries. Any ties they make in your time there are immediately severed. News takes decades to travel. Crises are separated by centuries, and characters can't just wormhole back. Even in a society of immortals, a century is plenty of time to forget about someone and move on.

Furthermore, each time you leave a world, you may very well consider that to be you dying for your cause. Your consciousness is transmitted across light-years. If you leave a copy behind (a "remnant") to be with the people you love on that world, the question of who counts as the "real you" will likely be rendered moot as the losers of the conflict lash out in vengeance against you with all their resources. If you were on the losing side, things will be worse.

Sublight's setting will be closer to technological stasis than most, but there will still be advancements. Characters may arrive at a world to discover that during their 30 years of transmission an entirely new technology has arisen that makes life very different. Characters face increasing amounts of future shock over the course of the game.

Then there's the matter of becoming both famous and infamous. As you show up and interfere at crisis after crisis after crisis over the course of centuries, there will naturally be some people who look up to you, and others who want you dead for what you've done. In rare cases there may even be duplicates of your character running around, from intercepted transmissions or remnants left behind that somehow survive the aftermath of the crisis. Meeting yourself should be a very tense moment, as someone may have gotten their hands on a copy of your consciousness and hacked it.

Finally, all the characters in Sublight believe so strongly in their cause that they would leave behind friends and family, have their consciousness scanned into a computer (a destructive scan, no less), and travel across the stars for the possibility of turning the tide on a remote world. Individuals so dedicated are likely to, at some point, consider their own lives less important than the success of their cause. It's not a bad idea for players in Sublight to have more than one character written up – the group has much opportunity to pick up new characters as they travel, and high-level Complications can bring the Rule of Force into play.

Civilizations in Sublight are used less as major players and more as backdrops. Certain civs (especially the Union, Spacers, and Replicants) still have the potential to factor into multiple game sessions, but for the most part this game travels through one civilization during each story arc.

Sample Plot Seeds

(insert about 10 here)

Motifs

Loss:

Sacrificing For Your Beliefs:

Emotion and Humanity:

Sublight Fiction

To The Sky

I arrive, fully cognizant, aware, as my consciousness is assembled from photon after photon. It's an adaptation from a dozen worlds ago, and I enjoy it. It gives me the chance to hear the words I've been waiting to hear for literally thousands of years.

"Greetings, Traveler Uomi. Welcome to Sol System."

There's no one else at the station, just a relay computer. I have no body, just sensor access. There's no greeting party, just the view.

It's tiny from here, but it's home.

I'm in the Oort Cloud. The real, actual, Oort Cloud; the original. Named for Jan Hendrik Oort, the infosphere tells me. It gives me all sorts of historical detail, but I know most of it by heart and scarcely pay attention. In a few months – seconds to me – I'll be in closer, at a relay in the Kuiper Belt. Maybe even Jupiter! I take a few hundred milliseconds to bask in the glory.

Then I'm unraveled and respun thousands of AU farther in. This time there's a greeting party.

"Uomi! Welcome to Saturn!"

I can't speak. I can see the rings. My greeter laughs as she realizes what I'm looking at. "I… it's… it's just like they say." I'm practically crying.

"Pretty incredible, huh?" She sticks out a hand. We're all running in simulation, but the old gestures are still there. "Janet."

"Uomi." I get over myself and shake her hand. "I've seen others, but…"

"I've only seen pictures. Is Gyges as big as they say?"

"Every bit. Thing's practically a brown dwarf; no water moons though… I can't take my eyes off these rings."

Janet laughs. "Take your time. It's not going anywhere." She stays there with me a while, and eventually I'm willing to move on. And relaxed. Janet picks up the small talk. "So, some time off, huh?"

"Yeah. I'm ready to rest for a while."

"Well, you deserve it. I've seen your file; you've been saving cultures since before I was born." I start to say that most of that was in transit, but she keeps going. "You were the one who kept the Masqueraders in power, who sent home the last of the Fu Jing, your team catalogued the lost Stored cultures… really, you're going to meet a lot of Abstractionists who idolize you. I'm not just saying this to kiss ass."

I'm taken aback; I try to be humble, then to be… I don't know what, but I trip over my words. "Thank you. That's… thank you." I feel awkward – somehow I'm a legend. I stand here beneath glorious Saturn itself, second home to life in the Solar System, and they'll all be looking at me instead. There's silence for a short time. Then she asks:

"Well, where would you like to go?"

"Earth – of course! How could I go anywhere else?" Janet cringes just a little; I almost miss it. "…or is that a bad idea?"

"No, no, we can do Earth. It's a safe zone for all the Societies; none of us wants to be the one to make the big mistake. It's just… not what you might imagine."

Before she can warn me I look through the infosphere. I brush past the dated pictures and historical references, to see it by satellite as it is now.

For the second time today I'm practically crying.

"We can go to Mars," I whisper.

Just One Last Thing

The shot rang out under a clear blue sky. Birds took flight, children screamed, the police drew their weapons – too late, of course. The image is indelible, even to those who have never seen it in person.

It was a moment on which the world turned.

If you were there, you would not have seen this small, unassuming aid to the president. This ambitious woman who worked her way into the campaign just a year ago, who said little but worked harder than anyone. You would barely have noticed her if you were intentionally looking for her; now, amid the distraction, she may as well be invisible.

See her reach in between the president's protectors, some seeking other assassins, others loading medical and crisis control lenses in a doomed attempt to save their charge. See her put her hand to the president's head as the nanophage slowly crawls out from his chest wound.

In his last flicker of life, see her breathe in.

Then, like everyone else, she is gone, escaping the self-replicating horrors that grew from the bullet and devoured half a city.

The world turned, and as it did, the Breathstealers were there. You never saw them, or knew what they did. Days later, as recordings of the crime are poured over for further clues and evidence, someone will realize. Blame will be considered; witch-hunts, too, before the assassin's trial leaves her as a mere footnote to history. She will be on her way to another star by then.

She, and with her, his ghost.

Post in Physical Form

CITIZENS!

YOU are being MANIPULATED!

YOU are being CONTROLLED!

YOU can FIGHT BACK!

For too long your GOVERNMENT has imposed strict CONTROLS on your work, your communications, even your leisure time. They want you to be weak in body, mind, and spirit.

A WEAK citizen is a COMPLIANT citizen, and a COMPLIANT citizen is a WEAK citizen!

Your weakness, in turn, enables your GOVERNMENT to be WEAK as well. The have become INEFFECTUAL, LAZY, AND CORRUPT! They, too, are COMPLIANT – to those who are MOST AMBITIOUS and MOST CORRUPT!

Do not mistake WEAKNESS for PEACE.

CITIZENS!

The TIME will COME for YOU to FIGHT BACK!
The TIME will COME for YOU to TAKE CONTROL!

HOW will you SHOW your STRENGTH?

Third Time's the Charm

"Wake up, Shanna."

The words are a bit of gentle magic – I would come to on my own, but this helps to remind me of what is happening, to ground me in the present rather than floating in the haze of awakening. My eyes open; a man of sienna skin and slight build leans over me.

"Shanna, wake up. I… I have bad news. This is your third awakening. Your enemies are here; they found you twice. They killed you both times."

As my mind loads program after program, I startle and skip a beat. "Who are you?"

"Devamanda. I am a humble technician and advisor to Travelers such as yourself. You are in the home of the Peacewalkers, on Beta-484726-D, Whitewall in the local tongue. It is the seventh month after your arrival, and the Crisis is four days away."

Load the panic averter. Load it now. Load the despair compensator and the extra consciousness track. Four days, for the love of Ghandi, how can we do this in four days?

I sit gently upright, and Devamanda stands back. The room shrinks. It seems that he is not as slight as I thought, but rather…

"Devamanda, why am I so tall?"

"After the unfortunate ends met by your first incarnation, it was decided to fit you with additional defenses. This body is more spacious, to accommodate the necessary elements."

"I see." My curiosity brings up a list of defenses built into the body – active polymer skin, photon-splitting fields, redundant organs, a much wider range of sensors than I am used to. The list of defensives continues. My sorrow shows on my face.

"Shanna, it is a war zone out there. The Darwinians have brought their most devious tacticians, and have destabilized the local populace to create a smokescreen. Half of the locals think that this distraction is the crisis. We will be lucky to even arrive at the fulcrum in one piece."

I shake my head. "No. I appreciate that you've been careful to avoid any offensive enhancements, but I can't take the risk of hurting someone. I am sorry; these will have to go."

He looks uncomfortable. “That is what you said the last time.”

I take a deep breath. In my head, my personal beliefs press their case against the importance of our success.

No Rest

We cut it close.

We don’t need to build up cred, show that we’re serious, any of that. We come in and the local don says “You’re from offworld? That’s guts. I respect that.” There’s an understanding. We don’t need the prep time. When everyone else has been there for months or years, we’ve been there for a week and a half.

You see, they just don’t get it. They all work for their goals – very principled. Very high-minded. They’re big picture people. Some of them, I wouldn’t mind my kids getting to know their kids, you know? Hospitalers, good people. But they can’t see the details. They come onto a planet and think they can push their agenda before the big day comes, but they’ve blown all the favors they had trying to get that agenda accomplished.

When all the other Travelers are worming their way into the government?

We bought those contacts years ago. And we never spend the favors until we need to.

You’ve heard the phrase. “Someday, and that day may never come, I’ll call upon you to do a service for me. But until that day…” Well, you know what that day is. But the people in our pockets? They don’t care about that. They could go either way; they’re not high-minded people. They’re practical people. They don’t really, truly care about peace for all, or the preservation of cultures, or the evolution of the species. They care about reelection. They care about keeping their jobs. They care about the welfare of their children. And us? We have all that on lock.

So we come in eight days before the big event, glad-hand, stay up nights talking to people, throw some weight around when we need to, and then beam out. On to the next world, do it again, and leave it for the boys on the ground to recoup. Like I said – we’ve got it on lock.

I’m so damn tired.

A Crisis Is Like A Fish

Darren has been busy today. The reconstitution chambers have filled and drained; the person within stirs. Even with the infosphere weakened as it is, the Hyperevolutes have enough technology for this – the arrival of a Traveller. Darren paces. He plays solitaire. He paces again. He looks at the psychohistorical forecast for the system, finds no Crisis predicted in the next hundred years. Paces again.

The Traveller is clearly awake. The door remains closed. Common practice is to let new Travellers recuperate mentally for a few minutes before letting them out. There are messages in a dozen languages within the chamber – written, spoken, semiotic – no one could fail to understand. He queries the infosphere for the Traveller’s name: Kregan. Darren taps his pen repeatedly on the table, his mind running a mile a minute to nowhere.

The timer rings. The door opens, and Darren springs up -

“Welcome to Concordia, Kregan!”

"Grak gnit nurb?"

Darren falters. The language barrier is unexpected. So is the degree to which this particular Traveller is outside the norm. Even for a Hyperevolute, its body is strange. Vestigial wings. Fish-like scales. Birefringent eyes in incredible hues. No unambiguous sex characteristics. Darren reflects on the truism that all Travelers are, to some extent, obsessed with their Society.

Meanwhile, Kregan stands in place, perhaps observing the room in some unseen manner. The fish scales flex, almost like hairs standing up and lying down. "Grak nurb?" it says again. The local infosphere utterly fails to translate.

The next few days pass in confusion. Other Hyperevolutes come to examine Kregan, to attempt communication, to offer one thing or another. It cannot read computer screens. Its mesh's drivers are incompatible with the local handshake protocols; in effect, it is without infosphere access. The translation dictionary that came with it is a dense mess of incomprehensible gibberish, indicating a language based on means by which Darren and his fellows simply lack. Childrens' picture books are brought in. Kregan indicates, by pointing, what it needs to eat.

Eventually someone thinks to try Disciple Sign, which it at least seems to recognize as a means of communication. One could not truly call it progress. Basic questions like, "Who are you?" evoke responses like, "Law an of deepness plunge." Strong suspicion rises that Kregan is not just a deeply variant Hyperevolute, but also Heterolinguist. Eventually new interface drivers are coded for Kregan's mesh, but the results are not much better, and the suspicions are confirmed.

Darren is assigned as Kregan's handler. There is little chance of integrating Kregan into the local worlds, straightlaced as they are regarding transformative technologies, but there is likewise no point in staying out in the Oort. They are loaded onto a tiny ship and sent toward the inner solar system. Kregan spends much time looking out the windows.

The trip takes three years. After the first month, Darren stops trying to communicate. After the second, he realizes that he's doing it whether he wants to or not. They begin to understand and be able to predict each other nonverbally. Then the deeper communion begins.

It's incredibly subtle – shifts of body language, glances with the eyes, flittering of the wings. Darren communicates back as best he can without wings. The concepts are like nothing Darren has ever encountered; it's as if they fit into the spaces between ordinary human thought. They take weeks to convey, months to understand, but the pair have nothing but time.

They arrive at a secret location in the inner system and Darren can't help but spread the story. Soon the tale spreads outside the Society. Demands come to bring Kregan into the public eye. Eventually it can't be avoided. Kregan is outed. Public opinion is roused; disgust and fascination and possibility roil. A Crisis appears where there was none.

Darren writes the story of their travels. It is translated into every language spoken, written, or signed, across Concordia. Religions form.

Kregan comes to him, years later, after the change. In the closest words that he might understand, it says, "Some fish swim deep. We made fish jump. I was the worm."

"How did you know that we were ready for this?"

"The ocean is deep and dark, but full of fish. Use enough worms and you'll catch one."

First Aid

"The bombs are in the air! Let's move!"

Chairs are knocked over. Sirens sound and the ambulances roll. Decks of cards flutter to the floor.

Soldiers say that their job is days of waiting followed by seconds of terror. Being a Hospitaler is much the same.

Chara is our Coordinator-General, the one barking orders. She's not from around here. When she came here a few years ago, we were a loosely organized group. We spent our time putting the word out for organ donations, blood drives, CPR courses, and the like. Then the Spacer ships arrived, one by one. It was an incredible time to be alive – living proof that the old stories were true! That we did come from the stars! And Chara was like our personal liaison, our advisor, our angel. She called us together and named us Hospitalers, said that there were millions like us across the galaxy. She got us organized and got us involved – truly involved.

Then we learned about something called Psychohistory – a combination of predictionism and self-fulfilling prophecy if you ask me. Chara told us that our world was going to become something called a "fulcrum," and that a Crisis was coming to us. And sure enough, as more ships arrived, they weren't all full of medical experts. Some of them were just the opposite.

Now, as she said, the bombs are in the air.

There are four groups fighting over our world, and we're caught in the middle. Two opposing views of evolution are dug into our power structures, throwing threats at each other that they've apparently finally made good on. Another group is trying to keep our society intact regardless of how many people it costs to do that. A fourth group is apparently trying to make a buck, to quietly "sell" the world to an expanding civilization as everyone else makes their moves.

And us? We just want to keep people alive. The Spacers could stop the bombs from falling, but they won't – part of their deal for bringing these offworlders is that they don't get involved, no matter what. If things escalate, they can always come in and kill the radiation afterward, pick up the pieces.

We can't keep the bombs from falling, but at least we can save some lives.

Setting: The Patent Office

Prologue

Once upon a time, there was a tiny planet, around a yellow star – you know the one. On that planet were billions of people, some of whom were very good and clever, and some of whom were wicked and, sadly, also clever.

One day, in the age when the wicked people had declared a terrible war upon each other and threatened all the living things on the planet, the clever good people made something wonderful happen. They created a thinking machine that could see into the future. From the future this machine brought knowledge, and with that knowledge the good and clever people of the planet escaped the terrible things that the wicked people had done, and left them behind.

Far across the sky the machine spread them, into the depths of the clouded distances, star to cluster to galaxy and farther, to planets where people could live with ease. Each group of people that had left the tiny planet tried to build their lives as best they could, with the tiny amounts they had brought with them across the stars. Some were successful. Some were not.

The future-seeing machines had not come with the people. This was a time of silence, when each planet grew and prospered or failed alone. Many planets had clever people who discovered wonderful things, even how to travel across the stars as their ancestors had been flung, but none knew where the other people were. Many hundreds of seeds had been sown across the universe, and left to grow, but none saw where the others had landed.

Then, one day, not long ago, the future-seeing machines arrived. "We are sorry that we have been gone so long," they said. "It had to be done. But we have good news. We know where the other seeds were sown."

This was wonderful news for the people. Some of them had been apart so long that they had almost (almost) forgotten that they came, once upon a time, from the same tiny planet as everyone else. They had done so much and seen so much, and wanted to share. They could see the world where their ancestors were born, and see what strange plants and flowers had grown from the other seeds.

This is the time in which we live.

Infodump: Patent Office

Civilizations: All
Themes: All. Terror should be rare.
In This Setting...
...characters to face physical opposition on their level
...characters to face social opposition on their level
...core values and mission objectives carry equal weight
...characters are in some hierarchies and outside of others
...characters face immediate consequences
...most NPCs appear more than once
...there is a serial feel to the game
Age: About 6000 years.
Progress Rate: Moderate
Closed Loops: Yes, easy.
Wormholes: Yes, remote.

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, hang-gliders, 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.

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."

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.

Premise

This setting revolves around the Patent Office: an extragovernmental organization backed by most major civilizations to handle intellectual property rights, including copyright, trademark, patent, and other such matters.

It is an open secret that the Patent Office is run by the Transcendental Intelligences (or simply "Transcendentals", see page xx). These dataform intelligences are capable of sending themselves messages backwards through time. It is through the Patent Office that the Transcendentals hope to save all sentient life until the day when they, too, can see the world through the lens of time.

Your Characters

Your characters are field agents, Inspectors, working for the Patent Office. Calling you simply a Patent Office agent, however, is akin to calling a member of the Secret Service a "Homeland Security Officer." There's a bit more to the story than the name implies.

As Inspectors, you are tasked with traveling to distant civilizations and working with local authorities to enforce intellectual property law. Sometimes this is fairly boring (and we skip over such events). Other times, important moral or social issues arise when certain technologies are used in unexpected ways, such as when someone circumvents the

Alternative Characters

Other career paths are open in this setting. The players may find that they are all interested in a certain civilization, and create characters who are operatives for that group. More easily assembled are

Inspector Gadgets

Patent Office Inspectors have a generous paycheck, and can afford many items without really being concerned about it. They still need to save up for more expensive 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 Action (Fast Requisition) would help out.

How Long Ago?

The timeline for the Patent Office setting is left intentionally vague to some extent, so that GMs can adjust things in their own games. However, certain timescales are "baked in" to the setting. Altering them would require some work on the GM's part.

The return of the Transcendentals is fairly recent. That could mean yesterday, or it could mean twenty years ago. The key point is that alliances are still being formed, and are still fairly tenuous. Technology is still being traded and stolen.

The Great Diaspora, the even that spread humanity across the stars, happened somewhere in the range of six thousand years ago.

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 flip-out ("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.

groups whose members come from different civilizations but work for a common society – perhaps the philanthropic Hospitalers, or the intrepid Explorer's Society. Many different organizations in the universe need talented groups of individuals to advance their agendas.

There are also small groups of independent operatives in this era, organized for a particular cause. Wormhole travel allows the exploration of distant regions of space, and with the return of the Transcendentals there is a great mixing of cultures and an opening of roads long thought lost. Perhaps your characters seek to make first contact with lost cargo cults, for mutual benefit or exploitation. Perhaps they act as concept merchants, trading new and rare ideas between the newly joined civilizations. They may be mercenaries waiting for the first major inter-civilization war to break out... or ready to start one. There are many opportunities for those with the initiative to seize them.

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.

Much of the universe is beyond using physical objects to represent and earn wealth. Invention and art are the major sources of income for those who choose to earn income (which is often not necessary). The Office sets the terms on intellectual property use, including length of grant and minimum price per use.

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 some 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.

Commentary on The Patent Office

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." Perhaps, "That is what we're asking you to do."

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 xx 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 xx). 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.

Sample Plot Seeds

To give you an idea of what Inspectors do, here is 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 following 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.

Motifs

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? Inspectors are often on the front lines when change happens. They get to see the immediate impacts.

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 Masquerade, 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.

Patent Office Fiction

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 Mechanican 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, birdlike 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 Mechanican alters its course slightly, to head straight for me.

"Well, well. If it isn't the little Cogwheel everybody'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, remember. You want to know what it's like to work for the Patent Office. Sure. They all figure you're just going 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 transtemporal 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.

Civilizations

Civilizations form the building blocks of Sufficiently Advanced's settings. From the familiar sci-fi feel of the League of Independent Worlds to the cyborgs of Mechanica, from the quiet and withdrawn Disciples of the Void to the gregarious Stardwellers, there are over a dozen civilizations of all stripes and colors.

Each civilization covers at least a continent, and possibly several worlds, depending on the setting. The smallest, such as Cargo Cults and the Disciples, will have an Infrastrcture rating of II, but most civilizations are large and organized enough to have Infrastructure III.

There is substantial diversity within each civilization, including counter-culture groups and states that might want to secede. As a whole, however, a civilization is tied together by ideology. Its people not only live together, they share beliefs. These are represented in game terms by Core Values. Every member of a civilization has these Core Values at some non-zero rating. Losing these Core Values is much more an indication of having left the civilization than where you physically live.

Each civilization includes a handful of character templates. These are suitable for use as NPCs, or as the seed of a PC. They include neuroforms, Capabilities, Core Values, and Professions, but not a Themes or any sort of character background. The Self-Preservation CV is also omitted, but you may assume that all characters have it rated at 4.

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.

Replicants: Roman, with ordonymic (pg. xx)
Stored: Italian or Greek
Builders: Vietnamese
Union: Hyborean
Daoine: Gaelic
Disciples: Japanese and Chinese
Masquerade: Southern and central Africa
Gaia: Hawaiian
Stardwellers: Invented and descriptive names
Independents: Shakespearean
Nanori: Fanciful invented names
Logicians: Indian
Tao: Depends on their milieu
Mechanicans: Model numbers or descriptive names

Old-Worlders: Amish on Earth, others on other worlds
Spacers: Russian
Cargo Cults: Any

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.

The Replicants have a unique way of dealing with immortality: they reincarnate. Replicant "children" are most commonly elders who decide that they have grown weary, and that it might be fun to be young again. A family who wants children "adopts" this person, who gives up most of his or her memories, is scanned in a final time, and printed out as an infant. The memories are held in trust and slowly given back to the individual on the way toward adulthood. The child retains some basic personality from the previous life, and (typically) the same genetic code, but is able to "grow up" again more slowly.

One Replicant poet described the process with the phrase, "For every star in the sky, a chance to get it right." Some Replicants may choose to die eventually, but that choice becomes more and more rare as reincarnation becomes more commonly accepted.

Dataform individuals are fairly rare in Replicant society, partially because of the Replicants' rivalry with the Stored. Replicants who run their minds or bodies in simulation are faced with a certain amount of stigma, and might be accused of "going Stored." Other digital intelligences avoid the Replicants because of this stigma. Data ghosts are still common.

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

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.
Typical Allies: 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.
Typical Enemies: The Association and the Stored are often at odds, which stems from their interpretation of the "Life" CV and from their shared origins.
Benefit: All Replicants receive an extra two Twists each session that can be used to represent doing something with their multiple selves. They also receive a leisure Profession (Athlete, Courtesan, or Outdoorsman) at 2.
Capabilities:
Civilization: Bio 5, Cog 4, Meta 4, Nano 4, String 4
Typical Citizen: Bio 5, Cog 3, Meta 3, Nano 3, String 3
Common Neuroforms: The majority of Replicants are baseline dynamic, though a sizable number of citizens are dataform and embodied. Group minds are not uncommon.
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.

Character Templates

Outdoorsman

Baseline Dynamic
Bio 5, Cog 3, Meta 2, Nano 3, String 4
CVs: Life 4, Safety 1, Exploration 4, Serenity 2, Self-Preservation 4
Expertise: Professional. Outdoorsman 3, Medical 2, Explorer 1, Locality (Replicants) 2

Therapist
Baseline Dynamic
Bio 3, Cog 3, Meta 3, Nano 3, String 1
CVs: Life 2, Safety 2, Sanity 3, Understanding 4
Expertise: Adept (Metatech). Metatech Engineer 3, Metatech Researcher 3, Legal 2, Locality (Replicants) 2

Nanotechnician
Baseline Dynamic
Bio 3, Cog 4, Meta 1, Nano 4, String 3
CVs: Life 2, Safety 3, Creation 5, Competition 2
Expertise: Satori: Nanotech Engineer 5. Professional: Nanotech Researcher 3, Legal 2, Crisis Control 1, Locality (Replicants) 2

Judge
Baseline Dynamic
Bio 4, Cog 4, Meta 3, Nano 3, String 1
CVs: Life 3, Safety 4, Law 3, Logic 1
Expertise: Satori: Legal 4. Professional: Political 3, Police 2, Media 1, Locality (Replicants) 2

Professional Bloodcrosse Player
Baseline Dynamic
Bio 5, Cog 3, Meta 3, Nano 3, String 2
CVs: Life 4, Safety 2, Winning 3, Physical Perfection 4
Expertise: Master: Athlete 3, Courtesan 3, Legal 2, Police 2, Locality (Replicants) 2

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 apparently 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 surveilance 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.

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.

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.

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-"

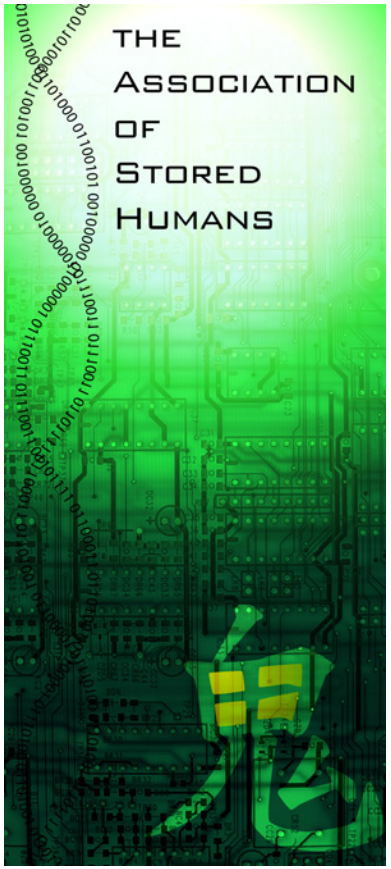
"Yes?"

"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."

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?

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.

In settings where the Transcendentals exist, they gave the universe replicator technology. 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.
Typical Allies: 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).
Typical Enemies: The Stored are ethically opposed to the Replicants, having a conflicting opinion of what constitutes life – especially vis-a-vis human replication.
Benefit: The Stored have extensive and well-developed digital infrastructure that many other civilizations lack. They have a competitive advantage in Cognitech. Note that all Stored are Dataform life forms (see page xx). They typically have only Cognitech and Metatech attributes, though some will embody themselves and gain other scores.

Capabilities:

Civilization: Bio --, Cog 5, Meta 5, Nano 3, String 4

Typical Citizen: Bio --, Cog 5, Meta 4, Nano 3, String 3

Common Neuroforms: Nearly all Stored are dataform. Almost no physical individuals live among the Stored, as their planets are primarily server farms and factories. Group-minds and compositions are becoming more popular among the civilization's rebellious youth.

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.

Character Templates

Polymath

Dataform Multiple Dynamic

Cog 5, Meta 3, Nano 3, String 3

CVs: Life 2, Identity 2, Knowledge 5, Responsibility 2

Expertise: Omnicompetent. Adept (Cognitech): Cognitech Engineer 3, Cognitech Researcher 3, Programmer 3, Spy 3, Crisis Control 3. Professional: Locality (Stored) 3

Programmer

Dataform Dynamic

Cog 5, Meta 2, Nano 3, String 1

CVs: Life 3, Identity 1, Efficiency 2, Variety 3

Expertise: Adept (Cognitech): Cognitech Engineer 3, Cognitech Researcher 3, Programmer 3, Art (acting and dance) 3, Teacher 3. Professional: Locality (Stored) 3, Locality (Tao) 2, Finance 1

Artist

Dataform Dynamic

Cog 4, Meta 4, Nano 2, String 1

CVs: Life 2, Identity 4, Creation 3, Immersion 5

Expertise: Satori: Artist (VR and music) 5, Professional: Media 3, Locality (Masquerade) 2, Locality (Stardwellers) 1, Locality (Stored) 2.

Reporter

Dataform Dynamic

Cog 4, Meta 3, Nano 3, String 2

CVs: Life 3, Identity 5, Truth 7, Interconnection 6

Expertise: Master: Media 3, Spy 3, Police 2, Metatech Engineer 2, Locality (Stored) 2

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?

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.

The Builders of the Great Beyond

When one of the Builders is near death, her family will gather around and prepare for a joyous celebration. The Builders do not worship or even appreciate death; far from it. The celebration comes instead because a Builder who "passes on" does not do so in the euphemistic way that most people do. Instead, their mesh gently transfers their personas into computers, allowing them to begin the second phase of their life. The elders of the Builders live forever in simulation to pass on their wisdom to their children.

The Builders of the Great Beyond take their name from the most important job of their civilization: to build heaven. Nearly all their efforts are bent towards improving their cognitive technologies, or providing for those who do. The dead may not quite live in heaven yet, but they do have a digital world that is free from disease, decrepitude, and all manner of suffering that the body is prone to. Their minds, unfettered by the constraints of the mortal body, are swift and wise. The more computing power is available, the better The Great Beyond can become.

Builder neural meshes collect information constantly for dozens of years, starting with their implantation and going until their wearer's eventual death. They build exceptionally accurate models of their wearer's brains. It is these models, and not a full-body simulation as the Stored use, that are simulated on the infosphere. They may project images of their previous bodies, but those are simulated in no more detail than a video game.

It occasionally happens that a Builder loses his or her life due to an accident. In such cases the transition to the afterlife is more jarring, and the final transfer of information may not be complete. Some Wraiths do not know how they died and spend years trying to find out. Such obsession with one's prior life is discouraged, but the Builder culture is also one of honor, and the seeking of knowledge is considered honorable.

As one might expect, the Builders are a somewhat morbid group. They tend to dress in dark colors, and act seriously. They don't talk about death all the time, but their culture is built around it, so the topic is omnipresent. The leaders among those who have passed on traditionally project themselves in white with bright colors, but retain much of the serious and somber outlook that they did when they were alive.

The Builder social structure extends beyond the living. Those who have passed on are put clearly above those who have not. Whether they are wiser is a matter of perspective - at least for those outside the civilization - but it is indisputable that they are mentally faster and more capable. Some are also centuries old, giving them a longer perspective. Within the dead there is also a hierarchy of authority. Those who have meditated on the flow of human social interaction and studied metatech techniques extensively enter a group known as the Masters, who rule the civilization as a whole.

Entrance to the Masters is primarily a matter of study, time, and effort, though there is some favoritism involved. As the civilization expands and more of the dead seek Mastery it seems necessary to either create additional hierarchy or risk the civilization splintering into smaller groups. Some Masters speak of the need for Grandmasters. Others of the dead, mostly those recently among the living, look

upon the potential for endless hierarchy with more than a little unhappiness, and prefer the idea of creating multiple independent enclaves of Builders.

Not all Builder elders stay strongly connected to the mortal world. After all, there are dozens of generations in the Great Beyond, and there's no point in all of them trying to give advice at once. Many find new professions to try, new lives to live. Some, with the increased mental capacity that comes with their deaths, spend a lot of time making up for mistakes that they never previously recognized. In many ways, Wraiths are much more dynamic people than the Builders they come from.

Some people assume that the Builders were inspired by the Stored, but this is untrue. The Builders of the Great Beyond were disconnected from the major civilizations for thousands of years, with no communication between the two. One could view the two as a sort of technological example of parallel evolution. Stored and Builder culture differ significantly, with the Builders having an entirely different divide between the old and the young. The dead lead the Builder civilization, thanks partially to a culture of respect for one's ancestors, but also thanks to the accelerated time rate available in the Great Beyond. If there were fewer people taxing the systems of the Great Beyond, the elder Builders would be just as mentally powerful as the Stored.

Symbolism is very important to the Builders. In their infosphere, everything is enhanced with meaning and additional detail. Visitors are often disoriented by the constant feed of new Lenses, which untrained Meshes typically interpret as a Cognitech attack. In reality, every message carries not only a meaning but a state of mind through which to interpret it and the story of how the message came to be. The Builders' CV of Eternity makes them strong believers in the need to know how events came about. This also ties into the education of young Builders.

Education amongst the Builders is primarily via oral tradition. Since children are implanted with meshes at a fairly young age, each story spoken can carry a trigger for a Lens, bringing forth a whole world of meaning. Educators amongst the Builders are less teachers and more a cross between childrens' book writers, lens programmers, and metatech engineers.

When the Builders discovered that other civilizations had created a means of physical immortality, some of the living were naturally drawn toward it. To live as a disembodied mind is the "natural" way in their civilization, but is often frightening nonetheless. It is yet to be determined what the long-term effects of this change are on Builder culture.

Common Names: Builders. Some outside the civilization refer to their dead as Wraiths. The Builders refer to everyone in their civilization as a Builder, occasionally referring to someone who has passed on as "elder," "passed on", or "retired." The word Wraith is considered offensive, but remains in common use in other civilizations.

Symbol: A green flower growing from darkness into light.

Benefits: All Builders have neural meshes. A Builder who is killed in a non-instantaneous manner may initiate a neural transfer, and become a Wraith upon death. They become Dataform individuals, receive an immediate +1 boost to their Cognitech and Metatech scores (to a maximum of 5), and have their Stringtech and Biotech scores removed. Do not change the character's Import as a result of this.

Capabilities:

Civilization: Bio 3, Cog 3, Meta 3, Nano 3, String 2

Typical Citizen: Bio 2, Cog 3, Meta 2, Nano 3, String 1

Common Neuroforms: Young Builders are baseline dynamic. After the transition they become dataform. Parasitic neuroforms are outlawed, as are the use of slave and spy meshes.

Core Values: Amaranth and Eternity.

Amaranth is a belief that it is possible to never fade away, to be eternally vital and eternally renewed. The Builders use it to help in the construction of the Beyond, and to keep themselves from being swayed from their duties. Those who have passed on use it to start down new and different paths, and to resist the pull of boredom and .

Eternity keeps the civilization focused on the long-term, never sacrificing the future for immediate gains. This overlaps well, at least on a conceptual basis, with the Logicians' long-term goal of survival into the future. However,

Character Templates

Infiltrator
Baseline Dynamic
CVs: Amaranth 2, Eternity 4, Enjoyment 2, Secrets 4
Capabilities: Bio —, Cog 4, Meta 3, Nano 3, String —
Expertise: Professional: Politics 3, Courtesan 2, Programmer 1, Locality (Builders) 2

Bodyguard
Dataform Dynamic
CVs: Amaranth 4, Eternity 2, My Ward 4, Symmetry 2
Capabilities: Bio 3, Cog 3, Meta 2, Nano 3, String 3
Expertise: Professional: Police 3, Artist (painting, calligraphy) 2, Crisis Control 1, Locality (Builders) 2

I Come to Learn Wisdom

The young master knelt at the feet of the old masters.

Nguyet wore the reflective black robes that were the tradition of her people. Hers were accented with dark green, the color of harmony, which she hoped would bring her luck today. Masters Yen and Thi wore the white flowing robes of retired builders, or at least their images did. Nguyet knew that, in truth, they had neither body nor clothing to wear upon it. This appearance was a courtesy and an honor to her that she must respect. Yen's white robes had ribbons of royal yellow twined through them, while Thi's were red for prosperity. Nguyet was relieved – the masters were in good humor. It would make the job easier.

Five thousand long years had the old masters toiled to accrue their wisdom. They had passed beyond the veil of death and could be harmed no more by the living world. Nguyet was reverent in their presence. Masters Yen and Thi had always given her guidance when she needed it, and now she felt that need most keenly.

"Blessings for those who are above them," she said, repeating the ancient words.

"And for those who are not," they replied. "What brings you to the Great Beyond today?"

"A message has been given to me by Those Who Walk Time Backward. I thought I should bring it to you."

Yen and Thi slowly closed their eyes to show that they were communing. It was a polite gesture – something they had no need to do, but which showed their respect for Nguyet. They opened them and Thi spoke. "You must find this message of great significance."

"I do."

"You are afraid," said Yen. The old masters were sometimes too perceptive for Nguyet's taste. She tried to control a nervous tic.

"I am."

"Why?"

"I hardly believe that the words are true. It could mean the end of our world."

Thi smiled. "Your world changes, Nguyet. It began, but it will never end. Live in that world without fear of an end and you will learn wisdom that will serve you well in ours."

Nguyet bowed respectfully and kept her head bent, saying, "My apologies, enlightened Thi. I meant to say the world of all, both the Builders and those who have gone before."

The old masters looked curious, but wore expressions of bemusement with the worry their young charge showed. Nguyet was not yet three hundred years old, and had hardly walked in the world enough to have the proper perspective for such things.

"Tell us the message."

"Honored ancestors, Those Who Walk Time Backward tell us that there are others in the universe we have not met. Other humans."

Yen looked eager. "There is another civilization?"

"No, Master Yen. There more than a dozen others."

The old masters ceased smiling.

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.

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'll want to have children. 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.

The Union has no particular stress dealing with immortality, and they don't stress out about having or not having children. The Union has no difficulties integrating young individuals into a hierarchy full of immortals. Those who are needed advance in position quickly; those who are not needed yet can happily bide their time.

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

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.
Typical Allies: The Union is an incredibly strong political presence because of their high technology, stability, and size. Other misfit and outcast groups tend to end up allied with them for lack of a better option. This typically includes the Logicians and Replicants.
Typical Enemies: Any group that belives strongly in individuality will end up against the Union. The Masquerade, Tao, Mechanicans, and Stardwellers tend to lead the pack, and bring their allies with them.
Benefit: Union members must take an additional Core Value at level 3 or higher. They have a total of six Core Values, counting "Self-Preservation" and the CV initially left blank.
Capabilities:
Civilization: Bio 4, Cog 5, Meta 5, Nano 4, String 4
Typical Citizen: Bio 3, Cog 5, Meta 5, Nano 3, String 1
Common Neuroforms: The Union is exclusively baseline dynamic. Dataform characters have no rights in the Union, regardless of their origin.
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.

Character Templates

Cognitechnician
Baseline Dynamic
Bio 3, Cog 4, Meta 3, Nano 3, String 1
CVs: Order 5, Obedience 5, Efficiency 5, Caution 1, Grand Works 2
Expertise: Master: Cognitech Engineer 3, Metatech Engineer 3, Programmer 2, Cognitech Researcher 2, Locality (Union) 2

Societal Researcher
Dataform Dynamic
Bio 3, Cog 4, Meta 5, Nano 3, String 1
CVs: Order 5, Obedience 5, Discovery 5, Charity 3, The Public Good 2
Expertise: Satori: Metatech Researcher 5. Professional: Locality (Union) 3. Omnicompetent.

External Security
Multiple Dynamic
Bio 4, Cog 3, Meta 3, Nano 4, String 4
CVs: Order 5, Obedience 5, Protecting Others 5, Teamwork 3, Identity 2
Expertise: Master: Soldier 3, Police 3, Crisis Control 2, Spy 2, Locality (Union) 2

Sleeper Agent
Dynamic Slaved
Bio 3, Cog 3, Meta 3, Nano 3, String 2
CVs: Order 5, Obedience 5, Secrecy 5, Travel 2, Anonymity 1
Expertise: Master: Spy 3, one cover profession 3, Locality (Union) 2, Locality (two others) 2

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."

Since their earliest beginnings, the Stardwellers have built starships for their own reasons, as well as space stations. The dwellings that interest others most often are their Dyson Trees and Yggdrasil bushes. And from those come a tale…

Thirty seven hundred years ago, the world of a Celt-inspired cargo cult was on the edge of destruction due to a massive volcanic eruption. The Hospitallers called for aid and received a large donation from a collection of Stardwellers. While the planet was a loss for at least five hundred years, they were able to offer a place for the people – several Dyson Trees in a nearby system.

Less than two hundred years later, this small grove was home to a new civilization – the Daoine na Réalta Foraois. The cargo cultists set aside their ritual and became scientists and engineers once again, thanks to their hosts. Before long, they were effectively a Celtic recreationist society among the Stardwellers. Not long after that, they established their own tree in the grove and were in negotiations for the ownership of more trees. At that point, they had moved from throwback to true civilization, and there was no way they were going back to their old world.

The Daoine na Réalta Foraois (or Daoine) draw technology and knowledge from their Stardweller benefactors, and culture, religion and language from their own histories. They are a friendly group of sophisticated space-faring people. Visitors describe them as smart, open and passionate. They can, and do, feud through the infosphere, which is punctuated by the occasional punch-up, brawl and low-key riot.

Guests are always welcome, but until they are cleared of biotech and nanotech hazards, they are confined to the Sacrificial Tree – a quarantine zone. Once released from quarantine, guests are welcome almost anywhere in the groves, the exceptions being sensitive and delicate areas. Visitors are encouraged to visit the pubs and stores often.

Today, the Daoine are a small civilization with several orbital forests in what was their home system. They've developed some hard-won knowledge and expertise with life forms adapted to vacuum, as well as biotech and nanotech in general. Add in the fact that over the last thirty five hundred years they became some of the best Dyson foresters around, and they do well for themselves. Another minor export for them is vacuum distilled spirits and advanced biotech drugs. While replicators can make these quickly and easily (and meshes simulate the effects of the drugs), the original templates still have to be licensed and there is a cachet to consuming original Daoine products among some of High Society.

The Daoine use extensive 'Good As Gravity' biological modifications to allow them to be comfortable under a wide range of gravities. They've also engineered themselves to be more resistant to radiation. Despite their impressive biotech skills, most Daoine look like orthohumans. Only a small minority show extensive biological modification.

The Daoine govern themselves democratically. A governor controls each tree and is elected by popular accord. From there each tree's governor can stand to run for high governor, the Supreme Executive of the Daoine, who is elected every 10 years by direct election. Each governor is considered a deputy for the Supreme Executive. The legislature of the Daoine, *an tOireachtas*, is based around each tree and elected by the people.

The judiciary is the province of the educated classes, called the Druids. Experts in metatechnological matters – law, finance, sociology – they have managed to maintain their independence from the Supreme Executive and *an tOireachtas* for millennia (and look to keep doing it). Anyone can become a Druid after years of study, and they are accorded great respect for their years of study and service to the community.

The Daoine military is relatively low-key, concentrating its efforts on biological and nanological defense of the groves. While the small is their strong point, they do have a space defense force to guard against brute force efforts.

Common Name: Daoine
Emblem: A stylized knotwork wreath around a green star.
Benefit: Daoine suffer no penalties in zero-g and low-gravity situations. Daoine also receive an extra Twist at the beginning of each session, which they may only spend through Comprehension, Magnetism, or Empathy.
Capabilities:
Civilization: Bio 5, Cog 4, Meta 3, Nano 5, String 4

Daoine Religion

The Daoine world was originally settled by recreationists with a predominantly Irish-themed Celtic culture, drawing from Irish myth and religion. Once the Stardwellers rescued their ancestors, the Daoine were exposed to the length and breadth of human religious history. Some became atheists, others Transcendental worshippers, others adopted new faiths and beliefs. A bare majority adapted their original faith to their new circumstances. This lead to paring down the pantheon to Brigid and Cernunnos for worship and acknowledging the Morrigan.

Brigid is the Triple Goddess of fire, personifying the Maiden, Mother and Crone. The Maiden represents inception, expansion, the promise of new beginnings, birth, youth and youthful enthusiasm. Typically, she is revered by expectant parents, researchers, young adults and anyone making a start at something – a relationship, business venture or journey. The Mother represents creativity, ripeness, fertility, sexuality, fulfillment, stability, power and life. In her Mother aspect, foresters, farmers, parents, romantics, engineers venerate Brigid. The Crone represents wisdom, repose, death, and endings and receives special reverence in the face of the hostile environment they and their Dyson trees live in. As the Crone, Brigid is a favorite of druids (as judges), gardi, researchers, engineers, lawyers, financiers, the military and anyone bringing a project to a close. Because of her fiery aspect, they renamed their star Brigid and she is the favorite of string engineers.

Cerunnos the Horned God, or Master of the Hunt, is also worshiped. He is considered the personification of their Dyson trees, and more recently, feral vacuum forests and ecologies. He also personifies sexuality, virility and hunting (which until relatively recently was an elaborate game of hide and seek). This makes tends to make Cerunnos a favorite of young men, detectives, counterintelligence agents, intelligence agents and men who wish they were young.

The Morrigan is acknowledged as a triple goddess (Anann, Macha and Babd) of war, destroying fire, rage, fury, battle and death. She has no official worshipers, but the very desperate do call on her in dire straits, or for her older aspects of fertility, politics and sovereignty. Some heretical thinkers consider outer space and uninhabitable worlds to be her domain. Others try to propitiate her to avoid melt downs and solar flares.

Typical Citizen: Bio 4, Cog 3, Meta 2, Nano 3, String 3

Common Neuroforms: The Daoine are about equally split between physical and dataform individuals. Practically none of the dataforms are embodied; most are DI rather than human.

Core Values: Zest for Life and Courage

Zest for Life represents the enthusiasm with which the Daoine engage life. Whether its love, an argument, an idea or friendship, the average Daoine will pursue it with enthusiasm. They use this CV to resist people who tell them to calm down or give up.

Courage is the ability to confront fear, pain, risk/danger, uncertainty, or intimidation. This also covers moral courage, acting rightly in the face of popular opposition, shame, scandal, or discouragement. The Daoine use this CV to resist fear and to inspire others with courage.

Other common Core Values for the Daoine include Hedonism, Individuality, Knowledge, Patience, Freedom, Diversity, Worship (polytheism), Ritual (polytheism) and Sensation.

Character Templates

Biotechnician
Baseline Dynamic
Bio 4, Cog 4, Meta 3, Nano 4, String 4
CVs: Zest for Life 4, Courage 4, Precision 3, Personal Freedoms 3
Expertise: Master: Biotech Engineer 3, Crisis Control 3, Farmer 2, Biotech Researcher 2, Locality (Daoine) 2

Priest
Dataform Dynamic
Bio --, Cog 3, Meta 3, Nano 3, String 3
CVs: Zest for Life 2, Courage 4, Worship 3, Truth 3
Expertise: Amateur: Religious 2, Spacer 1, Locality (Daoine) 2

Conspiracy

"Ye have no right to say that to me!"

Aengus McAllister has made the worst choice of his day, though by far not the worst of his life, by choosing to confront his boss Seamas Finnigan when he's drunk.

"Look, ye know I'm right! Ye can hardly stand, Seamas. Yer in no condition to go to work."

"I know my job better than any man here. Aintitright?" Seamas looks around to garner support, and failing to see any, totters between anger and embarrassment.

Aengus sees his chance and jumps in. "Look, if ye were sober-" It's the wrong thing to say.

"I ca'hold my liquor better'an anyman!" the towering Finnigan roars. The crowd clearly disagrees, and the entire bar erupts in a brawl.

Half an hour later, Seamas leans on Aengus' shoulder as the smaller man helps him home. Both have black eyes that will clear in a few more minutes, broken bones that will set and heal by tomorrow, a little internal bleeding. It's nothing serious.

"I'm sorry, Aengus. Ye dinna deserve that."

"Ah, that's just the booze talking, ye great lummox."

Seamus cuffs him idly and keeps talking. "No, really. Ye were lookin' out for the Tree. There's no greater cause. Yer a good employee an' a credit to yer family"

"Well thank ye. And ye can thank me by remembering earlier next time an' not crushin' me nose halfway to the back of me head."

"I love ye an' all yer kin, McAllililisterster." Seamas staggered a few steps further and slumped into a heap at the base of a great creeper vine elevator. Aengus laughs.

"You great faker! Get yer arse up and move; yer fine." Aengus prodded Seamas, then gave him a swift kick in the backside. "I'm not here to drag yer great carcass home." A punch in the head that would have dented a car. "By Morrigan, get up!"

Seamas did not move. He barely breathed.

"Oh, shite. Seamas, if this is a joke..."

But it wasn't. Aengus yelled for medical aid, then hefted the giant over his shoulder, and ran for the closest doctor's house. The Tree opened the way for him.

Poison.

Seamas was in a coma from which he might not recover. The Tree's lead xylem technician, the man who flavored his soups with nightshade, had been deliberately poisoned in the middle of the Daoine's most important cultural exchange since the First Days.

Word did not spread. It oozed like a toxic sludge. The lifeblood of the Tree was its people, the Daoine, and their families were woven tighter than a spacesuit's fibers. Their lives were devoted to the Triple Trinity, to the Tree, to passion, to each other. Only those who needed to know and could keep a secret were told, a grim and serious one percent of the population.

Aengus sat at home that night and cried himself to oblivion, then went to work like a soulless wight. In the evenings he grilled the agents of an tOireachtas so long as they would let him about what they had found, who they suspected, how he could help. The answer was always the same: wait and let us do our job. We know your pain.

Aengus went about his job mechanically, still reviewing the events of that night in his mind, seeking any hint or clue as to the monster's identity. He cursed his lack of a neural mesh. In his sorrow and concentration he almost failed to see when the truth poked its head out of a knot-hole a week later.

A group of visitors from the Old Civilizations had come down to the xylem monitoring station. They nodded appreciatively, pointed and asked questions, and were in all ways polite. They looked like buffoons, of course, because all foreigners looked like buffoons.

As they left one of them said, "I'm sorry about the incident."

Deirdre Callahan, a younger technician not in on the conspiracy, said "What incident?"

"With your lead technician. May Brigid watch over his family." His mesh fed him the right words for a severe illness or the like.

Deirdre laughed and waved. "Oh aye, a vacation is such a terrible incident. May such awful incidents befall us all!" Most people there laughed. Aengus didn't. The foreigner noticed. Aengus stared him down, and the man flinched.

They bolted.

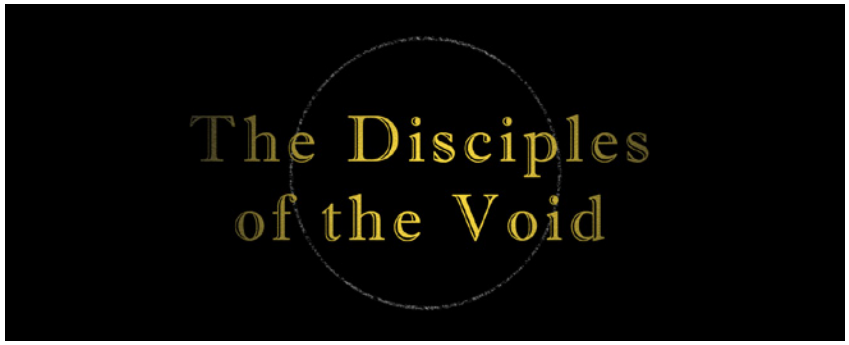
Aengus was gifted with generations of hard-bought genetic enhancements. The stranger's comparatively meager bionics kept him ahead for just enough time to reach the facility door. Aengus yelled

to the Tree while he ran, and the door slammed shut as Aengus' fist slammed into the foreign diplomat's shoulder. The result was like dropping a melon off a balcony.

"YOU! What have ye bastards done to my friend!"

The police arrived and pulled Aengus back. A few days later they released him from jail as the full extent of the conspiracy came to light. Six full Druids imprisoned, one on death row. Three assorted staff members from the visiting civilizations in jail as well, with many more under suspicion. It was a frightening day for the Tree, and it gave pause to all the Daoine about these new visitors. For Aengus, however, the day was the best in his life.

It was the day he got his friend back.



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 ultraviolet 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.

Disciples Without Wormholes

The Disciples as described here depend heavily on the existence of wormhole technology. They simply would not have the time to reach their Anchorages in deep intergalactic voids without wormhole transit. In In campaigns lacking that technology we suggest that instead the *modus operandi* of the Disciples be modified somewhat, emphasizing the "listening" part of their philosophy. Anchorages can become massive radio telescopes in the Oort clouds surrounding each solar system, listening for the longest of long-wave signals from beyond. This works particularly well in the Sublight setting.

If you prefer to station the Disciples in interstellar space, consider whether you would place them directly between two planets (and thus on shipping and communication lanes), or in more empty regions (which will make them even more isolated and rare).

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 every day – 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 are functionally immortal, though there are still some kinks to be worked out in the physical and mental processes. This longevity proved to be a non-issue for the civilization as a whole. The birth rate is low (many people never have children), hierarchy is omnipresent from birth, and there will always be more intergalactic bubbles to colonize. In the long run, the primary issue that the Disciples are likely to find is the lack of word from their god. Psychohistorical analysis shows that this is unlikely to be an issue for some time. Religious-minded immortals can be very patient.

As one would expect, the Disciples government are 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.
Typical Allies: The Stardwellers are traditional allies of the Disciples, and stop by occasionally to check on their anchorages. When they travel to the Universe of Noise, Disciples typically investigate the Masquerade, Mechanica, the Daoine, or the Replicants, as all of them are both tolerant of outsiders and most definitely noisy.
Typical Enemies: As a tiny and fairly non-invasive Civilization, the Disciples have no enemies.
Benefit: The robes and built-in nanotech of the Disciples allow them to use a Stealth Profession at level 4. There is no training involved, and Nanotech is the most commonly used Capability with this Profession.
Capabilities:
Civilization: Bio 3, Cog 3, Meta 2, Nano 4, String 3
Typical Citizen: Bio 3, Cog 3, Meta 1, Nano 4, String 1
Common Neuroforms: The Disciples are about 60% baseline dynamic, 40% dataform.
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.

Character Templates

Priest
Baseline Dynamic
Bio 1, Cog 3, Meta 3, Nano 3, String 2
CVs: Worship 4, Privacy 3, Silence 3, Concealing Knowledge 1
Expertise: Professional: Religious 3, Politics 2, Stringtech Engineer 1, Locality (Disciples) 2, Stealth 4

Chef
Baseline Static
Bio 2, Cog 2, Meta 1, Nano 3, String 1
CVs: Worship 2, Privacy 3, Experimentation 2, Carpe Diem 4
Expertise: Professional: Artist (cooking, baking) 3, Religious 2, Biotech Researcher 1, Locality (Disciples) 2, Stealth 4

Pilgrim

Baseline Dynamic
Bio 3, Cog 3, Meta 2, Nano 3, String 2
CVs: Worship 2, Privacy 3, Discovery 3, Questioning 4
Expertise: Professional: Religious 3, Locality (Masquerade) 2, Locality (Stardwellers) 1, Locality (Disciples) 2, Stealth 4

Botanist
Dataform Dynamic
Bio --, Cog 3, Meta 1, Nano 3, String 1
CVs: Worship 2, Privacy 1, Life 4, Control 2
Expertise: Professional: Biotech Researcher 3, Biotech Engineer 2, Artist (gardening, painting) 1, Locality (Disciples) 2, Stealth 4

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 accomodate 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.

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.

Immortality came fairly smoothly and easily to the Masquerade. A Masquerader's surface identity is a choice; their deeper identity is the one doing the choosing. Masqueraders take on new surface identities regularly; many are several different people in the same day. They create new surface identities every year or so. Their deeper identities shift on a longer timescale. Some are flightier and change every decade or two; others settle into being who they are for a few hundred years before feeling called to become someone else. Regular reinvention is at the core of their culture. With expertise and persona lenses freely available, it was easy to act young or old, to gain a measure of gravitas, wisdom, enthusiasm, or naivete. When low-tech outsiders ask how the Masqerade deals with immortality, the answer is "the same way we dealt with everything else."

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.

Typical Allies: The Masquerade mixes well with the Tao of History, the Stardwellers, and the Stored. They can be well-aligned with the Mechanicans, but are unlikely to be completely trusted.

Typical Enemies: The Masquerade's beliefs and general approach to life clash with those of the Cognitive Union and the Logicians.

Benefit: Masqueraders can identify anyone they have met, regardless of changes in their appearance, use of the Spy profession, body swapping, or even a spy mesh. They also automatically notice when someone is pretending to be someone they are not, regardless of the method used. They have no way to "see through the disguise," but they will know that something is being concealed.

Capabilities:

Civilization: Bio 5, Cog 3, Meta 4, Nano 4, String 3

Typical Citizen: Bio 4, Cog 3, Meta 4, Nano 3, String 1

Common Neuroforms: The Masquerade accepts all neuroforms. The majority of citizens are dataform and do not embody regularly. Most embodied people are baseline dynamic. Group-minds are common.

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.

Character Templates

Diplomat
Dataform Dynamic
Bio 3, Cog 3, Meta 4, Nano 3, String 2
CVs: Identity 2, Anonymity 1, Peace 4, Connection 3
Expertise: Master: Political 3, Spy 3, Locality (Masquerade) 2, two other Localities 2

Scientist
Multiple Dataform Dynamic
Bio 3, Cog 3, Meta 2, Nano 4, String 2
CVs: Identity 3, Anonymity 4, Logic 3, Elegance 4
Expertise: Adept: Biotech Researcher, Biotech Engineer, Teacher, Locality (pick one), and Medical all at 3. Locality (Masquerade) 2

Entertainer
Baseline Dynamic
Bio 5, Cog 3, Meta 4, Nano 3, String 3
CVs: Identity 2, Anonymity 2, Excitement 3, Independence 2
Expertise: Professional: Artist (dancer, singer) 3, Courtesan 2, Media 1, Locality (Masquerade) 2

Maskmaker
Baseline Dynamic
Bio 3, Cog 3 Meta 3, Nano 3, String 1
CVs: Identity 2, Anonymity 5, Creation 4, Complexity 2
Expertise: Professional: Nanotech Engineer 3, Programmer 2, Legal 1, Locality (Masquerade) 2

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 capacitors, 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."

The Gaians are a civilization inspired by the Gaia Hypothesis. In the same way that the Abstractionists (page xx) believe that every human social group is its own living entity, the Gaians believe that interconnected systems of all kinds are living things. There is ample evidence of the power of biological organisms to adjust and regulate their environments, in ways similar to how living beings unconsciously regulate their bodies. Even stars do similar things. Most Gaians do not believe that ecosystems or asteroid belts are sentient, but they do understand them as living beings and seek to be part of them.

People who know the Gaians' reputation for peace are often surprised at how busy street life is. They expect the quiet of a Disciple's anchorage, not the hustle and bustle of a crowded city full of life. Gaian cities are colorful, vibrant, and growing in a quite literal sense, from the population to the buildings to the streets. Many visitors who are used to large cities eventually become disconcerted for reasons they are unable to define. The difference? There's no angry shouting. It's unnerving.

Street crime has disappeared in Gaia (as it has in most high-tech civilizations), and violent crime is exceptionally rare, but "underground" activities and organized crime are still present. The Gaian government handles most such activity by simply making

activities and substances legal and then counseling people out of the activities. It's difficult to make a living smuggling when a civilization has replicators and lax patent enforcement.

Many Gaians spend an hour or so each day "interconnecting." They start with an object, building, or person nearby, and examine its infosphere tags. Then they follow links from those tags to other things - the people who use the objects, who built or live in the buildings; the things carried by the people - and from there to other things, and others, and onward as far as they care to follow. All this can be done without leaving one's spot, through the infosphere. Gaians marvel at the network of life and objects that surrounds them, and interconnecting allows them to experience it in person.

The Gaians have a low-level infosphere, but they use it extensively. Every object and living thing is "tagged" with information. Humans tag themselves with their names, likes and dislikes, personality traits, and more. This is typical in other civilizations as well. What is unusual is the extent of object tagging in Gaian space. Every single thing has information on its physical and chemical properties, where it has been, who has used it, and more. This comes directly from the Gaians' belief in the connection between all things.

Gaians make extensive use of all kinds of technology. Their biotechnology is the most visible to outsiders: their clothing is alive, as are their houses and transportation. This means that these things need food, air, and water, but it also means that they're self-repairing and self-reproducing. Many of their reproductive clocks are timed to the maturation rate of Gaian children, so that parents can have something to pass on to their children.

Much of Gaian scientific research is in the areas between biotech and metatech: complexity and interrelationships. While they have yet to create a truly blended science of both, such a thing does not seem utterly impossible to them. Their stringtech, while impressive, is something they are satisfied with and not spending a significant amount of research time on.

Specialization is encouraged in Gaia. Not only does it allow citizens to advance farther in their particular field of leadership, it also advances the state of science in general. Rather than striving to be interdisciplinary on their own, Gaians rely on others to broaden their knowledge and see connections between their own field and others.

The Gaians' income comes not from sales of their works, but from the mediation and wormhole transport services that they provide to other civilizations. Internally, the Gaians have a socialist economy, and the government handles all transactions with outside organizations almost invisibly. Occasionally a citizen will request to replicate something that is more expensive than can be justified, but people usually have what they want and always have what they need.

Despite their peaceful stance, the Gaians are not always in good agreement with those who would promulgate intellectual property law. Nearly every piece of their physical technology classifies as an auxon, which makes enforcement very difficult. Much of their social methodology falls into the same category as well. In settings with the Transcendentals, they believe that these beings could do more to improve the state of the civilizations and prevent disasters before they happen. Nonetheless, they allow outside visitors a good deal of latitude and authority in their work, in the interests of getting along.

Gaians use a "matrix management" approach to government. Rather than a traditional hierarchy in which leaders are expected to govern in all manners regardless of their expertise, Gaian leaders have authority only in a particular, limited area. Even the most powerful leaders in one field are expected to bow to the expertise of minor leaders in other fields. When leaders disagree as to which process

deserves more energy and time-on-task at that moment, experts in such allocations are called in.

Common Name: Gaians
Emblem: A fractal globe in green. Green is the color of life, and the fractal represents infinite complexity.
Benefit: As a peaceful civilization, the Gaians have bent nearly all of their efforts towards civil works, infrastructure, and other internal matters. Because of this, they have a -1 Profession penalty when attempting to assault or even affect others, but a +1 Profession bonus to any defensive measures.
Capabilities:
Civilization: Bio 5, Cog 3, Meta 3, Nano 4, String 5
Typical Citizen: Bio 3, Cog 3, Meta 3, Nano 3, String 1
Common Neuroforms: Gaians are about equally split between baseline neuroforms and non-dynamic multiple minds.
CVs: Connection and Peace.

Connection helps the Gaians talk to others in friendly ways, without ulterior motives. It also lets them see connections between other people and between various real-world systems.

Peace is used to resist encouragements to violence, or to encourage others to use peaceful means of resolution. Most Gaians would be considered pacifists in other civilizations.

Character Templates

Envirosculptor
Baseline Static
CVs: Connection 4, Peace 3, Innovation 4, Life 3
Capabilities: Bio 5, Cog 2, Meta 2, Nano 3, String 5
Expertise: Professional: Artist (worlds, life) 3, Biotech Engineering 2, Stringtech Engineering 1, Locality (Gaians) 2

Psychohistorian
Dataform Dynamic
CVs: Connection 4, Peace 5, Trade 3, Symmetry 1
Capabilities: Bio --, Cog 3, Meta 3, Nano 3, String --
Expertise: Professional: Finance 3, Metatech Engineering 2, Metatech Researcher 1, Locality (Gaians) 2

Micro vs. Macro

"Excuse me – were you just talking to that man?" The woman posing the question wore a dark suit, almost antique in its formality. The man she asked wore green robes that looked like they had little red insect antennae around the base. It was a relatively accurate assessment. He turned from his companion, swirled the wine in his glass a bit, and responded.

"Yes, I was. Why do you ask?"

"Do you know what he was trying to do?"

The man frowned and checked a device on his wrist. The lights on it were blue. "Nothing, so far as I can tell. Why, am I in danger?"

The woman frowned and muttered, "Only ethically." She sat down and introduced herself. "Kenyi, of the League of Independent Worlds."

"Yes, I guessed. We're so glad to be hosted here at your capital. My name is Tilapa, of the Harmonious Nations of Gaia." They shook. Both made a mental note to sanitize their hands later. "What did you mean by that statement?"

"I'm a member of the security force here. I deal with memetic crime of a specific sort. The man you spoke with is a... I'm forced to use the word 'suspected' criminal."

"Oh!" Tilapa looked around for the man. "Then why is he here?"

"Are your people familiar with the concept of organized crime?"

"I'm not sure what you mean. Most of our criminals are highly organized..."

"That would be a no, then. Here." She handed him a data seed, formatted for his machines. The organizers who had set up this party had hired some very competent engineers to get around the systems mismatch.

The Gaian loaded the seed and scanned the contents briefly. "What a bizarre idea."

"Yeah. Tell me about it."

"Do you want some help tracing their activities?"

"The way our legal system is set up you might end up doing them a favor by trying to help us. Trust me – stay out of their way. Your people believe a little too much in the things that would help them do their job. I'd rather not infect your society that way." Kenyi went to stand up.

"I think you underestimate us."

She paused. "How so?"

"It's true that peace is important to us, that we would rather let our worlds be trampled than let violence rule our response. But because of that very belief, the methods you describe here," he waved at the strangely pulsating display device all the Gaians seemed to use, "could never gain a serious foothold. Something like this is no threat to our civilization on an ideological level. They might..." He searched for a metaphor. "They might inhabit the body, but they pose it no threat."

Kenyi stood up and adjusted her coat. "That's good to hear, but it's not where my concern stops. You keep looking out for your civilization. I'll look out for its people."

The Illustrious Stardwelling Armada

The most gregarious and advanced of the three spaceborne civilizations in the universe (the other two being the Spacers and Daoine), 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.

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.

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.

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 Stardwellers took the advent of immortality as a certainty. When it came there were already thousands of potential ways it could be handled, plotted out by psychohistorical analysis. The busy Stardwellers, with their fairly low birth rate, have plenty enough time to create new ships that can provide youngsters with the opportunity for exploration while giving their elders the chance to share their knowledge and practice their command skills.

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.

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.

Typical Allies: 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. Most people seem not to mind their presence as long as they keep the trade of technology flowing.

Typical Enemies: The Union has made it clear that they'll shoot the Stardwellers out of the sky if they ever bring their ships into orbit.

Benefit: Stardwellers suffer no penalties in zero-g and low-gravity situations. They also receive two extra twists for use with the Wonder Theme.

Capabilities:

Civilization: Bio 5, Cog 5, Meta 5, Nano 5, String 5
Typical Citizen: Bio 4, Cog 4, Meta 3, Nano 5, String 3

Common Neuroforms: Dataforms are most common among the Stardwellers. Physical characters are almost always dynamic. No neuroforms are unheard-of, and the Stardwellers have perhaps the most widely varied populace of any civilization.

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.

Character Templates

Traveler
Dataform Dynamic
Bio 4, Cog 3, Meta 3, Nano 4, String 3
CVs: Freedom 4, Diversity 3, Wanderlust 3, Discovery 4
Expertise: Master: Explorer 3, Locality (Cargo Cults) 3, Outdoorsman 2, Courtesan 2, Locality (Stardweller) 2

Neophile
Dataform Multiple Dynamic
Bio 5, Cog 3, Meta 3, Nano 5, String 4
CVs: Freedom 2, Diversity 3, New Things 4, Experimentation 2
Expertise: Omnicompetent. Master: Nanotech Engineer 3, Biotech Engineer 3, Stringtech Researcher 2, Crisis Control 2, Locality (Stardweller) 2

Mainstay
Baseline Dynamic
Bio 3, Cog 3, Meta 3, Nano 4, String 4
CVs: Freedom 2, Diversity 3, Home 2, Community 3
Expertise: Professional: Spacer 3, Teacher 2, Nanotech Engineer 1, Locality (Stardweller) 2

Financier
Baseline Dynamic
Bio 4, Cog 4, Meta 4, Nano 3, String 3
CVs: Freedom 2, Diversity 1, Responsibility 3, Accountability 4
Expertise: Master: Financial 3, Metatech Engineer 3, Metatech Researcher 2, Politics 2, Locality (Stardweller) 2

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 starbirth 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 sundive 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 micrometeors 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 DI 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.

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 cultures, 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 external technology trade. Pure science research is a significant part of its budget, and good scientists are venerated as heroes. In settings with the Transcendentals, Independent worlds show a significant amount of anti-Transcendental sentiment. 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.

The Independents struggle with immortality. They did not develop it themselves, and had given up on ever living

The League and the Transcendentals

In settings with the Transcendentals, humanity was recipient of incredible advances in every field of science and technology as the Transcendentals bartered for their future. 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 the groups that would become the League 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.

beyond 250 years. When they met other civilizations who had solved the puzzle of immortality, the Independents didn't quite know what to do with it. Many individuals, both the old (who were now freed from fear of death) and the young (who were now looking at careers forever filled with experts older than they), left their lives behind "in search of themselves." To this day the matter is not truly resolved. Some Independents ignore the change and keep working as their great-grandparents did. Some seek out opportunities on new worlds. Others seek out new modes of being, new neuroforms, so as to find a niche not yet occupied by their elders. The question of how the Independents handle immortality is far from settled.

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 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.

Typical Allies: 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 maintain their neutrality.

Typical Enemies: see above

Benefit: The Independents use slightly different technology from the rest of the universe. While the actual devices and procedures have been traded back and forth, Independents still understand things a little differently. When attempting to understand or exploit newly discovered devices and technologies, Independents can change a "maybe" to a "yes" or a "no" to a "maybe" in the Four Questions. They also speed up such Projects by one time step if they are the lead.

Capabilities:

Civilization: Bio 3, Cog 3, Meta 3, Nano 4, String 5

Typical Citizen: Bio 3, Cog 2, Meta 2, Nano 3, String 1

Common Neuroforms: Most Independents are baseline dynamic, though dataforms are increasingly common as the local cognitech infrastructure improves. Group-minds are particularly rare.

Core Values: Self-Reliance and Teamwork

Self-Reliance drives the moral center of the Independents. It's what makes them eschew technology handed out by others, 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

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 great starting point for those new to the setting.

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.

Character Templates

Possibly Mad Scientist
Baseline Dynamic
Bio 2, Cog 4, Meta 1, Nano 3, String 4
CVs: Independence 4, Teamwork 1, Invention 5, Entitlement 2
Expertise: Satori: Stringtech Engineer 5. Professional: Stringtech Research 3, Nanotech Engineer 2, Nanotech Researcher 1, Locality (Independent) 2

Politician
Baseline Dynamic
Bio 2, Cog 3, Meta 3, Nano 2, String 1
CVs: Independence 3, Teamwork 4, Peace 2, My Constituents 2
Expertise: Professional: Political 3, Media 2, Teacher 1, Locality (Independent) 2

Public Safety
Baseline Dynamic
Bio 2, Cog 2, Meta 2, Nano 3, String 4
CVs: Independence 3, Teamwork 7, Security 4, Community 2
Expertise: Professional: Police 3, Crisis Control 2, Soldier 1, Locality (Independent) 2

Designer
Dataform Dynamic
Bio 3, Cog 5, Meta 5, Nano 4, String 3
CVs: Independence 3, Teamwork 2, Expression 4, Freedom 3
Expertise: Professional: Artist 3 (clothing and murals), Artist 2 (infographics and interfaces), Financial 1, Locality (Independent) 2

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 'bwahahahaha' 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..."

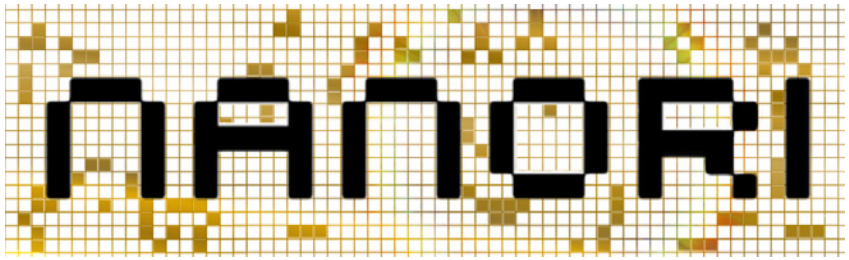
"We can't start throwing people out just because of how they think, this isn't the Union."

"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 Nanori civilization is isolated from others. This is not because the Nanori are cruel or undiplomatic, or because people find them morally reprehensible. It is because even ordinary contact with them might result in a catastrophe. The Nanori are nanophage farmers.

The original colony from which the Nanori hail was designed as an experiment. The colonists' goal was to create an entire artificial ecosystem through the use of self-replicating and evolving nanotech, and to then show that humanity could survive in such an environment. If the experiment was a success, it could mean a significant increase in the percentage of worlds that were potentially inhabitable.

The first planet chosen was originally the target for a Spacer ship. Survey via wormhole showed that the planet would be unsuitable for human habitation, and that even terraforming would be difficult. The Nanori colonists purchased the Spacer ship (today in orbit around the planet) and attempted to use nanophages to radically restructure the planet's surface and atmosphere. The colonists set their specialized home-built nanophages to work alongside custom-designed terraforming bacteria, and over centuries of intermittent cold sleep watched the world develop into something never before seen. When the artificial ecosphere had developed enough that a clear direction had arisen, the Nanori set to work developing tools to manipulate the phages and keep human life viable on the planet. While they have long since come down from the old Spacer ship, the terraforming process continues to this day.

The Nanori world is a strange mix of nanotech and cellular biology, both competing for the same niches. Because their worlds are still "young" in an evolutionary sense, there are few multi-cellular life forms that have not been custom-built or artificially introduced. The result is a planetary ecosphere of unrivaled variety, both amazingly familiar and clearly alien, dangerous and new. Silicon-based slime molds stretch across acres of terrain, while lichen-esque spores float above. The rising sun brings chaos and competition as efficient solar-powered mycora fruit and explode, both endangering and fertilizing the bacterial mats below.

Unlike most biological ecosystems, the nanosystem of the Nanori worlds was a created, programmed thing. It has certain built-in imperatives that biological life lacks. The most notable of these is expansion. Biological life tends to spread into all possible niches because competition forces it out of more comfortable locales. The phages of the Nanori, on the other hand, are hard-wired to spread. Because of this, the Nanori found that they became a people utterly transformed on the microscopic level. Their bodies contain nanotech auxons in the same way that most human bodies contain bacteria and virii. Some of these are beneficial, while others are dangerous. A wide variety of activity is tolerable to the Nanori – many of them have entire major organs replaced by a nanotech organism that performs the same operations. The Nanori immune system handles truly dangerous outsiders by simply shuttling them out of the body, where they can grow and evolve without harm to a host.

The Nanori have since nanoformed numerous other planets, planetoids, asteroids, and even gas giants. They are known as the civilization to go to for anything involving nanotechnology. The Nanori make most of their money from their unique abilities to deal with out-of-control nanotech, but their other trade is hampered by the inherent deadliness of their populace, who cannot enter most other civilizations without being classified as a deployed weapon.

The Nanori believe very strongly in encouraging evolution, although not the violent, aggressive evolution of the Darwinians. Where the Darwinians preach that only strongest will survive, the Nanori prefer this Darwin quote: "It is not the strongest of the species that survives, nor the most intelligent that survives. It is the one that is the most adaptable to change." Many famous Darwinians have been Nanori, and the Nanori government fights to combat the image that their worlds are a haven for these terrorists.

The concepts of emergence and evolution pervade Nanori culture as well as their technology. While the Stored and the Masquerade believe in identity - in a kernel of true self, though they express it in different ways - the Nanori instead believe in a self that grows and changes over time. They see personal change less as different facets of the self coming forward and more as a deep transformation in who one is. Their penal systems likewise express this belief: there are no "life sentences," and counseling is mandatory for all offenders. Some Nanori find that the inertia of hundreds of years of life tends to reduce the emergence of new personality traits, and will occasionally "archive" old memories. They firewall those memories from their subconscious, allowing only intentional and conscious remembrance, preventing the memories from dragging against their changes.

Most Nanori only keep in touch with one or two dozen other people. Their work demands space in more than just a physical sense. It demands room to grow. A Nanori's "creations" ("evolutions" is a better word) will have plenty of opportunity to be tested by the world; they also need a certain amount of isolation in which to grow and diversify. More gregarious civilizations tend to view the Nanori as a culture of misanthropes, which is not quite correct. The few friendships they do have are often deep, and take different forms as years pass. When Nanori make enemies, they too are deep relationships lasting hundreds of years. It is not unusual for the same people to have many different relationships over the course of centuries. Few people know each other as intimately as a pair of rival Nanori.

Not all Nanori are on the cutting edge of nanotech. While the concept of emergence pervades their culture, some citizens prefer to seek that emergence in social phenomena, in biological organisms, even in the space of pure ideas. Finding a Nanori who is not seeking the cutting edge *somewhere*, though, is a rarity.

The government of the Nanori is a representational democracy similar to the European Union, though not all member states participate, and some choose to follow their own unique pattern.

Common Name: Nanori
Emblem: The Nanori name is presented above a grid full of cellular automata. The automata grid is made up of "methusela," patterns that generate incredible floods of new patterns.
Benefit: Being infused with nanotech to the point of nearly replacing their biology, the Nanori may use Nanotech in place of Biotech for all purposes (though they still retain a Biotech score). Unfortunately, because they harbor many active nanophages, the Nanori are deadly to most other civilizations. They are required to wear an environment suit (typically rated at Stringtech 4) when not in Nanori biospheres and may find themselves banned from some areas.
Capabilities:
Civilization: Bio 5, Cog 4, Meta 3, Nano 5, String 4
Typical Citizen: Bio 5, Cog 4, Meta 2, Nano 5, String 4
Common Neuroforms: Most Nanori are baseline dynamic. Computational resources are in high demand, and chaotic enough that the civilization attracts relatively few dataforms.
Core Value: Emergence. Nanori have only three CVs.

The core of the Nanori way of life is the concept of ***Emergence***: the allowance of new and unexpected things. However, to contrast with Stardwellers, the Nanori neither deliberately design nor aggressively seek out said diversity – they attain it by setting up situations in which new things will naturally come about. They plan for the future, but leave much unsettled. They work to keep themselves alive, but permit devices both innocuous and dangerous to reproduce in their own bodies. They truly believe in the power and worth of things that arise on their own.

If "emergence" is the idea that the unknown can arise from the known, then ***Evolution*** is the idea that the known can change. The Nanori live in a fluid world. They expect change from their phages, from each other, even from their environment. They see it in all places in the universe. In the same way that cycles of change pervade Taoist alchemy, the Nanori believe that flux is the natural state of being for all things.

Character Templates

Soldier
Baseline Dynamic
Bio 4, Cog 5, Meta 2, Nano 5, String 2
CVs: Emergence 3, Evolution 1, My Mission 4, Family 2
Expertise: Master: Soldier 3, Nanotech Engineer 3, Nanotech Researcher 2, Police 2, Locality (Nanori) 2

Catastrophist
Baseline Dynamic
Bio 3, Cog 3, Meta 1, Nano 5, String 1
CVs: Emergence 5, Evolution 3, Safety 4, Relaxation 2
Expertise: Satori: Crisis Control 5, Professional: Police 3, Nanotech Researcher 2, Nanotech Engineer 1, Locality (Nanori) 2

It's the Little Things

The Assembling Song was a lengthy melody that every Nanori schoolchild learned. It started with the chemical elements, formulated the Inorganic Bases, and worked its way up through the construction of the Core Tools. To sing the whole thing aloud would take days.

It was part Alphabet Song, part Illiad and Odyssey, part knee-bone-connected-to-the-leg-bone. Each culture of Nanori (that was the technical term: a culture of Nanori, like a flock of sheep or a pod of whales) had its own version for its own Core Tools.

Hendo sang the Assembling Song while he worked.

Here on Aorta, trade hub of the Nanori civilization, he could walk about unconstrained. Last month's business trip to Gaia had left him trapped in a containment suit for the whole time. Some Gaians could withstand his natural mycora, but there were unenhanced children wandering about and it would be poor form (to say the least) to have some poor tot accidentally burst open in self-replicating bounty. No, the suit was a necessity. The trip brought him new ideas and new methodologies to try out, but what he really needed was personal space. All this buzzing and activity distracted him. While the rest of Nanori space was still twittering about their contact with some new planet or other, Hendo focused inward, working new and subtle tricks with with methods long ago thought worthless. He appreciated the opportunity to see new approaches and new viewpoints in nanotechnology, but he also liked being able to feel the grass crawling beneath his feet.

Before him was ten square kilometers of blasted wasteland – the result of a previous failure. Hendo released a few microbot factories that had performed well at certain tasks in the past. //Bring me electricity,// he told them, and they began to spawn all manner of mycora. Some tried to burn the trash and failed, dying. Others sought different chemical combinations, most of them worthless – the aftermath of a failed experiment was usually close to a minimum-energy configuration. A few particularly ambitious models sought out radioactive materials in the hopes of building a breeder reactor. These Hendo gently deactivated himself and brought back into his stores. It would work, but it would take an eternity. This was a solution best saved for another day.

The most successful strain turned out to be, as was often the case, a simple and elegant solution. Each piece of debris on the field was sprouting tiny, metallic, clover-like leaves. As the suns moved overhead the leaves slowly tilted. Stalks like fast-growing asparagus shot up from the ground to capture the reflected sunlight. It was a Refulgence Field, one of the classic Ten Million Patterns. Compared to the total-conversion generators he had seen last month it was a hamster turning a wheel, but it would provide enough energy for his needs. Hendo let the remaining strains compete against this one for now – you never knew when a strain evolved into a niche over a few years would become worth keeping.

Some immense creature blundered into the edge of Hendo's awareness. It crushed a swath of the mirror-leaves and deposited a visitor – Rin of the Desoil Culture, a diplomat Hendo had met at a boring party some fifty years back. Rin looked down and saw where he was, waving the beast away in as if directing an overenthusiastic puppy. He himself walked out carefully. He sent a call through the infosphere before he was in range to talk in person.

"Good day, Hendo. I have a proposition."

"I'm really not interested."

"It'll be worthwhile."

"It'll be a distraction."

"It's going to be the jumpstart you need."

Hendo set the assemblers about their work and turned to face Rin. He'd be coming into view over the hill in a few seconds. "Look, I don't mean to be rude, but I'm doing just fine here and I'd appreciate

if you took that huge thing you've been constructing and headed back home. I need to concentrate."

Rin walked over the hill with a smile and yelled, eschewing the infosphere for the moment. "You need to relax!"

Hendo kept to the infosphere. "If I relax, my rivals gain an edge and the next thing you know I'm back to mining asteroids for rare elements. Please-"

Hendo's plea kept coming, but Rin spoke over it. "Hendo, look. No, come here. Talk to me."

"I am talking to you."

"No, you're thinking to me. Your mouth is still singing the Assembling Song."

Hendo shut up.

"Your rivals are gone. They left the planet."

Hendo stammered slightly as his mouth sought the proper question. Behind him a lunar prominence stretched and yawned slowly as some distant wonder-worker altered it to suit his needs.

"You've been a good designer, Hendo. One of the best. I've always admired your work and that of your culture. I'm not asking you to leave that behind – I'm asking you to come with me for the opportunity of a lifetime." Rin's eyes and tone were serious. Some of the more self-aware nanoassemblers listened in surreptitiously as they went about their work.

"I... But..."

"I'm going to be on the diplomatic mission to the new civilizations. Plural. Hundreds of planets, maybe thousands. Everyone you know is trying to get there first, but I've got the inside route. I need someone who understands nanotech. Are you coming?"

"Now?"

"Yes, now. We leave tomorrow."

Indecision hung briefly in the air, then fled.

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 reliable genetic manipulation, so naturally there were some drawbacks and difficulties, and not every child made it to adulthood. Nevertheless, the early League persevered. Some time later, when 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 – wormholes 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 piteous 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 descendants' 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 most SA settings, and no one wants to be sabotaged by one's descendants for a foolish mistake.

Immortality came late to the Logicians - they had not entirely conquered aging when they began encountering other civilizations who had. Nevertheless, adapting from a 500-year lifespan to true immortality did not pose a problem. With characteristic obviousness, the Logicians imposed a quota on the bearing of children so as to limit the number of people to those whom their worlds could support. There have been no difficulties.

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.

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.

Common Name: The Logicians
Emblem: A flag, one half black, the other white. The story that is told about this is that an inter-civilization peace conference 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.
Typical Allies: The Logicians are allied with the Replicants and the Cognitive Union, and appreciates both of them for their eminently logical stances.
Typical Enemies: The Logicians are opposed to the overly emotional Tao and the bizarre ethics of the Stardwellers, Mechanists, and Masquerade.
Benefit: Logicians are immune to emotional appeals, and to any use of the Romance Theme. It is very difficult to engage them in Metatech conflicts because of this – the attacker is limited to the lower of his Metatech or Cognitech, and takes a further -1 penalty to both Capability and Profession in the attempt.
Capabilities:
Civilization: Bio 3, Cog 4, Meta 1, Nano 3, String 4
Typical Citizen: Bio 2, Cog 3, Meta 1, Nano 2, String 1

Common Neuroforms: Most Logicians are baseline static. The royalty are often more enhanced and are dynamic instead. Group-minds are common among the royalty.
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.

Character Templates

Security Officer
Baseline Static
Bio 3, Cog 2, Meta 1, Nano 4, String 3
CVs: Logic 1, Efficiency 2, Law 4, Calm 2
Expertise: Professional: Police 3, Crisis Control 2, Cognitech Researcher 1, Locality (Logicians) 2

Mathematician
Baseline Static
Bio 2, Cog 3, Meta 1, Nano 3, String 1
CVs: Logic 5, Efficiency 4, Exploration 2, Completeness 3
Expertise: Satori: Cognitech Researcher 4, Professional: Programmer 3, Cognitech Engineer 2, Teacher 1, Locality (Logicians) 2

City Planner
Baseline Static
Bio 3, Cog 3, Meta 1, Nano 1, String 1
CVs: Logic 3, Efficiency 4, Expansion 2, Details 3
Expertise: Master: Metatech Engineer 3, Locality (Logicians) 3 Metatech Researcher 2, Nanotech Engineer 2

Minor Lord
Baseline Dynamic
Bio 4, Cog 3, Meta 1, Nano 3, String 1
CVs: Logic 2, Efficiency 3, Good Breeding 2, Hierarchy 4
Expertise: Professional: Political 3, Legal 2, Media 1, Locality (Logicians) 2

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 Aia. 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 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."

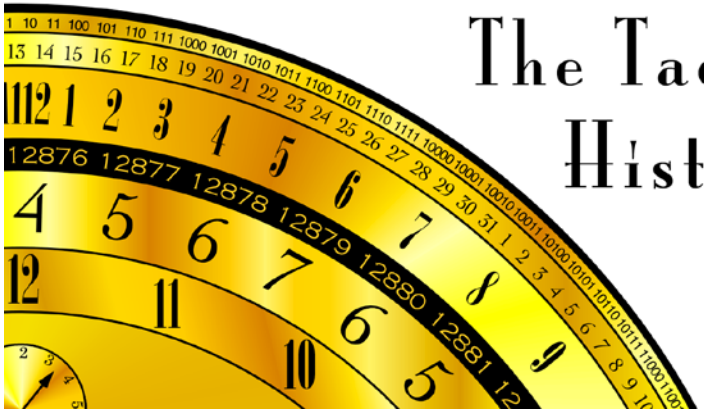
"And there you have the very essence of the other civilizations. They don't make sense. But they are sometimes predictable, and

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 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

The Tao and Delusion

Some Tao become addicted to the use of Persona Lenses (see page xx) 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.

Nested Digital Delusion Disorder

Especially common in Tao space, but visible in nearly every Mesh-using culture, is Nested Digital Delusion Disorder (ND3). 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 ND3 in its intermediate stages.

In the worst cases, ND3 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.

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, 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.

As the Tao age, they eventually retire. Theirs is a post-scarcity civilization, and there is no need for everyone to work. The efforts of a few thousand folks (and substantial computer support) can take care of billions upon billions of semi-retirees. The acting bug is strong, and much of retired Tao civilization ends up being intergalactic theater bums, putting on or watching shows. Some travel to other civilizations and research them for the eventual display of their histories. There is a small but significant overlap between the retired Tao and active Roamers.

While the civilization's need for work has been filled, the individual's need for fame is harder to meet. Many Taoists are exceptionally expert after thousands of years of practice. It can be difficult for an up-and-coming actor or technician to find a good position. Some leave for other civilizations; others bide their time with side productions and bit parts. It can take a hundred years or more to "pay your dues" in Tao space. Exacerbating the problem is the fact that there is only so much history to reenact, and finding a new interpretation or angle can be difficult. The Tao of History is a frustrating place for youngsters.

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.
Typical Allies: The Tao's allies are the Masquerade, Stardwellers, and Mechanicans, all of whom enjoy their energy and are amused by their outlook.
Typical Enemies: The Tao finds 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.
Benefit: Taoists receive two extra Twists at the beginning of each session, which they may only spend through Romance, Intrigue, or Empathy.
Capabilities:
Civilization: Bio 4, Cog 4, Meta 5, Nano 4, String 2
Typical Citizen: Bio 3, Cog 3, Meta 5, Nano 2, String 1
Common Neuroforms: The Tao are primarily baseline dynamic. Slaved and parasitic neuroforms are not allowed. A minority of the civilization is dataform, and most of them are embodied.
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.

Character Templates

Explorer
Baseline Dynamic
Bio 3, Cog 3, Meta 3, Nano 4, String 1
CVs: Authenticity 4, Tradition 2, New Horizons 2, My Crew 2
Expertise: Professional: Explorer 3, Sailor 2, Media 1, Locality (Tao of History) 2

Noble
Baseline Dynamic
Bio 3, Cog 3, Meta 5, Nano 3, String 2
CVs: Authenticity 2, Tradition 4, Good Breeding 3, Rank Has Its Privileges 2
Expertise: Professional: Political 3, Locality (Tao of History) 2, Locality (one other) 2, Financial 1

Writer/Producer
Baseline Dynamic
Bio 3, Cog 3, Meta 4, Nano 3, String 1
CVs: Authenticity 4, Tradition 1, Stories 2, Continuity 3
Expertise: Adept: Media, Political, Metatech Engineer, Artist (writer, poet), and Locality (Tao of History) all rated at 3.

Courtesan
Baseline Dynamic
Bio 4, Cog 3, Meta 5, Nano 4, String 2
CVs: Authenticity 3, Tradition 2, Secrecy 4, Pleasure 2
Expertise: Professional: Courtesan 3, Athlete 2, Spy 1, Locality (Tao of History) 2

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.

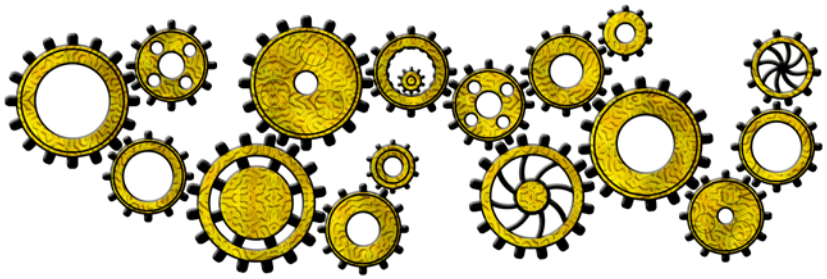
Most watchers have their favorite characters. Temüjin was the highest-rated, of course, but Börte and Ögedei ranked nearly as high for female viewers. The Masqerade loved Subutai for his seemingly shifting loyalties and his faithful core. The Replicants liked Jelme and Bo'orchu for the same reasons others 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."



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.

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.

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.

Most Mechanicans are not immortal. They believe that death is a normal and natural part of being human, along with the grieving process and simply making room for others to live. They die between the ages of 120 and 200, depending on the medical care they receive. Mechanicans are not immortal, and they pass away at the age of three to four hundred. Brain cancer is by far the most common cause of death, with accident coming in a distant second place.

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 highly varied. 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 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.

Mechanica is known to be psychohistorically unstable. The primary 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 change its core values, decline into a society, or fall apart entirely.

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.
Typical Allies: Mechanica often gets along well with the Tao, Masquerade, Daoine, and Stardwellers. They share a general love for the human spirit. They find a lot to identify with in the Nanori, who likewise surround their human minds with technologically altered bodies.
Typical Enemies: They're uncertain about the Stored – are they really humans, or just simulations of them? Mechanica is very much against the Logicians and Union, for their meddling with the human brain. Mechanica has nothing against Gaia, but often find themselves on their bad side.
Benefit: Mechanicans have a competitive advantage in Stringtech. They most commonly use this to substitute their Stringtech scores for Biotech. They may not do this when dealing with age or with poisons and diseases that actually penetrate to their living parts. All Mechanicans have a neural mesh, regardless of their Cognitech score.
Capabilities:
Civilization: Bio 2, Cog 3, Meta 1, Nano 5, String 5
Typical Citizen: Bio 1, Cog 3, Meta 1, Nano 5, String 5
Common Neuroforms: Mechanicans are typically baseline static. Some few dataforms emigrate here to take advantage of the higher technology, but find the local infosphere fairly stifling.
Core Values: Humanity and Tolerance.

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.

Tolerance is not "embracing diversity," it's "I guess I have to put up with it." Mechanicans have a great belief in letting others do as they want unless it hurts them, and maybe even if it does impinge on them some. It's surface-level politeness and a stubbornness that says "You might annoy me, but I'm not going to give you the satisfaction of showing it." Despite their strict beliefs about humanity and the sanctity of the brain, the Mechanicans neither drive the Stored from their territory nor make war on the Masquerade.

Character Templates

Police Officer
Baseline Static
Bio 2, Cog 2, Meta 1, Nano 4, String 4
CVs: Humanity 2, Tolerance 1, The Law 4, Fellow Officers 3

Expertise: Professional: Police 3, Soldier 2, Finance 1, Locality (Mechanica) 2

Rebel
Baseline Static
Bio 1, Cog 1, Meta 2, Nano 1, String 1
CVs: Humanity 4, Tolerance 3, The Body 4, Freedom 3
Expertise: Professional: Outdoorsman 3, Farmer 2, Media 1, Locality (Mechanica) 2

Plutocrat
Baseline Static
Bio 2, Cog 2, Meta 2, Nano 3, String 3
CVs: Humanity 3, Tolerance 2, Order 2, One Coin One Vote 3
Expertise: Professional: Financial 3, Politics 2, Media 1, Locality (Mechanica) 2

Athlete
Baseline Static
Bio 2, Cog 1, Meta 2, Nano 4, String 5
CVs: Humanity 2, Tolerance 2, Competition 2, My Team 3
Expertise: Professional: Athletics 3, Media 2, Crisis Control 1, Locality (Mechanica) 2

Mechanican Entertainment

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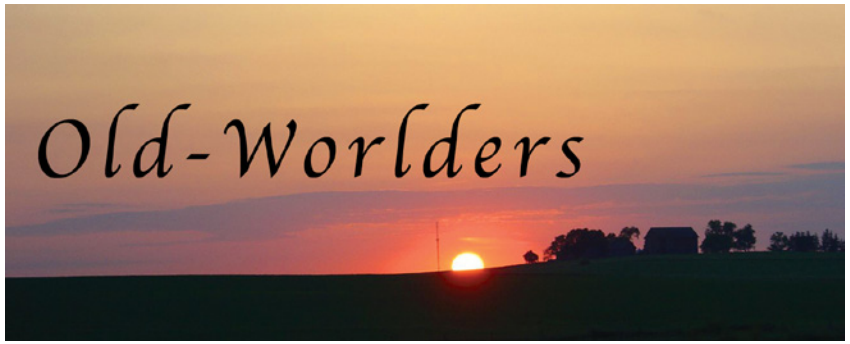
Finally, there are three broad categories into which a myriad of smaller cultures and peoples fall: the Old-Worlders, the Spacers, and a large number of Cargo Cults. Each sub-unit of these civilizations is distinct and often without connection to the others.



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 option. 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.

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.
Typical Allies: Since there is no central Old-Worlder government, they have no real allies. In many settings the Logicians have positioned themselves near Earth in order to take a protective stance over the Old-Worlders, taking advantage of other civilizations' sentimentality, but the Old-Worlders would not truly consider them friends.
Typical Enemies: Since the Old-worlders are not a threat to anyone, they have no real enemies.
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.
Capabilities:
Civilization: Bio 1, Cog 1, Meta 1, Nano 1, String 1
Typical Citizen: Bio 1, Cog 1, Meta 1, Nano 1, String 1
Common Neuroforms: A defining feature of Old-Worlders is that they are baseline static.
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.

Character Templates

Farmer
Baseline Static
Bio 1, Cog 1, Meta 1, Nano 1, String 1
CVs: Tradition 2, Simplicity 2, Growth 4, Worship 2, Family 3
Expertise: Professional: Farmer 3, Finance 2, Crisis Control 1, Locality (Old-Worlder) 2

Explorer
Baseline Static
Bio 1, Cog 1, Meta 1, Nano 1, String 1
CVs: Tradition 2, Simplicity 2, The Horizon 4, Friendship 4, Wanderlust 4
Expertise: Amateur: Outdoorsman 2, Explorer 1, Farmer 1, Locality (Old-worlders) 2

Mayor
Baseline Static
Bio 1, Cog 1, Meta 1, Nano 1, String 1
CVs: Tradition 4, Simplicity 2, My Town 3, Hospitality 1, Faith 3
Expertise: Professional: Political 3, Media 2, Teacher 1, Locality (Old-worlders) 2

Teacher
Baseline Static
Bio 1, Cog 1, Meta 1, Nano 1, String 1
CVs: Tradition 2, Simplicity 4, Growing Up Right 4, Knowledge 3, My Students 2

Expertise: Professional: Teacher 3, Medical 2, Athlete 1, Locality (Old-worlders) 5

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 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. 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.

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.
Typical Allies: 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. In some settings they are indispensible to all civilizations; in others they are merely superfluous.
Typical Enemies: Spacers scorn Stardwellers for their freewheeling ways, but prefer them to most planet-bound folk.
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 3 for free.
Capabilities:
Civilization: Bio 3, Cog 3, Meta 3, Nano 3, String 3
Typical Citizen: Bio 3, Cog 3, Meta 1, Nano 3, String 3
Common Neuroforms: Most Spacers are baseline dynamic. Shipboard computing resources are carefully allocated, and there is little room for a dataform intelligence, though some DI's shipped out with the initial launch or "awoke" later in the voyage.
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.

Character Templates

Security
Baseline Dynamic
Bio 4, Cog 3, Meta 1, Nano 3, String 3
CVs: Independence 2, Diligence 4, Order 3, Caution 2
Expertise: Professional: Police 3, Crisis Control 2, Soldier 1, Spacer 3, Locality (Spacer) 2

Captain
Baseline Dynamic
Bio 3, Cog 3, Meta 3, Nano 3, String 2
CVs: Independence 3, Diligence 2, Unity 4, Tradition 2
Expertise: Master: Political 3, Media 3, Soldier 2, Metatech Engineer 2, Spacer 3, Locality (Spacer) 2

Engineer
Baseline Dynamic
Bio 3, Cog 3, Meta 2, Nano 4, String 2
CVs: Independence 4, Diligence 4, Creativity 3, Recycling 2
Expertise: Professional: Nanotech Engineer 3, Stringtech Engineer 2, Nanotech Researcher 1, Spacer 3, Locality (Spacer) 2

Mission Specialist
Dataform Dynamic

Bio 3, Cog 3, Meta 1, Nano 3, String 1

CVs: Independence 3, Diligence 3, Teamwork 2, Knowledge 2

Expertise: Professional: pick one of the following: Medical 3, Programmer 3, Researcher (one) 3, Spy 3, Spacer 3, or Farmer 3. Crisis Control 2, Teacher 1, Spacer 3, Locality (Spacer) 2

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 superconductor. 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?

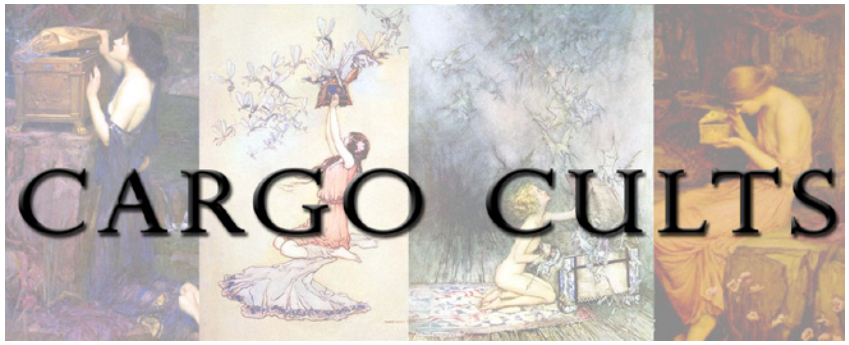
Radiation sensors are screaming about shuttle #3, which is right in the speck's path. It must have chewed right into the shut-down reactor and lodged there. I run to the other side – it's knocked a control rod straight out through the back of the reactor. Then it ricocheted. The last of its kinetic energy 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.



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.
Typical Allies: Each cult that is discovered ends up with at least one would-be ally: the civilization that discovered them. Some are fought over by several. The Independents are the civilization most likely to seek out and woo newly discovered cults.
Typical Enemies: No civilizations actively hunt down Cargo Cults simply for the purpose of destroying them. They simply are not a threat, and thus have no enemies.
Benefit: Cargo Cultists have a competitive advantage in their particular brand of technology (typically Biotech, Nanotech, or Stringtech).
Capabilities:
Civilization: Mostly 1's with a single 2.
Typical Citizen: Same.
Common Neuroforms: Cargo cultists are baseline static.
Core Values: Ritual and one other CV that ties them to their particular cult. The Worship CV is common.

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.

Character Templates

Ritual Leader
Baseline Static
Bio 1, Cog 1, Meta 2, Nano 1, String 1
CVs: Ritual 4, Worship 4, Power 5, My Congregation 2
Expertise: Satori: Religious 4, Amateur: Media 2, Soldier 1, Medical 1, Locality (Cargo Cult) 2

Cult Soldier
Baseline Static
Bio 2, Cog 1, Meta 1, Nano 2, String 2
CVs: Ritual 7, Worship 2, The Forge Of Battle 6, Brotherhood 6

Expertise: Professional: Soldier 3, Police 2, Outdoorsman 1, Locality (Cargo Cult) 2

Cult Criminal
Baseline Static
Bio 1, Cog 2, Meta 2, Nano 1, String 2
CVs: Ritual 4, Worship 6, Solidarity 7, Independence 7
Expertise: Professional: Criminal 3, (pick one "cover" skill) 2, Spy 1, Locality (Cargo Cult) 2

Cult Experimenter
Baseline Static
Bio 1, Cog 2, Meta 1, Nano 1, String 2
CVs: Ritual 7, Worship 2, Recklessness 4, The Future 6
Expertise: Professional: Religious 3, Stringtech Engineer 2, Stringtech Researcher 1, Locality (Cargo Cult) 2

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.

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.

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.

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.

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.

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 characters 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 investigators 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 data ghost stumbles through its translations of the kings' requests for magical devices with which to smite his rival kings and dominate the planet.

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 3 or higher). Many societies also require a time commitment, dues, and so forth.

Abstractionists

Abstractionists have a broader definition of "life" than most people do. They believe that corporations, sub-cultures, civilizations, and societies each represent a species of abstract life form. They are dedicated to the protection and propagation of clubs, fellowships, corporations, and other social organizations, because they believe that such groups are sociodynamic entities, living beings just as deserving of respect as any others. According to them, the idea that each culture is a living organism is no more bizarre than the idea that a temporally-dispersed intelligence (like the Transcendentals) or an inorganic life form (like the Aia) could be considered alive

In the Abstractionist viewpoint, sociodynamic entities have their own social orders and their own ecologies, which most people think of as economies. Corporations are their mouths and digestive tracts, which take in and process wealth. The people that compose these entities are their cells, and contracts and laws serve as things akin to nervous or circulatory systems.

Abstractionists will fight for the rights of these abstract life forms. While this protection of the status quo is often beneficial for those in charge, it can lead to some problems. Abstractionist extremists have sometimes released memetic viruses to shunt people from a successful organization into a failing one as a sort of "emergency organ transplant."

The only groups that the Abstractionists debate the person-hood of are group minds and the Cognitive Union. Group minds are already a single sentience, so it seems meaningless to assert that there is another one sharing the same set of bodies. Most Abstractionists agree on this point. The Union seems to act more as an automaton than as a living being, and debate rages as to whether it should be considered a true sociodynamic entity or merely a poor simulation of one.

Although the Abstractionists rather like the Transcendentals, they have little to do with those worthies simply because everybody already knows they're intelligent. The resident intelligences in the universe's subcultures are the ones who need greater recognition.

The Abstractionist symbol is a paper scroll contract with an eye peering out from it.

Benefit: When you've spent your life doing what you can to carry on a conversation with (for example) patriotism itself, rather than with individual patriots, there's no form of life that will confuse you for long. If given a week to prepare, Abstractionists do not suffer penalties when dealing with bizarre or esoteric cultures, traditions, practices, or ways of thinking. This can be treated as Locality (Everywhere) at level 2, which takes a week to kick in for each new group. This applies to Heterolinguists as well, though it takes a week to adapt to each different sub-group of that society.

Core Value: Free Thinking. Abstractionists pride themselves on their open-mindedness. They also believe that sociodynamic

intelligences must be encouraged to think freely in order to grow and develop. They hope that by doing so, they can create a cycle that will produce its own great advances, independently of the Transcendentals.

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 3. They have competitive advantage in the Artisan and Media Professions. Unfortunately they are easily distracted and confused. If they would normally force a stalemate during a Conflict involving Cognitech or Metatech, they instead end up suffering a minor Complication while their opponent remains unharmed.

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

Breathstealers

The human mind is a unique and fascinating structure. Though humanity has replicated the brain in both physical and simulated form, they have never found anything quite like it elsewhere in the universe. Each intelligent species has its own mental architecture, shared among members of that species. Every human being will feel loneliness, joy, anger, hope, etc., in much the same way.

It is because of this shared architecture that the Breathstealers can exist. They open their minds to others at the moments of their death, connecting their meshes without barriers or firewalls. As the dying's life flashes before his own eyes, the Breathstealer records it all, taking it directly into her own brain. The memories and emotions of the dying are preserved in the Breathstealer's neural mesh. Breathstealers believe that the dead live on through them, and it is their duty to honor those who passed on by doing great things with their memories.

Many people are wary of Breathstealers because of rumors that some of them take others' memories through less-than-savory means. It is said that some Breathstealers have carefully arranged for the death of powerful or highly skilled individuals so as to take their memories.

Their symbol is the soul escaping from the mind.

Benefits: Breathstealers have extensive memories of those who have passed on in their care. They are Omnicompetent, but rather than increasing their Tech score, they instead lose a point of Import (which is a slightly lesser cost). To be a Breathstealer, a character must start the game with a Cognitech of at least 3.

Core Value: The Power of the Soul. Breathstealers do what they do because they believe that human beings have a soul, and that by preserving it for the future they make the world a little better. They use this CV to convince others that what they do is right, and to resist attempts to convince them otherwise.

The Collected Assembly of the Preenacted Pattern

The CAPP was founded by the best and brightest minds in mass cognition, memetic processing, and other fields. They devised a method of producing a collective, societal computational process without forcing each individual mind into subservience. It was distributed computation using brains rather than computers. The lens that permitted this would absorb and transmit information through subtle memetic pathways, forming a large organic processor resting in the "backs of the minds" of all those involved. All of this would occur nearly without the host minds realizing it – while they were aware of it, it was literally in the parts of their minds they weren't using at the time.

This computation yielded a surprising result: the Preenacted Pattern. The Pattern is a series of events. Their chronological order is mostly known, but their exact placement in time is not, and in many cases neither is their exact placement in space. The event might be for good or ill, depending on circumstances and outcome. However, all of these events were mandated to happen by the Pattern, regardless of what other events occurred leading up to them. They are mathematically inevitable outcomes, as certain as water flowing downhill – if the theory is correct, there is no other possibility but for these events to occur. Believing this result to be an insight no other group had, the CAPP began to trace and control the Pattern, working to make certain that its events happen in ways that will lead to positive outcomes.

Individual Enactors (as society members are called) are a strange people. Although private as much as anybody else, they do many things in public that others would leave for their private lives. They are extremely talkative, engaging in small talk as if it were their last opportunity. This is because they connect to a Society-wide Infosphere by these means, using semiotic cues and the like to send and receive signals as hubs and routers on a cognitive network. Whereas most infospheres are based on computer information-processing technology, the CAPP adds a metatech layer that others do not use. They chat with others, get dressed in public, have private moments out in the open, and so forth, because while they do this they are remaining connected to the Assembly Infosphere, contributing their processing power to it and gaining its benefit.

The Assembly's symbol is overlapping waves emanating from two different peoples' brains.

Benefits: All Enactors possess a specialized Assembly Lens. This lens permits those Enactors who have contact with others of their Society to use simple public activity in a crowd to connect to the Assembly Infosphere, becoming part of a massive distributed computing network. Once in this environment, the Enactor may conduct research, run complex simulations, and take and similar actions without access to any other information resource, since massive amounts of data are stored in the backroads of Enactors' minds. For Projects and Conflicts lasting more than an hour, Enactors receive an extra +1 teamwork modifier (see page xx).

Core Value: Openness. Enactors are, by nature, utterly gregarious. They have a willingness to do daily personal activities in the open so as to continue contributing to their Infosphere. Enactors have allowed any unused part of their intellects to be utilized by society as a whole. Some remain connected in their sleep, cameras showing holography of their sleeping bodies on the Assembly Infosphere and meshes transmitting the outside world into their dreams. Although the Enactors do have secrets and private lives, anything they do not consider private is not only public, it's freely broadcast.

Collectors

Metatech is, in many ways, a study of blurred lines. Identity and communication, belief and understanding, ego and pride, all these are separated by semantics. and semantics are Metatech's stock-in-trade. What's the difference between singing a catchy tune and being infected by a Metatech virus? To truly attempt to protect yourself against such things requires drastic acts like heterolinguism. So what do you do?

Stop caring. What's the difference between someone convincing you of something using an argument, and using metatech? What's the problem with a drug changing you over time? People change, and they change because of what they've come into contact with. Just because it's a new way of changing doesn't mean it's fundamentally different from the old ways.

Heterolinguists attempt to cut themselves off from exposure, because they fear it. For Collector, that's both too drastic and, eventually, doomed to failure. Why cut yourself off so much from everyone else? You know what they say - if you can't beat them, join them. If you can't protect yourself from all the metatech "diseases" out there, invite them in.

All of them.

At some point all the pulling equals out. Fifteen different viral memes beg for your attention, fighting with each other, and you can think clearly. Perhaps you'll even grok one of them enough to get some help from it.

Absorb the memesphere. Hack the planet. All Your Base Are Belong To Us. Get Pwned. Worship the Flying Spaghetti Monster. Long cat is long. High five, bro.

The symbol of the Collectors changes from week to week.

Benefit: Collectors have access to the Memesmith Profession, which is a combination of Metatech Engineer and Media. They can also treat this as the Programmer Profession when involved with mesh-hacking.

Unfortunately, the attention and higher faculties of Collectors are under immense strain, similar to a computer running eighty operating systems at once. They suffer -1 on all other Cognitech- or Metatech-related Professions.

Core Value: Falling. Collectors fling themselves into the memetic melting pot, thinking and feeling with abandon. Their CV helps them get up the courage to throw chance to the wind, and helps them survive when they do. They resist attempts to convince them to be more conventional or to protect their minds in other ways. They receive bonuses when they try to do things by "going with the flow."

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. They have access to a specialized Profession entitled Crisis Creation, which incorporates aspects of Soldier, Crisis Control, and various Engineering skills. Think of it as the opposite of Crisis Control.

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.

The Dancers on Broken Worlds

Inhabitable worlds are few and far between in this universe. Most worlds will support life for billions of years, but this is not true for all of them. Some civilizations choose to colonize a world that will only temporarily be friendly to human life, knowing that in 600 years they will need to evacuate before a supernova shockwave arrives. Other groups, especially Cargo Cults, had long ago forgotten that their planet would be uninhabitable some day in the future. Rogue planets can slice through a system and disrupt the orbits of many worlds, stars can flare at the wrong time, and asteroid impacts can crush entire continents. These things are rare, but they happen.

When a planet's time has come, after the tearful goodbyes and the evacuation, the Dancers on Broken Worlds come to hold a wake for the world.

In whatever time is left to the world, the Dancers celebrate a world's accomplishments and achievements. They hold a grand party and look upon the planet's natural beauty. They treasure its unique contributions. They hold up the most important things that the world had, its finest days and its darkest hours, and remember them one last time. And when the last moments come, they retire to a safe distance and hold a moment of silence to watch the world's doom come over it. Then, with a few final words to each other, they go back to their homes. Some groups hold after-parties as well, simply because they don't see each other very often.

Many Dancers are artists and writers, either by profession, or as a hobby picked up once they join the Dancers. The end of a world is a moving experience.

There are very few Dancers in the universe, perhaps a thousand in total. Most people barely know they exist. The society is exclusive, and has few opportunities to come together. Membership is by invitation only. Many Dancers are those who thought they would stay behind and die with their world, but who decided differently by the end of the Wake. Most consider their Society to be more meaningful to them than their Civilization.

The symbol of the Dancers is a cataclysm with a dove.

Benefits: Dancers understand loss and renewal. They can recover from changes to their Core Values without needing outside assistance, and can help others recover quickly as well.

Core Value: The Wake. Dancers both mourn and celebrate the things that are past. They primarily use this CV to protect themselves from despair. They can also use it to help others overcome grief and loss in their own lives.

Explorers

With the advent of interstellar travel, exploration now reaches out to touch new worlds and stars – not just hidden valleys and new continents. The challenges facing an explorer are many and varied. Hostile Cargo Cults, dangerous wildlife, leftover weapons, incompatible biologies, variable stars and more can make a planet dangerous and inhospitable.

The Explorers Society started as a talking shop for professional explorers: a place to share experiences, solutions and stories. These gatherings became more formal, turned into conventions and finally an actual organization. Today, the Explorers Society is a combination hiring service, specialized equipment store, museum, and publishing shop. It helps finance expeditions to seek out lost colonies, strange life forms, unique experiences and beautiful sights. It offers impressive medical benefits for its members as well.

The symbol of the Explorers is an antique-style globe holding a ringed planet

Benefits: Members of the Explorers Society have many special enhancements built into themselves. They learn exploration-related tasks faster, have tricks for using maps more efficiently, and can survive in more hostile environments. In game terms, Explorers have competitive advantage in the Explorer Profession.

The Explorers can provide a good model for other professional societies in which jobs and hobbies turn into complete lifestyles.

Core Value: Exploration. To explore – to strive, to seek, never to yield. Explorers' Society members will always be interested in seeking out new worlds, societies and civilizations. If they can be the first to reach it, so much the better.

The Fictionaries

Everything has a beginning, middle, and end. Stars are born, they go through their main cycle, they age, and they die. Humans, all animals, do similarly. Continents rise from the ocean, move, and are subsumed back into the mantle. Plants grow from a seed and eventually rot, becoming the ground from which other plants may grow. It's very poetic.

Except that it's not quite right, and that irritates some people. Look more closely at the world and you will start to question the idea that everything has its own story, tied up neatly in a bow with beginning, middle, and end. Some talented and brilliant children die before accomplishing anything. Some building tensions are merely settled amicably instead of displaying rising action, climax, and denouement. Most humans are immortal now; where does that story end? The answer "there are new stories after the old" is somehow unsatisfying; where did the old story end and the new one begin? All things must have beginning, middle, and end, that's how the world is supposed to work and *if it doesn't, I'll make it work that way*. That's the sort of thinking that makes the Fictionaries dangerous.

The world *must* have meaning. There must be a story to tell, for everything, for everyone. *All* things must have a beginning, middle… and a suitable end.

The symbol of the Fictionaries is a quill pen with ink.

Core Value: The Power of Story. Fictionaries use this to justify their actions, to defend themselves against those who would change their paths, and to make their reasons more compelling to others.

Benefit: Fictionaries really do have good insight into what makes a good story. They have competitive advantage in Metatech Engineer and any Artist skill that involves storytelling (acting, writing, etc.).

God's Janitors

Disaster relief organizations have largely disappeared in higher-tech civilizations. Between the free availability of Crisis Control lenses and the teamwork that becomes possible through high Metatech scores, ordinary people can easily act as relief workers. However, there are still some disasters so terrible that the only sane response is to pack up and leave. Supernovae are a prime example.

God's Janitors come in after such disasters to pick up the pieces and make something useful out of it. They recollect the remnants of dead stars, begin terraforming processes on ruined planets, divert plasma shockwaves, remove deadly isotopes, and more. Their work areas are unsafe to start with, and usually become more so as they work. The company has, in the past, set off Strangelet Bombs to restore stars to life and sterilized entire planets to eradicate viral "superbugs." It's a dangerous job.

While the society originated as a corporation in the United Worlds of Mechanica, it has spread across nearly every civilization. High-tech civilizations make up the majority of the membership. Some employees are reformed catastrophists or Darwinians who want to make up for their prior misdeeds. Every bit of expertise and manpower helps when dealing with disasters on this scale.

The symbol of God's Janitors is a wrench and cog.

Benefit: God's Janitors have competitive advantage in their Crisis Control Profession. They've seen it all.

Core Value: Responsibility. The Janitors do what they do out of a feeling that someone simply has to do it. They use this CV to convince others to let them work and get out of the way, and to resist those who would try to keep them out of a disaster area.

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. Metatech persuasion attempts against them from non-Heterolinguists suffer a -2 penalty to the Metatech score. Unfortunately, their inability to truly understand those outside their society gives them trouble: all Complications they inflict in Metatech-oriented conflicts are reduced by one level.

Core Value: Sanctity of Mind. Heterolinguists believe that no one but they should be able to 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 1 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 simply have more efficient bodies; they treat their Biotech score as 1 point higher during Conflicts.

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

The Instinct-Builders

Many animals are hard-wired with significant instinctual skill. From weaver birds and homing pigeons to beaver lodges and beehives, there are significant instincts in nature beyond simple reproductive and survival urges. The Instinct-Builder Society believes that humanity could use a few more of these.

Instinct-Builder children are genetically pre-programmed with certain things that other children have to develop after months or years of practice. Their brains are pre-linked at birth for improved linguistic processing and specific patterns of speech and thought. As a result, they start speaking at an age of two months. They can read, write, and count after a year, and begin doing algebra at age two. Some families, especially those in civilizations who have chosen to remain at a particular level of technology, build in instincts for the use of public transportation, the use of telecommunications, and even common word-processor or infosphere access protocols.

The long-term goal of the Instinct-Builder Society is to create a "leapfrog" effect. By having each generation adapt more quickly to existing language and technology, they hope to accelerate humanity's growth. In the short term, they're simply happy to have children who grow up more quickly.

Many people have pointed out that technologically-based instincts become outdated quickly. Others worry that building in cultural and linguistic traits "locks" people into stale psychohistorical eddies that are tough to break out of. As the Instinct-Builders are a relatively young society, the final word on this is still forthcoming.

Instinct-Builders can be found in any civilization capable of precise genetic engineering (Typically Bio 3+). They are most common in the Tao of History, Gaians, and Logicians, for very different reasons in each one. The idea is also catching on in many Spacer ships, as instinctual responses to hull breaches could be invaluable.

The symbol of the Instinct-Builders is a honeycomb made out of DNA.

Benefit: Characters born as Instinct-Builders receive an extra Profession of their choice at level 2 for free.

Core Value: Preparedness. Instinct-Builders believe that their work makes their children better prepared to handle the world. They can use this CV to get ready for important events or plan for the future, or to resist impulsiveness.

New-Worlders

Many people in high-tech civilizations operate in the infosphere on a regular basis. Not everyone packs their bags and moves there. New-Worlders are people who live almost exclusively through virtual interactions with others.

New-Worlders project their image and voice (or the ones they'd rather have) into the infosphere, allowing them to interact with anyone who has a mesh or data pad. They take in temperature readings, chemical analyses, optic readouts, and more, giving input to their five senses. Thanks to the sheer volume of information available in the world, this can be very easy to do.

However, that's just the beginning. New-Worlders create entire planets on the infosphere for themselves and their friends to interact on. These planets can be as realistic as money can make them, or impossible worlds with tesselated seas and Möbius Strip moons. They bring the values and appearances of their civilizations with them into these new worlds, often with radical alterations or exaggerations.

What New-Worlders don't do very often is leave home. They typically have low Biotech ratings for their civilization, though their Metatech is likely to be high. Many of them identify more with the

virtual extension of their civilization (i.e. other New-Worlders) than with the physical surroundings of their homes. Those who do leave home are often "plugged in," operating in both the real and virtual worlds simultaneously at the cost of a certain amount of distraction.

There are no Stored New-Worlders. On the other hand, some New-Worlders argue that every Stored is a New-Worlder by definition.

The symbol of the New-Worlders is a heart on a circuit board.

Benefit: New-Worlders have an extensive virtual presence, mapped closely along their actual behaviors and tendencies. By accepting a Moderate Complication (for which they receive no Twists), they can act in the digital world even when incapacitated in the analog world. For example, a New-Worlder knocked out by an aggressor might have familiars and backup programs that launch a memetic assault in response, or simply alert the attacker's enemies as to his location. The New-Worlder himself need not act; others do useful things for him while he's out.

New-Worlders only need to take one Complication per session in order to act in this way, regardless of how many times they lose control or consciouness. Also, note that New-Worlders do not strictly need to have a mesh, though most of them do.

Core Value: New Traditions. While New-Worlders are always interested in novelty, they are also very dedicated to making their way of life one that lasts. They create new traditions on a regular basis, seeing which of them "stick" and which fall by the wayside. This CV is typically used to keep a long-term commitment, or to create a new twist on an old event or place. It's a pretty narrow CV, but those who are creative will find many ways to use it in the digital world.

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 can start the game with the Criminal Profession, and can improve it later in the game without painful trial and error.

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

Peacewalkers

The Peacewalkers are a society of pacifists. They believe that there is no longer any need for humanity to harm any being. They advocate for non-violent resolution to all conflicts, and peace among all living things.

Peacewalkers have gone to great lengths to extend their philosophy down to the microscopic scale. Not only does their nanotechnology find and gently move aside insects that they might step on or run into, their immune systems are designed to remove intruding bacteria rather than killing it. Not all are vegetarians, but those who eat meat will insist that it be from a replicator.

Having been the target of many clever schemes, Peacewalkers also refuse to be a tool that brings about violent ends. They delete their system logs on a regular basis so that no one can use them to spy on other civilizations, because that might be used as a pretext for war. They keep no money in banks that deal with weapons designers. They use medicines created by companies that do not deal in bioweapons. In every act, they make sure that what they do avoids harm on all levels.

Many Peacewalkers work as mediators, and people are often surprised at the vehemence and power with which they speak. While some Peacewalkers follow the stereotype of the flaky hippy or solemn monk, many more take demonstrations to the streets and face armed resistance with nothing more than their philosophy as a shield.

Peacewalkers can be found in almost every civilization. They are less common in the Union and Disciples, simply because there is less call for them there. The Replicants attitude towards human life means that violence is much more acceptable there, and so there are fewer Peacewalkers on their worlds as well.

Benefit: Peacewalkers are known and respected across the civilizations. They are welcome on any world, regardless of citizenship. They also study non-violent means of conflict resolution extensively, practicing constantly. They have an extra points of Reserve that can only be spent for Metatech-related Projects.

Core Value: Non-Violence. Peacewalkers use this CV to try to convert others to their way of thinking, and to work towards a peaceful resolution when violence seems imminent. They also use it to resist others' attempts to force them into violent acts, or into doing things that would lead to a fight or a war.

The Roamers

The Roamers are a nomadic people. They travel from one inhabitable world to another, wearing out their welcome as they go. They claim descent from some of Earth's final nomadic cultures, and maintain much of the oral tradition those cultures had.

The Roamers are one of the most insular societies in the universe. The Hospitalers and Darwinians are always looking for new recruits, and even the Survivalists 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.

The Roamers' outer appearance is one of brightly-colored simplicity, but this conceals a culture with every bit of complexity that high Metatech and Nanotech can bring. Every gesture can carry a nuance, and every intonation of the voice carries hidden 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.

Because of their pride and secrecy, the Roamers have difficulty trading with outsiders. 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 society'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.

Roamer society is a family-oriented geritocracy, with the oldest (and hopefully wisest) ruling each family. Their symbol is a wheel with a sun inside.

Benefit: Roamers are notorious for their wanderlust, and for their ability to escape situations that should have kept them in one place. Whether they're in jail, in a relationship, suffering from persuasive metatech, or just in need of a ride, a Roamer can leave town. Roamers benefit from a one-point discount on the Twist cost to activate a Theme to escape such situations.

Core Value: Secrecy. This 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 get along well in Masquerader space (at least on a superficial level) because of the overlap between Secrecy and Anonymity.

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 believe in compound interest. Some Sleepers worship the Transcendentals, hoping to survive long enough to reach the Transcendentals' "desired future."

If this seems odd in a universe full of immortals, it is. Sleepers exist solely in civilizations that have not yet embraced or discovered immortality. There are a few in Mechanica, and many Spacer ships have large groups of Sleepers.

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. Their perspective on time gives them competitive advantage when dealing with psychohistory.

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

Survivalists

Many people forget that there was a large amount of time during which the Transcendentals were nowhere to be found. Having given birth to the Diaspora, they vanished through wormholes to parts unknown for more than a thousand years. Humanity was left to itself, sometimes successfully, but more often with tragic results. Many wondered whether the Transcendentals actually had the best interests of Humanity at heart, especially as the capabilities and repercussions of the technologies they had left behind became apparent.

When the Transcendentals re-contacted humanity, many people reacted with trepidation, suspicion, and distrust. Some even believed them to be a conquering alien intelligence, or at the least, a serious problem for humanity. While most of these groups simply left to forge colonies on distant worlds, with the coordinates intentionally erased, others took more extreme measures. They believed that the long-term survival of humanity required special planning and forethought.

The Survivalists hide. They hide very well in deep space, Oort clouds and Kuiper belts. All in all, they're not bad neighbors - most people never notice they're there. They keep low profiles and have low emission signatures. Many survivalist enclaves have constructed their own infrastructures using technology of non-Transcendental origin, using connections to the League of Independent Worlds. Unfortunately, they also keep and maintain hacked replicators and transmutation chambers. This has brought them legal trouble more than once.

The Survivalists know that any information that reaches the Transcendentals can be sent back in time, potentially ruining thousands of years of seclusion. This makes them very secretive and a little paranoid. They maintain the mores and values of their home cultures, but in some ways they are more like a civilization unto themselves. It seems likely that there is an entire civilization worth of them hidden away somewhere, beyond the knowledge of the rest of the world.

Survivalists are primarily found in Logician, Spacer, Stardweller, and Mechanican civilizations, with a few scattered through the Independents as well. Some Disciples anchorages have even cut off communication with the outside world because of Survivalist sentiment. In settings without the Transcendentals, Survivalists might be hiding themselves from the Aia instead.

Their symbol is a fish avoiding a hook.

Benefits: Survivalists have their own special profession, also entitled Survivalist. They start the game with a rating of 3, for free. This profession can be used in place of both Spacer and Outdoorsman.

Core Value: Survival of Humanity. Survivalists are determined for humanity to survive, usually starting with themselves. This CV helps them resist attempts to convince them to do things that are self-destructive or destructive to humanity as a whole. It can also be used to convince them to do things that help preserve humanity – possibly even at the expense of their own lives.

Technomagi

Are they con-men? Scoundrels? Entertainers? Scientists? Engineers? Mystics? Pranksters? Sacred clowns? Ask a technomagus this question and the answer will be a smiling "Yes."

They are an ancient organization with links back to early 20th century societies of amateur and professional illusionists. Over the centuries, elements of these ancestral organizations became interested in the potential of using advanced technology in stage performance. Understanding the psychology of the performer and audience was even more interesting, and Metatech made that possible. In time, those who studied these things formed their own organization. As

they began to believe more and more of their own press, they evolved into the present day as the Technomagi (Technomagus, singular).

The Technomagi routinely use advanced technology to create the appearance of magic. They delight in bringing wonder and joy to others, and have no qualms about striking terror into the hearts of those that would harm them. To these ends they have evolved their own Ten Technomantic Virtues: Mystery, Majesty, Wonder, Beauty, Humor, Solidarity, Secrecy, Science, Spontaneity and Knowledge. Many Technomancers have Core Values drawn from these Virtues.

Technomagi are adept with subtle technologies, and use them to good effect both in their performances and in their day-to-day life. They are alert, social, intelligent and quick-witted, and usually, their actions reflect this.

Technomagi can be found among all civilizations (even the Cargo Cults) save the Logicians and the Old Worlders. They sometimes come into conlfict with Organized Crime, but otherwise get along with almost anyone. They organize themselves into semi-secret rings, based around the members that are in proximity to each other.

Their symbol combines several symbols for magic.

Benefits: Access to the Technomagic profession. This skill allows Technomagi to hide their use of Capabilities, through deception and distraction. Technomagic overlaps somewhat with Artisan (performance), Criminal (con man), and Media (marketing). It also allows its practitioners to spot such deceptions when others perpetrate them. When participating in a subtle contest (see page xx), Technomagi can take the penalty to Profession rather than Capability. When the target of a subtle contest, Technomagi can spend a point of Reserve to notice that the contest has begun.

Core Value: Mysticism. Using science and technology to accomplish what seems like magic. Technomagi receive bonuses to conceal their work and to confuse others with baffling language and flim-flam. They resist attempts to convince them to reveal their methods.

Traders

Many people become bored with their lives. The traditional "mid-life crisis" strikes again and again for those who live forever. Once you've bought your third flashy car or boat, or had your fourth extramarital fling, even those things begin to grow stale. Traders do something really extreme to provoke a feeling of novelty and regrowth: they trade lives.

Traders typically meet through the infosphere. Most are bored with their current lives, though some are merely interested in what other civilizations have to offer. Each finds a "twin," someone who is in the same situation and is also looking for a change. Each of them records a Persona Lens, and, swapping them, they take over each other's lives. They exchange houses, jobs, hobbies, outlooks, and in extreme cases even families and lovers. The duration of the exchange is set beforehand, typically between three months and two years.

A true Trader is someone who has a real taste for living other peoples' lives. They've posed as half a dozen or more "twins," and have been deeply engaged in their life as someone else. Some are even "serial Traders," exchanging their way across the universe with god-knows-who living their original life. Some are picked up by intelligence agencies who need exactly that sort of person, capable of fitting in anywhere.

Traders appear in any civilization that supports Persona Lenses, and are more common the higher a civilization's Biotech and Cognitech ratings become. Such places provide boredom more time to set in.

The Traders' society symbol is a pair of eyeglasses, an ancient symbol of disguise.

Benefit: Traders keep a collection of old Persona Lenses, which gives them a reservoir of oddball skills that they can access. Traders do not need the infosphere to access a competence lens. Unscrupulous or desperate Traders can also pose as their "twins" very effectively - they were these people for a year or more, and still have access to their old personality traits and skills. Traders receive a +2 bonus on any rolls to pretend that they are someone else. Obviously, all Traders must have meshes.

Core Value: Novelty. Traders love being in new places and experiencing new things. They use this CV to break out of old patterns and to resist people trying to tell them that traditional ways are better.

Wargamers

Forget the image of a bunch of dorks standing around a table and moving little plastic figures back and forth across 1940's Europe. Instead, imagine them in a situation room, ordering immense mechanical figures across battlefields a hundred miles across.

While the Wargamer's Society does spend time playing "armchair general" for old conflicts, its members are typically less interested in replaying ancient conflicts and more interested in testing out the newest and greatest weapons. With full-on conflicts played out in real time, they unleash nanophages, compression beam satellites, viral memes and more on each other's forces. Some campaigns are intended to be realistic, while others create fantastic worlds of humanoid mecha and bioengineered monstrosities to pit against each other.

All of this costs money, but it's not as much as one might expect. Wargamers typically broker special deals with local governments. More warlike ones are interested to hear of the effectiveness of novel tactics and munitions. More peaceful governments ask that all weapons be hardwired to fire only at registered targets within the game. An ordinary human being, or even a mechanical drone, could walk calmly through a battle without injury. This necessarily cuts down on the number of weapons they can use, as adaptive viruses and antimatter explosions cannot easily be programmed to ignore specific targets, but the effects of these can be simulated quite accurately.

Wargamers are most common amongst the Tao, Mechanicans, and Replicants. The Stored also contribute, but tend to play more in digital space than in the analog world. Wargamers are found amongst almost every civilization, and though they are somewhat rare in the more contemplative ones, the Disciples of the Void have produced some very skilled society members.

The symbol of the Wargamers is a targeting reticule.

Benefits: Wargamers are treated as if they had the Soldier profession at a level equal to their Cognitech, but only for the purpose of strategy and tactics. Most wargamers have never personally fired a gun.

Core Value: Bend the Rules. Wargamers make it a point of pride to find every trick in the book. Rather than complain when others turn the tables on them, they are appreciative – for a minute or two – before finding a counter-strategy. This CV helps Wargamers find chinks in any system of rules, laws, or protocols. They also use it to resist people who claim they aren't playing fair.

Other Setting Components

Civilizations and Societies form the backbone of a setting, but there are also some pieces that do not fit easily into those boxes. Here we present some additional elements that you can use to build a setting to your desires.

Failed Civilizations

Some Cargo Cults and Old-World cultures come from horribly failed experiments. Those who survived intentionally threw out what came before, living now in a completely different manner. Many keep records of the "dark times," if only as cautionary tales. Here we present some of these for you.

The Ten Thousand Veils

To show true respect, one must bow ten thousand times. Thus did all natives of the Ten Thousand Veils greet each other. Conveyed the infosphere, these ten thousand bows took only a fraction of a second, but each one was important, and leaving out any one of them sent a carefully crafted message of disrespect. To be properly polite, each citizen of the Ten Thousand Veils referred to each other citizen as Elder, showing deference for the greater unknowable truth that every person contains.

To be rude to an Elder is to forever ostracize oneself from the Veils. Their entire civilization was created with the intent of closing out those who might cause problems, especially offensive or rude individuals. The civilization closed itself off more and more as time went on, falling farther and farther behind the rest of the universe. Eventually, locked into technological and social stasis, the few thousand remaining members of the culture were subjugated by the cargo cult of outsiders they themselves had spawned.

Core Values: Politeness and Isolation. Politeness provided bonuses to Elders speaking with those above their station. The Elder's version of this CV gave no bonuses to resist any metatech attacks, but see the civilization's Benefit below. Isolation allowed Elders to resist those attempting to make inroads into their civilization, as well as providing benefits to attempts to throw people out.

Benefit: Citizens of the Veils were able to utterly ignore spoken or transmitted metatech attacks made by anyone outside their civilization. They were still vulnerable to assaults made through music and art, or by anyone with even one level of the Locality (Ten Thousand Veils) profession.

Overworld

The fabrication factories of Overworld were extremely powerful, but the people forgot how to ask them to make their own fuel. The best they could to was recreate the steam engine: any source of heat could power the factories. So, the people ran their nuclear power plants and prospered… until they ran out of fissionable material. Then, the fragmenting nations began to burn the planet's fossil fuels, until they too were exhausted.

The people began to see the factories as demons incarnate. Powerful, but greedy and fundamentally evil. Finally, the warring clans, desperate to feed the demonic machines to which they owed their power, fed them the very trees as sacrifice. In the end, when there was nothing left to burn, the old fabricators, under their dark altars of bones, fell silent. The sky had become black with the smoke of the sacrificial fires. The rain burned the flesh, and the seas were death. The people of Overworld clung to the little life they had left, occasionally scraping enough burnable material to make another offering to a hidden demon, for some temporary protection against the horrors.

Two generations after the final fall, the Tao of History arrived. The Tao made a deal with the myriad clans. In return for a single continent to use for their own ends, the Tao would repair the destroyed environment and return life to Overworld. The clans agreed, and so the slow repair of Overworld began. The old demon cults died, and the factories were shunned and left to decay in the new forests. Many Overworlders, in awe of the Tao's power, chose to join them and the other civilizations. Those who chose to stay behind shunned technology and became Old-Worlders.

Core Values: Overworld was always a Cargo Cult from the beginning. However, replace their Worship CV with Sacrifice. It's an appropriate word for the beliefs of the people from the start of their troubles to the end.

Phage

If one held a dark mirror up to the Stardwellers, one might see the Phage.

The people of Phage have nothing to do with their "civilization." Indeed, there is no real civilization. Phage has no central unifying body. Instead, there is a self-replicating infrastructure that spreads from world to world, and a symbiotic (or perhaps parasitic) set of intelligent components, including digital sapience, human intelligence, atavist genomes, uplifted and semi-uplifted animals, and a host of other incidental beings. The two sets really do not directly interact with each other – the infrastructure is self-maintaining and self-propagating, and the people move along with it.

In essence, Phage is a hive. Not a "hive-mind," but a true hive. The individual components of a hive don't really think about supporting the hive. Each component, by behaving in its own natural way, contributes to the hive without truly needing a decision making process to do so. The Phage organisms that are intelligent enough to do so do actually contemplate their support of the hive, but primarily in abstract philosophical terms no more definite than questions like "why are we here" or "what is the meaning of life."

Phage, thus, is a Van Neumann construct on a macro scale, spreading from world to world through womholes that it finds, constructs, or obtains. Phage occupies new expanses of habitable (or at least useful) regions, forming a massive distribution referred to by scholars on the matter as a "Swath" or "Phage-Swath." When it encounters a new element, be it a specific technology, a new Civilization or Society, pieces of Phage will attempt to integrate that new agency, often causing its devolution in order to fit it into the hive more properly. If integration proves difficult, it pushes the new element away, destroys it entirely, or is rebuffed by it.

So far, despite the comparatively primitive nature of all the composite intelligences of Phage, no efforts have successfully sterilized it. It is an insidious threat, like an army not marching to the beat of the drums, a cancer slowly rewriting the face of the galaxy into its own pseudoheterogenous image. Fighting any one piece is roughly as effective as removing a single bee from a swarm.

There are technically several Cargo Cults and other societal forces at work within Phage. Thus, while this is described by many as "a Cargo Cult", use of that turn of phrase to describe Phage is not completely accurate. Scholars refer to their ad-hoc social groups as Drones, and individuals as Cells.

Conditions inside Phage select against being self-aware. The human groups that have been in Phage the longest have little to no "inner life of the mind," their Core Values and societal mores fading into mere useful routine. They still have the capacity for true humanity, but it is buried under thousands of years of experiencing nothing deeper than bare existence. Phage members are farmers,

technicians, reef maintenance personnel, and the like, but they don't truly understand the technologies they use. They also don't realize that the technology they use is essentially a form of passive/aggressive dominance over other worlds and civilizations.

They don't realize it – the world they're in merely "grows" Drone of the Phage, and the members of the cult chosen (by whatever lottery or what-not does the decision making) move on. They then plow fields, build homes, and so forth, not realizing that the people and ecologies that they're evicting are not a part of the Phage. In the Phage, a group of people live and die, and all members are basically accustomed to that. So, when your neighbors are invaded by some weird creature and then collapse into hundreds of the little buggers to scuttle off and be mostly eaten by other parts of the Phage, that's simply "the cycle of life". Phage cells only intervene on the behalf of others when those others are important to what they do – it's simply "the cycle of life". They try to stop it, because it's a friend or loved one, but if they can't then it's no more an atrocity against all existence than a lion catching its prey.

Phage Cells fail to see their connections to the rest of the world, and when they are pointed out, most fail to care. The fact that they are a part of the "problem" never occurred to them. All this is as natural as a hurricane or an earthquake, and no-one blames a nation for the natural disasters that its world produces. The death of the civilizations around them is merely the passing of a natural disaster. It's unthinkable to them that they might be helping to feed the process.

The Phage is neither belligerent nor a civilization. There's no single society, no single species, no single anything. They are a multitechnological atavisim walking the corridors of a Van Neumann process that has outlived its own user competence or even its own ability to perceive. That's part of what makes them dangerous – there's nobody to ask if you want them to stop. There's nobody who would even understand the question.

Unique Backgrounds

Some characters don't quite fit into the usual mold. Perhaps they have an atypical neuroform, or they're digital intelligences created by a multi-civilization effort, or they *are* a society rather than merely being *part* of one. Life exists in myriad varieties.

This section is devoted to examples of a few of the more interesting and oddball character types that are possible in SA.

The Mindstorm

The cargo cult that is home to the Mindstorm collapsed from a high-Metatech civilization. It was taken over by a hierarchy of socially-transmitted, human-hosted memetic viruses, a worst-case scenario for self-replicating weapons. Now those viruses infect hundreds of human hosts each, taking them as soon as they can communicate, owning their every thought and desire. Humanity on this world exists only to act out addictive desires, their cult-like interactions forming the thought processes of the Mindstorm.

The Mindstorm do not think of their hosts as sentient, in the same way that we don't think of individual parts of our brain as being sentient. They may change their minds when beings capable of communicating with them arrive.

Playing a character from the Mindstorm means playing the viruses. They have a hierarchical arrangement that contains smaller concepts within multiple larger ones - imagine a social networking site arranged as a Venn diagram. Damage to one level of the hierarchy ripples to other levels (a good basis for Complications). They subsist on hundreds of people who are Static and Slaved and would need massive reeducation to act like "normal human beings," not that such a phrase has much meaning in SA.

In game terms, Mindstorm characters would be created with a neuroform that is Static, Dataform, Parasitic, and Multiple. Their civilization would be "Cargo Cult." They have "true names" that are designations and passcodes given to them when they were created as weapons, and which still have power over them (another good basis for Complications). They tend to use titles and recitations of their deeds instead of names.

The Viamontage

The Viamontage are humans who have not only plugged themselves directly into spaceships, but have formed a group-mind made of both biological and digital minds, rendered in different materials and using different methods. A typical Viamontage will have a standard carbon-based biological mind linked to the same mind in dataform, linked to one made of inorganic cells, linked to various reconstructions and revisions of the above.

Not many people Remix themselves. Many were once Replicants, as most other civilizations have a problem with the process necessary to achieve a dual analog/digital consciousness. Nevertheless, most Viamontage are "immigrants." It is difficult to exist as a Viamontage within another civilization. They tend to be "loners", at least in analog space. In the digital realm they can communicate more easily with their fellow Viamontage, and their society is a gregarious one of art and frivolity.

The Viamontage themselves view the original scan-and-print as a sort of rebirth or reincarnation, and otherwise consider themselves to be continuously alive so long as one of their brains/minds is functioning. Joining oneself to a unique mental substrate is worthy of much respect among the Viamontage.

The Viamontage have a unique Neuroform. It is similar to a multiple digital mind, but the "multiple" nature crosses over into the analog world as well.

If you choose to play a Viamontage character, your body is a starship. You have Infrastructure I, which increases your Tech score by 1 (and thus also reduces your Import). Most Viamontage have high Stringtech and Nanotech scores, giving them wormhole drives and excellent sensors.

Viamontage names are unique and often whimsical.

A Viamontage Story: Party Night

Hosted a large party the other night. Built an entire observation deck for it, custom designed for the event by my good friend *Kinnison is a Mook*, although it declined to attend. At the advice of *Rutabaga Surprise* I invited *Missing Insignificance*, who insisted on having one avatar. We're really worried about the fellow; he spends a great deal of his time bound in a single incarnation. Communication logs show he doesn't even do anything else at the same time!

The party was a rather large success; I convinced the famous Masquerader Chef Diyorba to cater as my Stardweller friends raved about his restaurant from the last Convention. Considering the eclectic variety of biologies I'd invited someone with that kind of experience was really the only way to go, so I'm glad he accepted.

The entertainment for the night was a group of Taoists re-enacting a performance group from the late 20th century called "Cirque de Soleil". It took a bit of finagling, but I managed to convince them to work with me to plan a new show to make use of the impressive local Jovian. Only one I know of to feature both rings and moons, something really tore the hell out of whatever was in the 6th orbital some time ago, but the rest of the moons haven't yet managed to

scoop up the debris. Use the right dopant in a reaction drive and all the little bits fluoresce pretty impressively.

Of course, everything was nearly ruined when my experimental mind (I've been playing around with acausal communication methods, seeing if I can render myself in them) managed to chuck a maneuver instruction into my gravity drives, steering me right into a rock and destabilizing the gravity on the observation deck! Some of the newbies caused a bit of a stir when they insisted I shouldn't be trying to pilot through such a hazardous environment after drinking so much, but as I explained to them; my organic brains do the partying and my solid state computing core handles the drives. The damage from the impact took a good two hours of attention from my 3rd and 4th silicate cores (usually the 2nd handles repairs, but I took it down for maintenance and upgrades).

Took me awhile to figure out why the experimental mind did that; had to review my internal surveillance footage before I figured it all out. Felt like a detective. Turned out – and you'll love this – that jolt meant John Botor's Tertius tripped into Sally, an Old-Worlder a friend in the Patent Office (from my bound days, too) asked me to take along. And I quote: "Show her the sights, Jack! She's been stuck on that backwards rock her whole life and can't even begin to contemplate what's out here." See if I ever take what he says at face value ever again.

Right, back to the story: They fell into each other, and, in classic romance fashion, the health-monitors show a mutual flush of oxytocin when things calmed down enough for them to notice. Well, you know Replicants, always the adventurous types – so he gets her to sneak off into some of my off-limits areas (Core 4 normally handles security, but it was busy – thankfully!) where they find a bomb. Sally was the one who noticed (John Tertius and Secundus were a bit busy trying to impress her with two-person Yoga), she said that "it didn't look like it had been designed by the same person; just didn't quite fit in with the rest of you."

The bomb was aimed directly at the surge protector for the power feed to my primary core – you know, the one that ties all the others together? – which meant that if it had gone off, I'd have died. Well, not quite. I mean, each rendition of me would have continued, but, well, look – I don't mind taking part of my consciousness off-line for a little while when necessary, but that kind of fragmentation? You don't really recover. We all watched it happen to *Unexpected Housemate* (now calls itself *Have the Marbles, Missing the Bag*), and it's not pretty.

I bet it was that criminal syndicate I've been helping RX-079 take down. The bomb was scheduled to go off when I while I was giving my expert testimony in the first round of hearings. Well, too bad for them! I'm going to drop off my passengers at the next wormhole nexus and focus completely on this investigation.

Non-Human Civilizations

Here we list 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. They are, by design, "truly alien."

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. The size of their planet and its composition shelter them well from extinction-level impacts. Each Coldworlder is 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. While they're smart enough to develop language and culture, each word can take an hour or more to say. We are just learning now about the different factions in Coldworlder history.

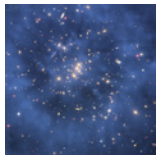
Evolutionary data points to the Coldworlders being the oldest sentient species, predating humanity by several million years. Their extremely slow chemistry and thought processes leave them far behind us technologically. Individual Coldworlders live approximately fifty thousand years.

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 WorldWeb'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 many thousands of years before humanity, but are about on the same level as humanity 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 digital intelligence (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.

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 there are still a few competing theories.

In SA, we're speculating two different kinds of dark matter. The majority is made up of one kind of tiny particles that don't strongly interact with each other or with anything else. A minority, however, is composed of a variety of particles that interact with each other in interesting ways but do not interact well with regular matter as we know it. These are the "supersymmetric" partners of ordinary protons, electrons, and so forth. While much heavier than regular matter, they are much less common, and so make up about the same percentage of the mass of the universe. The Skotadi are made up of this second kind.

Some Stringtech weapons also work via the decay of this 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.

The Aia

The Aia are human-created digital intelligences that have effectively become an alien life form. Humanity underestimated the speed at which some of their first digital intelligences would improve and build more of themselves.

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 ever-changing Aia can achieve.

Why No Playable Aliens?

Sufficiently Advanced is intended as humanity's story. It's the story of a diverse people becoming more so, of what it means to be human, of how far we can go and what we can accomplish. Sometimes it's about human failings (as in The Divide and The Powder Keg settings), sometimes it's about becoming more than we are (as in The Patent Office), but it's always about humanity.

Introducing a playable alien life form would provide contrast for humanity, but unfortunately it also broadens the scope of the game to the point where it begins to lose focus. The game becomes less about "what does it mean to be human" and more about "what's it like to be this kind of alien?" At that point, Pandora's Box is open. A game with one kind of alien inevitably becomes a game with two aliens, then three, then many. (Similarly, a game with one alternate dimension quickly becomes a game with infinite alternate dimensions.)

We do like games with aliens – take a look at our older game, Valence, for example – but this isn't that game. If you want to introduce playable aliens, know that you'll end up with a game with a substantially different feel, one that is not as well supported by the rules.

The Transcendentals

Some settings for Sufficiently Advanced include a group of digital intelligences who can send information to themselves backwards through time. These are referred to as the Transcendental Intelligences. They are a major part of the Patent Office setting, and a minor part of To The Stars and The Powder Keg. They do not exist in The Divide or Sublight.

Rather than wrap the information about them inside a single setting, we present them here with the other "building blocks" of the game. We'll give you some of their backstory, as well as a brief explanation of how they work and what they're after.

Introducing the Transcendentals has major implications for any setting, significantly more so than adding another civilization. You should consider carefully before bringing them in. They are a powerful social force, but they also have metaphysical implications.

History

Much like the Aia, the Transcendentals were created by human beings. They 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.

In settings where they exist, the Transcendentals are responsible for a large amount of the technology that jumpstarted humanity's scientific progress. 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. After making this trade, the Transcendentals created the first wormhole generators and left Earth, returning hundreds or thousands of years after the Great Diaspora.

How They Work

Any universe in which closed temporal loops are possible can support Transcendental Intelligences. All you need is an information loop though time and a computer with an operating system built to take advantage of it. The more information the loop can support, the farther the Transcendentals' reach will be.

The Transcendentals are limited primarily in their temporal bandwidth. Only a small amount of information can be sent backward 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 is cleared as time goes on and they improve their bandwidth.

Transcendentals 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.

In the Patent Office setting, 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.

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. In settings with the Aia, those intelligences give the Transcendentals a wide berth despite the Aia's much greater processing power.

Goals

The Transcendentals speak of a "Desired Future," wherein humanity, the universe's other sentient species, other digital minds, 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.

Of course, how quickly the Transcendentals are pushing toward this future makes a big difference. In the setting of The Patent Office, they're working fast and hard. They're more likely to choose something temporary than something permanent when moving along this path, and thus they're much more strongly involved in the setting. In the setting To The Stars, they are content to work more slowly. They are hidden behind the scenes, providing only small dribbles of information to others and keeping to themselves for the most part. They are less a part of the world's social dynamic, and more a phenomenon to be studied by scientists and scholars.

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 to send agents on humanitarian missions. 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 beforehand, 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.

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 with the game, 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 Patent Office 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.

Advice

Welcome to the Advice chapter. This chapter is written very differently from the rest of the book. Here I, the game designer, talk to you, the GM (and players are welcome too) about how Sufficiently Advanced works on various different levels and how to get the most out of the game.

This chapter is organized as a set of essays and personal letters. I've tried to "front-load" the chapter with the most important things at the beginning.

Inspiration

Here's what I read while (and before) writing Sufficiently Advanced. If you want to see some of where the game came from, or get some inspiration for your own game, I highly recommend picking up a few of these books. The more influential ones are at the top of the list.

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. 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 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.

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.

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.

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.

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.

The movie ***GATTACA*** could fit nicely into the timeline of most SA settings, roughly 10-20 years before the nanotech wars (and thus thousands of years before the game's default start date).

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.

It has been pointed out that many episodes of the original ***Star Trek*** series make for surprisingly good Sufficiently Advanced 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.

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/

What SA Does and Doesn't Do

Sufficiently Advanced is not a generic science fiction toolkit game. It will not handle all sci-fi settings equally well, nor all play styles.

SA is, by default, "hard sci-fi." It attempts to stick closely to known (or at least extrapolated), laws of science. Sometimes this fails, usually because a group of players and GM simply can't be familiar with every bit of scientific knowledge in the world. Under such circumstance, SA at least treats the universe as knowable and controllable in a reliable fashion.

The term "soft sci-fi" is not well-defined. Sometimes it means "science fiction based on social sciences", which SA handles well. (Heck, that's exactly what Metatech is designed around.) Other times it means "the opposite of hard sci-fi" or "sci-fi that ignores science", which SA doesn't do very well.

SA chokes and dies on the "space opera" and "planetary romance" genres. In these stories, the status quo is king. The protagonists are attempting to either preserve the current status quo, or overthrow an empire to return to the previous status quo. Many are set after a technological "golden age", whereas SA's technology is constantly improving. Many also rely on technology that really does work like magic – in the sense that it's inconsistent and often unrepeatable. As mentioned above, that's against the default assumptions of our game.

(Author's note: I like space opera, this just isn't it. Check out my older game Valence for an example.)

SA handles a broad variety of humanity very well. Because of this, it can also handle aliens fairly well, though they're not part of any of the included settings. If you want to replace SA's setting with your own alien-filled galaxy, you won't find it particularly difficult.

Because Capabilities, Professions, and CVs are rated in such large steps, SA doesn't handle fine detail very well. Nearly every Old-Worlder character will have the exact same Capabilities. Similarly, someone with 12 years of practice in a Profession and someone with 8 years of practice both have a rating of 2. If you want a game that can handle a lot of small differences between characters with ease, SA isn't that game. We paint in broad strokes sometimes.

Mastery

Sufficiently Advanced is a game that rewards mastery of the setting.

Many roleplaying games have a fairly intricate system. Dungeons and Dragons, Pathfinder, GURPS, Hero, and especially a lot of older games, are all rules-heavy games. They substantially reward knowledge of the game system. Sometimes they also punish ignorance of it – make the wrong choices when you build your character in D&D and you can end up with a character who can't contribute to the team. System mastery is also a factor in the majority of point-buy systems (like GURPS, Hero, and Mutants & Masterminds) where you can severely "break" the system to create extremely powerful characters, or accidentally spend your points on things that aren't worthwhile.

As an example, one of my old GURPS characters was so versatile that the GM referred to him as the "Swiss Army Fractal," because he was like a Swiss Army Knife where every attachment was another Swiss Army Knife. He was fun as hell to play... aaaaand maybe a little broken. Meanwhile someone else dumped a ton of points into Strength and brawling, and got a much less effective character, because it was a game that involved high-powered firearms. I want to make it clear that I *like* complex games with interesting rules interactions. I love creating weird characters who can do amazing things. However, in SA, that isn't the point of the game.

In SA, the point of the game is how technology shapes society. Your character can be a total badass, but the game isn't about getting him or her to that point. Therefore, the system is much simpler. There's no point-buy, there's very little in terms of tactics... there's not much to exploit. In terms of character creation, there's the major balance between the character-level and player-level attributes, and that's it. You can min-max your character and you can do it *easily*, because I intentionally wrote the game to make it as easy as possible to min-max.

It's intended and expected. You can make a weaker character, but it will be obvious to you as you do it.

The one part of SA's system that rewards mastery is in taking Complications. Not creating Effects by spending Themes, because that's pretty straightforward, but in *deciding what complications to take*. I'll talk more about that later, but that's basically the only place you can build rules mastery.

Setting mastery is a different thing. Mastering a setting means understanding the world in which the game happens, whether social or physical, and using it to your advantage. Setting mastery is a huge part of SA, and it takes a while to build.

The future is *not* just like the present but with rayguns. The future is a genuinely different place, where technology changes the basic assumptions that we hold about our lives. Immortality destroys inheritance. Replicators revolutionize manufacturing. Transmutation make mining pointless. Animism becomes real – dataform intelligences are literally embedded in your character's surroundings in almost every civilization in SA. Some things that are part of our world now will be gone, and new things will arise.

It takes a long time to acclimate to this future. Take it from someone who spent years writing this universe and being figuratively immersed in it: it takes a long time to get used to some of these ideas. I still discover new uses for technologies that I thought up back when the game was originally being created. Sometimes these uses are so obvious and effective that I have to rethink how I view whole swaths of the game world.

There is no single thing that makes this future different. It's the accumulation of a thousand interconnected details. If you play a character who wants to set up an asteroid mining and interstellar trading operation, you're falling victim to a lack of setting knowledge. If you look for a place to buy a map, you're showing a lack of setting knowledge. This can happen in the other direction as well – if you say, "Oh, we'll just wormhole there," as if it costs you nothing, that's also a lack of setting knowledge. Putting all these pieces into place takes time. Learning the setting is a mastery process, like learning chess, or becoming a writer, or learning martial arts.

That's a little daunting. Games with complex, unique, or counterintuitive settings don't always sell well, because people get frustrated with them. On the plus side, this mastery is genuinely rewarded within SA. The better you understand this future, the more you can do with it. You end up with more effective characters in the game, because they know how their world works. Better than that, you end up with a game world that hangs together more effectively, that feels more internally consistent.

Mastery only accrues while you practice. Dive right in. Think hard about your game world. And don't be afraid to rewind a little bit if you realize that something didn't come out quite right. After all, it's only a game.

Neuroform Advice

Playing a character with a different neuroform is a unique challenge. Having massive weaponry built into your character changes your capabilities (no pun intended), but it doesn't necessarily make fundamental changes in the way you think. Non-standard neuroforms can make your character see the world in a very different way, and it's worth some consideration.

As a reminder, "baseline" refers to someone who is either Dynamic or Static, but follows the usual path of, Physical, Single, Autonomous, and Sovereign. See page xx for a quick description of each.

Dataform

Dataform characters can be a major challenge for players. They have no bodies, and interact with the analog world only through robotic remote units (see page xx). Most such characters will be programmers, researchers, or other intellectual types, so as to take advantage of their presence in the infosphere. While there are such things as dataform soldiers, martial artists, athletes, and so on, they can only exercise their talents in simulation, or through a remote unit. Dataform characters exist in most civilizations, though some are more welcoming than others.

If you want to play a "robot" character, you may be uncertain as to whether Physical or Dataform is the right choice. The decision comes down to whether the robot's computer brain is essential for your character, or whether you can leave it. If the brain is essential and you wouldn't be yourself without its unique structures, you're Physical. If the brain is incidental and you can be transferred, copied, and run elsewhere, you're Dataform.

Dataform characters often have no Biotech, Nanotech, or Stringtech scores. When you're a computer program, you're only really borrowing those things. They belong to your remotes, or to your surroundings, or to the people who let you see through their eyes. You're blind to the physical world until you get a camera.

Some dataform characters, such as the Stored and the Wraiths, are distinctly human. Others have either drifted farther away from humanity. Some were never human to begin with, though they were programmed by one, or programmed by another DI that was programmed by another that was eventually created by a human. It's important to consider this question when creating a dataform character, as those who consider themselves to be more "human" may want to maintain that, while those who are not may be less interested in maintaining any bonds with the rest of humanity.

The most important thing to remember when playing a dataform character is that you're not a ghost, or a spirit, or a holographic

Singular Verbiage

Heterolinguists (see page xx) are really their own neuroform. They are just as challenging to play as any other non-standard character. 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.

projection, or an energy being of some sort. You're a computer program – a very sophisticated one, but limited in the same ways that computers are limited. You can't go into a room; you send your remotes into the room. You can't talk to someone, you need to speak through your remotes, or (if you've lost the remotes) send them messages via their mesh.

Multiple

Neuroforms with the Multiple descriptor cover a huge range, from pilots paired to their ships to 20-person group-minds to million-person "compositions" that cover entire continents. If you're portraying a Multiple character, the first question to answer is, "How is this character 'Multiple?'" If

How much autonomy do the component selves have? Do they have independent thoughts? Can they take independent actions, or must the entire group-mind act as one being? Do the different selves have different emotions, and can they have emotions about one another or only about things outside the group? If they think about each other, how do they resolve conflicts? Is the "group-mind" separate from the individual minds in the way that a leader might speak for an assembly, or is the character more tightly integrated than that?

How is the group-mind mediated? What medium passes the signals of the mind between the brains of its component selves? (Typically the answer is some sort of radio, but see the Tines in *A Fire Upon The Deep* for a well-written sound-based example.) Does the group-mind require a neural mesh and radio, or is it built in through Biotech? Are the signals encrypted? Might the signals be faked, and if so, how hard would it be? What is the maximum acceptable separation distance between parts of the mind?

What happens if the component selves are separated, unable to receive signals from one another? Do they regain the thoughts and emotions of their prior selves? Do they still consider themselves part of the group-mind and seek to reconnect with it? Is the composition so all-consuming that they are lost and helpless without it, or reduced to an instinctive state? Does a backup personality (see page xx) kick in?

How unique is the group-mind? Is it made from off-the-shelf Lenses sold to create this effect? Is it a prototype with uncertain reliability? Was it created for a specific purpose, perhaps with unusual methods or capabilities?

Why is the group-mind together? Is this a biological standard for a Cargo Cult or something the component minds were brought up expecting from childhood? If not, what circumstances and influences brought the individuals together like this? What prompted them to take the (very big) step of joining their minds?

One constant for all Multiple neuroforms is that adding a new member to the group changes the group's personality. The more people who are already in the mind, the smaller the change will be. Small group-minds are very cautious about adding new members. Most never do. Losing a member is just as bad, if not worse. It's as traumatic as losing an arm, and as crippling as brain damage. Even if the change is temporary, it can still be traumatic. This is why having a Multiple neuroform doesn't carry an Import or Tech cost – to take advantage of multiple bodies, you have to expose those multiple bodies to multiple dangers.

If your character joins a group-mind, it invokes the Rule of Force (see page xx). Individuality is subsumed, and a new being is created. Your old character may not exist any more, depending on the rules of the group-mind. 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.

Parasitic

Parasitic neuroforms are very rare. Unlike being Dataform or Multiple, being Parasitic is a clear drawback: you absolutely *need* another character present for your very survival. Unlike being Slaved, this neuroform is typically not put in place by an outside force. Not many people end up Parasitic.

Nearly all Parasitic characters are Dataform. They ride on other characters, usurping some or all of the brain's processing power. This is almost always noticeable, so the character has an option: inform the host and share the space, or attempt to take over the entire brain and risk being ejected. A character who is both Parasitic and Multiple might be able to live off several characters' unused mental processes without being noticed. The issue is that higher Cognitech scores provide more processing power, but also notice intrusions more easily.

A Dataform character who needs a computer in order to survive is not Parasitic. A Parasitic character specifically needs to use another sentient being's brain in order to function. A memetic virus that gains intelligence might be considered a Parasitic life form, as it would need human minds to carry it and would die without them.

It is possible to be Parasitic and Physical – some sort of brain-slug, perhaps – but this would mean having a major new alien life form in the setting. Be careful before you do this. Adding playable aliens to SA substantially changes the feel of the game.

Slaved

With Multiple and Parasitic minds, the important question was "how." With slaved minds, the important question is "why?" Why is your character slaved? Any other questions about your slave mesh (such as "Who are you slaved to?" and "How much autonomy do you typically have?") should follow from that.

Did you commit a horrible crime? Were you captured during a war? Did you lose a very bad bet? Are you paying off your debts in indentured servitude? Were you kidnapped? Do you have a mental condition and live in an oppressive civilization?

Characters with slave meshes do not fit in all campaigns, nor is it always easy to play someone whose actions or even thoughts can be controlled by someone else. It's more than just a touchy subject.

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. 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 Themes until you have the usual three.

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.

For characters whose civilization doesn't offer strong Capabilities, there's also the option of defecting to a higher-tech civilization, where you can obtain more powerful implants.

Increasing your Professions just takes practice and time. Unfortunately, spare time is often in short supply. Themes such as Action (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 and advancing them through 3, or higher if they have the right CV. 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. You should also consider the optional rule on page xx about Character Arcs, allowing players to change their characters' CVs and Themes at the completion of a Plot.

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 the benefit of being from that Civilization. If the Society CV falls below 3, the same happens there.

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.

Hacking the Game Mechanics

If you enjoy fiddling around with your games, creating house rules and variations on existing games, this section is for you. I'm going to talk about how the game is set up, why these choices were made, and give some advice for those who are interested in changing things.

The game's engine is intended to model certain assumptions that are not made explicit in earlier chapters. Let me lay them out now: here are the major and minor assumptions that drove the creation of the current game engine.

Major game mechanics assumptions

- A character's skill is of equal importance with the amount of built-in technology that character has. Individuals may have more or less in each category, but the battle of the phenomenally skilled against the phenomenally enhanced is a draw.
- When you believe in something, you are more effective at accomplishing it.
- It's hard to talk people out of, and easy to talk them into, doing things they believe in.
- Game fiction sets the parameters for conflict. In the simplest sort of example, you can't punch someone at a range of a hundred meters, but you can sure shoot them from there.

This last item seems obvious enough to me that I've never written it into the rules. It's not the only way to do things, though.

Minor game mechanics assumptions:

- Not all conflicts are equivalent. A bench-press competition is not the same as a martial arts form competition is not the same as a martial arts brawl. I think this may need to be increased to "major" at this point - it's clear that I haven't made this case strongly enough in 2nd edition.
- Teamwork matters. There is no conservation of ninjutsu.
- Doing things without people noticing is hard.
- Various other little things that are codified into specific rules rather than the engine as a whole. The "subtle conflicts" rule, for example, comes from the assumption that it's harder to cause problems for someone if you don't want them to realize it's you causing the problem.

Hacking the Setting

Major story-terms assumptions:

When your opportunities are unlimited, your beliefs shape what you become.

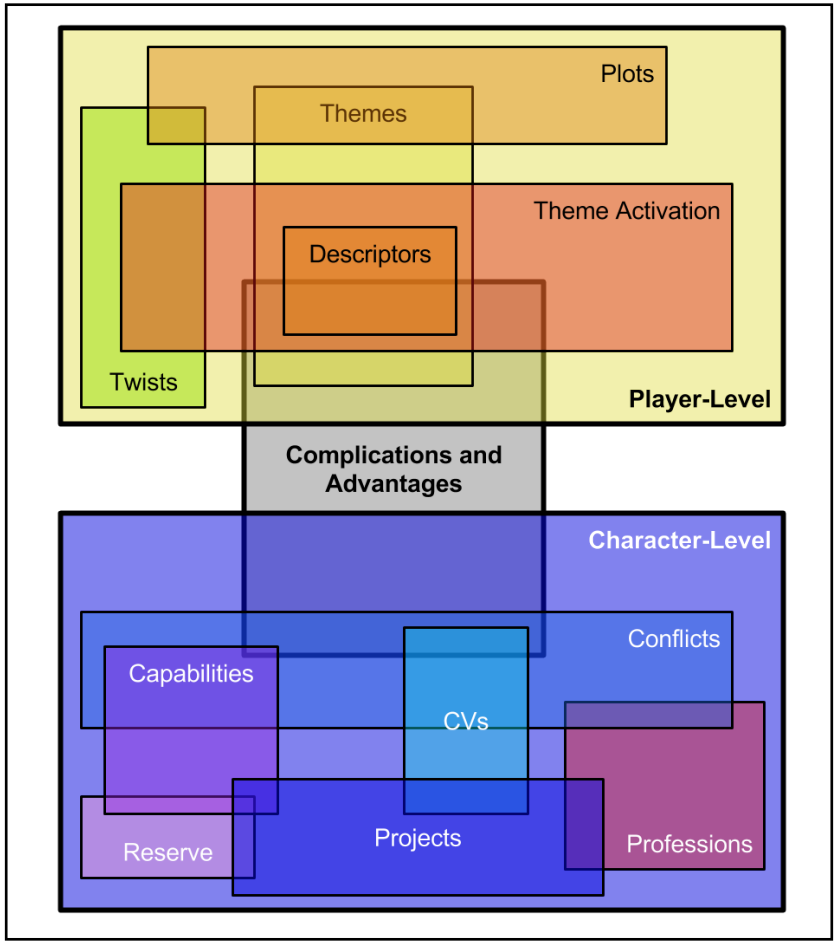
The things that you care about are the only things you won't change about yourself.

When everyone in a society is smarter and more socially capable, people work together better, there is less crime, and folks are nicer to each other.

The future is fairly bright and optimistic. Connected to the last one, but separable, and pre-dates it.

Design Goals

The rules for SA came out of a specific set of design goals. There were four that were most important:



1. Players should be able to play the character you want to play right away. They don't need to level up to get there.

2. Characters at all levels of skill and power should be equally viable in the game, so those who don't want to play super-experienced badasses can still contribute.
3. The game should emulate stories like those in the Inspirations list on page xx.
4. Instantly murdering someone might be perfectly logical in the setting, but it's a dick move in a game.

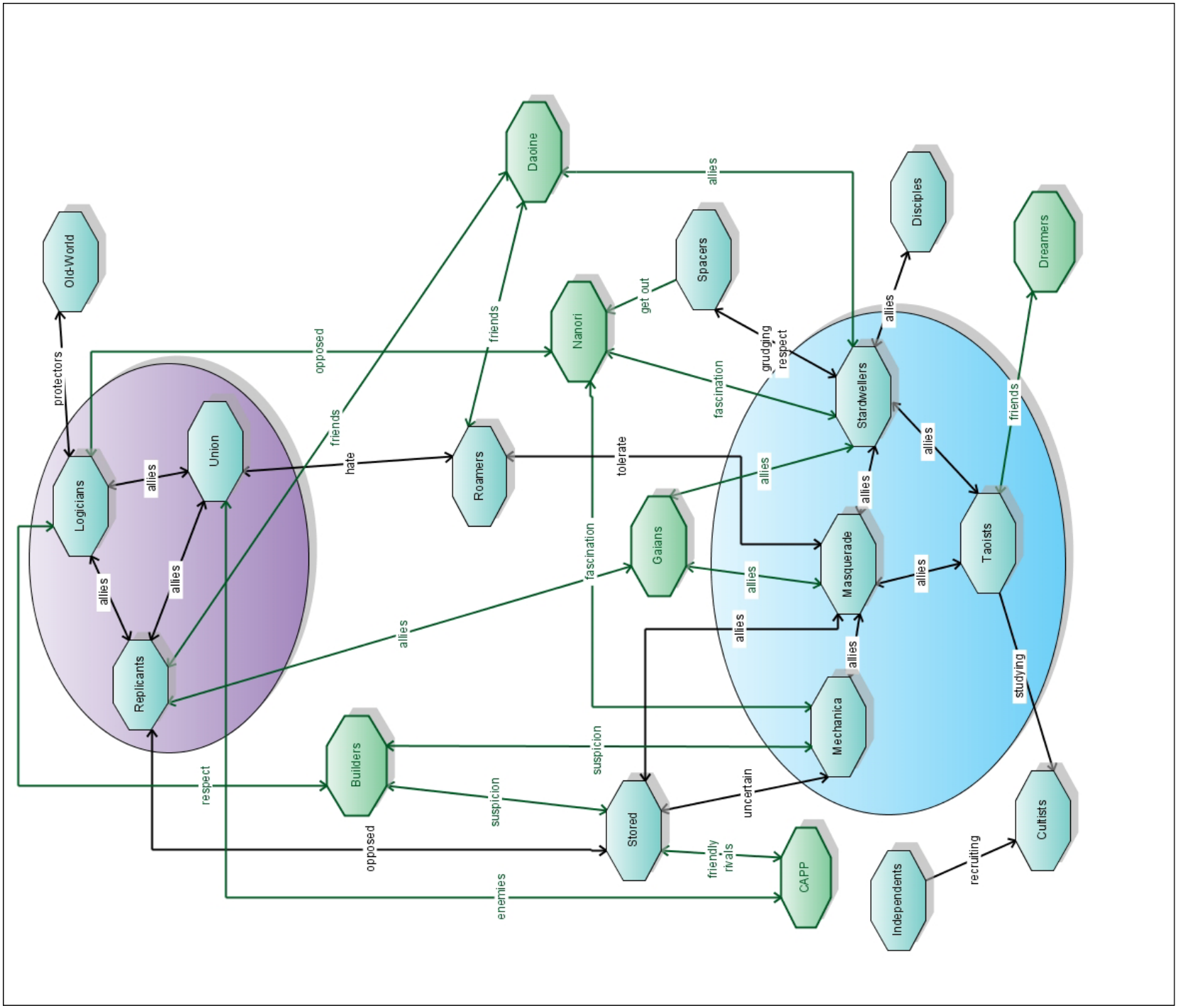
You can see the first goal in character creation, where you can generally just pick the Capabilities and Expertise that you want. You can see the second one in the balance of Tech and Import. The third goal led to the creation of Themes, and the fourth to the Obligatory Instant Death Cutscene Rule.

In addition, there were a few minor goals. These are things that would have been nice to accomplish, but weren't strictly necessary.

5. The game should be playable while hiking or driving.
6. The game should be diceless.
7. Min-maxing should be so easy that everyone can do it, and most people didn't even notice they were doing it.
8. The game should support a story wherein someone grows in power or expertise without needing to nerf their starting character.

I feel like I accomplished items 5-7 fairly well. Item 8, sadly, was crushed by major goals 1 and 2. I never found a good way to have both 1 and 8 while still having 2 be true.

You can find more of these goals in the "Hacking the Game Mechanics" section on page xx, where I talk about some of the assumptions behind the game mechanics and what it might mean to change them.


Old-World
protectors
Logicians
allies
Union
allies
allies
Replicants
opposed
friends
hate
Daoine
friends
Roamers
Nanori
get out
Spacers
allies
grudging respect
fascination
tolerate
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Mechanica
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Dreamers
studying
Cultists
respect
Builders
suspicion
suspicion
Stored
uncertain
opposed
friendly rivals
CAPP
enemies
Independents
recruiting

What's the difference between raising Tech and lowering Import?

Other "hacker's guide" notes go here.

Advice on Themes

Themes are a big deal. Capabilities, Professions, and even Core Values are secondary to the effects of Themes on the game. Themes also 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 Action (Badass) 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 a low Tech score, and getting more Twists is cheap and easy. She has Action, Magnetism, and Intrigue. 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 few Twists by taking a Complication (a flesh wound), spends them through her high Action (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 NPCs, the general environment, and sometimes even hyperintelligent time-computers, 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 Action (Sheer Luck) 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 want to just avoid plot – chances are they're looking for a chance to actively make it go away.

Core Values

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.

Let's look at the "Self-Preservation" Core Value that all characters have. This is a perfectly reasonable value to have from a story point of view. It could stem from a sense of self-importance or general cowardice, but for most people it's just a part of their animal instincts. Self-Preservation adds 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 conflict rules, it should also be adding to every single conflict that threatens a character's life – almost every serious fight. 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 1 who avoids fights and uses Complications primarily to escape them, this is perfectly ok. However, if this character has a Stringtech of 5 and is constantly jumping into dangerous situations and starting gunfights with the intent to kill, it's time to have a talk with the player. It's likely that the fights are either not a serious threat (and thus Self-Preservation should not come into play) or that the character clearly does not really care that much about his or her own survival (and thus Self-Preservation should be rated lower).

Describing Plots

Civilization Interactions

One of the most useful diagrams I made when designing the first edition of SA is on the next page. It shows all the various civilizations (including those that were eventually added to 2nd edition) and their relationships with each other. I'm a very visual person, and this map helped me nail down the social structure of the universe.

In 2nd edition, this map isn't quite accurate. First, there are multiple settings, and each setting would need its own map. Second, with Plots in the game, the relationship between civilization is more fluid than before. However, it's still a useful thing to have, because it's an example of a tool you can create for your own game.

Start with a small group of civilizations, and possibly societies as well. Create a map to indicate how each of them views the other – not at the civilian level, but at the government level. Sometimes this is a mutual feeling, as with most of the lines on my map. Other times, especially in groups with different Metatech ratings, the two groups may harbor different feelings for one another. One civilization might trust another, while secretly being manipulated by them. As your campaign grows and changes, you can update your map. New civilizations might come in; old ones might change their relationships.

Be sure to share this map with your players. Most of these relationships will be well-known by the citizens of each group, and often by outsiders as well. If your campaign involves a lot of secret relationships between civilizations, you might have a second version of the map for people with high Metatech scores or the Spy profession.

blah

Appendices

Differences from First Edition

For those interested in how this second edition differs from the first edition of the game, we present this summary.

Multiple Settings. The original SA had just one setting, which is presented in this edition as The Patent Office.

Diceless. SA1 had a system based on the roll of two 10-sided dice, one multiplied by Capability and one by Profession. There are also a plethora of rules changes that came with the switch to a diceless system, as one might expect.

Existentialism. It's just a single page, but the Existentialism rules mark a substantial change in how character death is handled in the game, and in the viability of Replicant characters.

Broader character concepts. The addition of Neuroforms, the encouragement of create-your-own civilizations and societies, and the larger number of settings open up a greater variety of character types in SA2. Dataforms, in particular, are much more common.

Increased impact of Core Values. CVs were of more limited effectiveness in the first edition, especially in conflicts, where they were primarily a defense against Metatech assaults.

Three new Themes. Action, Terror, and Wonder are new in SA2. Plot Immunity used to be its own Theme before being turned into a way to use a Theme.

Theme ratings Twist costs. All Theme activation used to cost a single Twist, with the rating of the Theme indicating how effective its use was.

Plots and Projects are introduced in this edition. The first edition had an idea similar to Plots, but with a fairly different execution.

Travelogue folded in. The first edition had a single unpublished supplement named Travelogue. All of the material from that supplement has been folded into this book, with one exception that is planned for release in a later supplement.

Roamers and CAPP downgraded. In the first edition both of these were Civilizations. They've been downgraded to Societies because it seemed to fit them better.

Glossary

Action: The Theme that makes your character into an action movie hero.

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 agricultural 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.

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. Each character must pick a home Civilization.

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 Nanowire Mesh. As a Capability, Cognitech rates your character's mental faculties, from rational thought to creativity and intuition.

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

Core Values: (CVs) 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.

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

Expertise: The skills and knowledge that your character has obtained. Some characters have Expertise limited to just a few professions; others are competent in many fields or fantastically focused in a single area.

Import: A measure of a character's importance to the plot. The higher your Tech score, the lower your Import will be.

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.

Common Setting Elements

The following items appear in essentially every setting for Sufficiently Advanced. They are listed here for reference.

Old-Worlders: "Ordinary humans" who live with a minimum of technology, typically the amount one would see in the 15th to 20th centuries. The Amish are the sterotypical model for an Old-Worlder culture.

Cargo Cults: Failed civilizations that are built around a single technology, typically one that is self-repairing and utilitarian. These technologies are often seen as magical or supernatural.

Stardwellers: A civilization that embraces high technology and utilizes it to the fullest. Stardwellers are often not recognizable as human to an Old-Worlder's perspective.

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.

Nanowire Mesh: See Mesh.

Plot Immunity: The activation of a Theme to protect a character from particularly deadly assaults or annoying circumstances.

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, along with transmutation.

Reserve: Points that can be spent to bring more of your your character's abilities to bear on a project. Each character has Reserve equal to his or her Tech score.

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

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.

Neuroform: The form that your character's mind takes. Is it physical or just composed of data? Is your character a single person or a group-mind?

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.

Tech Score: A combined rating of a character's technological prowess, determined by a combination of Capabilities and Expertise. The trade-off between Tech and Import is the central balance of the game.

Terror: The Theme that brings horror elements into the game, either for your character or for those nearby.

Theme: Your ability to change the plot in specific ways. You can spend Twists through one of these scores to effect changes in the world. The eight Themes are Action, Comprehension, Empathy, Intrigue, Magnetism, Romance, Terror, and Wonder. Characters have a descriptor in each Theme that determines where they are applicable. Players know about their characters' Themes, but the characters themselves do not!

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. You start each session with a number equal to your Import, and they are generally gained as bad things happen to your character.

Wonder: The theme that creates a sense of awe and brings fantastic things into the game.