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TRANSHUMAN SPACE

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STEVE JACKSON GAMES

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Article Colors

Each article is color-coded to help you find your favorite sections.

Pale Blue: In This Issue Brown: In Every Issue (letters, humor, editorial, etc.) Dark Blue: **GURPS** Features Purple: Other Features **Cover Art** *Christopher Shy* **INTERIOR ART** Greg Hyland Steven Marsh



What better way to start the dawn of a new year than the dawn of a new era? Strap on your spacesuits – or simply upload yourself across the solar system to a receiving station – and get ready to take a tourist stop in *Transhuman Space*.

Our first unbelievable futuristic fusion comes courtesy of Phil Masters, *Transhuman Space* line editor. He's figured out how to add *GURPS Action* DNA to the year 2100 experience in *Transhuman Action!* These new lenses, rules, and tips for adding cinematic fun to the near-tomorrow setting may be just what you need!

Once you're done adding exclamation points to your slinks, *Transhuman Space* architect David Pulver offers a glimpse at how a group of "normal" Fifth Wave citizens live their lives, particularly at *42 Fedorov Road*. This apartment building (complete with maps) even has two vacant rooms just waiting for tired adventurers to make themselves at home!

Long-time *Pyramid* contributor J. Edward Tremlett welcomes nervous tourists to visit the latest advances in human depravity, with five sinister locations in *Dark Places of the Earth*. It's time to put those new-found *Transhuman Action* rules to use!

Within the pages of *Inhuman Space*, *GURPS* author William Stoddard explores the horrific implications of the *Transhuman Space* setting further. Never before have ancient ideas of cosmic horror felt so *new*.

New ideas come in new ways, with *Big Media Memetics*. These optional rules give more possibilities and control for those exploring tomorrow's most subtle science. Drink *Big Media Memetics* Cola! It's new!

For campaigns featuring extensive interactions between the red and blue planets, the *Earth-Mars Calendar* may be just the thing you need to keep track of time between these neighbors. Good through January 2102!

Steven Marsh, *Pyramid* editor, explores a new way of looking at the *Transhuman Space* setting in his *Random Thought Table*. What do you get for the setting that has everything?

Finally, *Odds & Ends* includes a couple of adventure ideas we miniaturized to cram in here, and – of course – the everpopular *Murphy's Rules*, featuring the art of Greg Hyland.

Your passport to the future isn't nanoscrawled on a scroll of DNA or laser-carved on an asteroid; it's right in front of you, waiting to be read. Welcome to 2100!

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FROM THE EDITOR

2100 Adventure Possibilities

I talk a bit about approaching *Transhuman Space* in my column this week (a piece of scholarship so brilliant it will no doubt be required reading for all school children in the world of 2100). So I'm going to use this space to talk a bit about one aspect I enjoy concerning the setting – filtered through the lens of this month's articles.



When assembling this issue, I realized how varied the world of Transhuman Space is. It's pretty neat that the article about how to transform the setting into а Cowboy-Bebop-esque action-vid romp is followed immediately by an article about a down-toearth suburban apartment complex - and both make sense within the context of the setting, and are entirely possible to use in gaming.

To put it another way, let's say you want to play with the concept of identity and memories in *Transhuman Space*. One avenue takes you to an adventure like *Total Recall*, while another more closely resembles *The Truman Show*. That's pretty neat.

Science fiction has often been about visions of the future and exploring new ideas; at times the trip is facilitated by explosions, and other times by whispers.



WRITE HERE, WRITE NOW

If you're hoping to influence our behavior, you could do worse than sending applicable memes to us, at **pyramid@sjgames.com**, or via our virtual presence at **forums.sjgames.com**.

In addition, if you or your AI have ever wanted to write for *Pyramid*, you should note that we recently updated our wish list with lots of new ideas for future issues we'd like to run. Our Writer's Guidelines are at **sjgames.com/pyramid/writing.html** and the wish list is at **sjgames.com/pyramid/wishlist.html**.

Of course it's always a personal taste/campaign style thing, but this [issue #3/11] will be one of the most wholesale useful issues for me as a GM of the new Pyramids so far.

- jimminy, on the Steve Jackson Games forums

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TRANSHUMAN ACTION! BY PHIL MASTERS

This book details a bodyguard firm, which is precisely what any high-profile socialite living in the 22nd century needs. They are ready, willing, and able to crash through the window, grab the ambassador's head, twist it off, and hurl it out of the back door mere seconds before it explodes. Oh, you didn't realize that ambassador was actually a bombhead bot? See why you need these people now?

- The Daily Illuminator, August 17, 2009

Well, that's definitely one way of playing it – "it" meaning a *Transhuman Space* game, of course. And if you're going to play things that way, well, you ought to be looking at the primary *GURPS* reference for that sort of window-crashing, guntoting action: the *GURPS Action* series.

So let's take a look at merging the two series (under *GURPS Fourth Edition*, of course, and using templates and rules from *Transhuman Space: Changing Times*). This article also takes *Personnel Files 4: Martingale Security* – the subject of that *Illuminator* quote – as a source of worked examples.

CONTRASTING STYLES

To begin with, note that *Transhuman Space* isn't a cinematic setting by default. It's designed to sit very firmly at the hard SF end of the scale, which implies a strong sense of realism. However, it's a world with its full share of combat experts, high-tech weapons, international plots, and dangerous factions – a world with plenty of scope for high-action stories, in other words. If you want to preserve the division, think of a *Transhuman Action* campaign as bearing the same relation to "standard" *Transhuman Space* that the James Bond movies bear to real Cold War espionage, or that *Die Hard* bears to real police work.

In any case, some aspects of the Action approach do actually move closer to realism in the Transhuman Space world. Brain and nerve booster nanosymbionts can grant superhuman reactions and speed. Various biomods can provide superior strength, resilience, and pain resistance. The medicine of TL10 generally can enhance healing and the ability to cheat death. Heroes carry gyrostabilized guns with built-in laser sights - and if those don't ensure sufficiently uncanny marksmanship, there's always the option of homing bullets. Virtually all of the gadgets described in Action 2 (p. 30) can be considered realistic in Transhuman Space. Move the action to lowgravity settings such as Luna or Mars, and trained fighters can perform feats of acrobatic leaping previously seen only in chambara movies. This is still a constrained sort of cinematic no amount of technology can grant luck or plot immunity - but it means that "straight" Transhuman Space games can have some degree of cinematic style, while Transhuman Action games needn't look quite so far over the top by comparison to the "reality" of the setting.

LENSES AND TEMPLATES

The character creation tools provided in *GURPS Action 1* can be used in *Transhuman Action* games, in combination with the character creation notes from *Changing Times*, but a little adjustment may be required, at least for Fifth Wave heroes. "Realistic" people from that background tend to start out with assets and abilities beyond the norm for earlier eras, and action heroes will look a bit strange if they don't build on the same baseline. It's suggested that you give each *Action* template an extra 50 points, to be spent on any or all of the following.

Genetic Upgrade, Parahuman, or Bioroid Templates: Action heroes are as likely as anyone else to be genetic upgrades or parahumans. (In dramatic terms, there's a clash between bioconservatism and transhumanism here: Old-fashioned audiences might secretly cheer to see "old-school" human heroes kicking posthuman butt, while transhumanists would expect the greatest heroes to have the best genetic profiles. Mostly, perhaps, teams should have a range of types, for the sake of variety.) Bioroids are also perfectly possible, and can look *interesting*.

Gun-toting **Transhuman** *Action adventurers might be able to adapt material from Gun Fu. Among its goodies are guidelines for creating exotic and prototype weapons.* (*Tomorrow's prototypes are* **Transhuman** *Space's retro!*)

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However, they do tend to need slightly more complex backstories, which will have to fit the area in which they are based. In areas where bioroids are oppressed and more or less property, they're going to be *treated* as subservient sidekicks, possibly even comic relief, or as faintly sinister "manufactured gunslingers," even if they're *played* as more complex or even tragic figures. In, say, games set in Europe, they have and will tend to insist on equal citizenship (although they'll also frequently be legal minors), probably with complex past histories involving escape from slavery.

Biotech and Nanotech Enhancements: Some biomods and nanosymbionts are more or less expected for tolerably well-off people in advanced areas; while they aren't necessarily essential for action heroes' adventures, they might be effectively required for plausible (organic) protagonists. Primarily, someone who isn't highly resistant or immune to disease of all kinds – whether through genetics or later enhancements – will just be seen as *weird*. In a game with any chance of space travel, resistance to radiation and calcium loss may also be required. Other such mods are less standard, although those that enhance fighting effectiveness will certainly be useful to heroes – no, those 50 points *can't* all be spent on stuff to make the hero deadlier in a brawl, although putting a few points into nervous system enhancements, backup hearts, anti-shock glands, etc. fits the style of the setting well enough to be worth encouraging.

Infomorph Allies: Heroes with any sort of access to useful material resources should have some kind of AI assistance. (In some cases, their chief infomorph aide may be another PC.) A basic NAI in a wearable or implant shell can be had for 4 points; since it's designed on 25% of the adventurers' total (62 points for a 250-point action hero), it can be a very useful researcher and data manager. More formidable Allies in mobile shells are also entirely possible, although the GM should discourage players from using combat shells to do all their fighting for them; while that's quite **Transhuman Space**, it's not very **Action**.

Wealth and Status: In advanced areas of the *Transhuman Space* world, standard wealth levels are above the average for the world as a whole (see *Changing Times,* pp. 36-37). Hence, heroes based there who don't put points into Wealth are effectively marking themselves down as impoverished – which is fine in many games, but should be a conscious decision. In the richest areas, this in turn means that the "baseline" Status level is 1. While many *Transhuman Action* heroes can be Status 0 (crumpled police detectives who are still junior or who annoy their superiors too much to receive promotions, tough soldiers from the ranks, career criminals bordering on fringer status, and so on), it may help to have at least some of the group able to fit in with the higher level of society in general, or "social" scenes will (and should) too often involve minor problems.

Reduced Disadvantages: Action heroes tend toward having slightly crazy, extreme personalities, even in 2100 – but still, they ought to be a bit less extreme than the templates might suggest. Remember, this is a setting with not only good psychotherapy (some of it based on memetics) and genetic screening for hereditary predispositions, but also treatments for mental conditions based on careful use of nanodrugs.

(With GM permission, some mental problems might be taken with a Mitigator limitation to represent the need for periodic treatment – though usually, in practice, this would only justify a quirk at most.) Downright crazy, on-the-edge heroes won't look dramatically interesting to people around them; they'll just seem like menaces to themselves and others. *Physical* disadvantages are even more likely to be cured in short order.

Duties and Reputations, however, aren't susceptible to medical treatment; lenses and templates with disadvantage lists focused there are perfectly reasonable. Again, this principle applies primarily in the most advanced regions; rough, impoverished Third Wave areas can easily breed rough people.

In short, unless a Fifth Wave character is from reduced circumstances or an unusually odd background, he'll be good looking, fairly wealthy by global standards, resistant to disease and other health hazards, and with access to advanced computer resources. These 50 points must be used to reflect these aspects of the setting. If the game is to be located in a Fourth or Third Wave area, though, prevailing standards are lower, and the GM may opt to give fewer or no extra points to be spent on the benefits of futuristic technology.

A **Transhuman Action!** hero – or any other Fifth Wave citizen – is attractive, wealthy, and resistant to health hazards.

WHAT FITS AND WHAT DOESN'T

When scrutinizing the lenses and templates from Chapter 1 of *Action 1*, a little adjustment may be necessary to fit this setting. Most of the character types and occupations they describe still exist in 2100, but some have new requirements or priorities.

To start with, many of these people have to be quite sophisticated and tech-aware to sustain much of a career in Fifth Wave environments. *Criminals* in particular have to be smart to stay ahead of TL10 forensics. This is one place where the noncombat aspects of *Action* games – the slick organization and clever use of resources – may verge on "realism." Shifting a few points to Computer Operation or Electronics Operation is rarely hard to justify! Even combat specialists may be trained in multiple high-tech skills. Those using the *military* lens should feel free to shift points from archaic stuff like Parachuting, Spear, or Knife to Battlesuit. Anyone with access to any sort of Gunner or Guns skill (i.e., everyone) can also choose to switch the points to the Gyroc specialty, to Artillery to control larger man-portable missiles, or to Beam Weapons to be able to handle various sorts of high tech.

Of course, given the possibilities of slinkies, PCs could also experience "firsthand" the wonders of adventuring using the **Dungeon Fantasy** rules(!).

More specifically, given the dangers of rapid detection by high-tech sensors, "sneaky killers" with the *assassin* template ideally don't even want to still be around when the shooting starts. Traps and Electronics Operation become possible primary skills for them, as they can hide one-shot launchers and smart-fused explosive charges around the killing zone and then trigger them from a distance.

Similarly, *demolition men* will mostly use cybershells for explosives emplacement and EOD – only the craziest will rely on their skill and luck to keep them alive when a bunch of relatively cheap teleoperated hardware can take the risks instead. (Of course, action-hero demolitions specialists are always the craziest ones.) Meanwhile, *wire rats* have a whole world of new toys to play with, although their skill list may not actually change too much.

The characters fight criminals or erase outlaw entities. They may be local cops, a large agency such as the Genetic Regulatory Agency, or freelancers such as bounty hunters or xoxhunters.

– Transhuman Space

In games with any sort of criminal or espionage aspect, problems evading detection of all sorts move the *cleaner* from being a slightly peripheral character type to center stage. A competent cleaner will absolutely need a high level in Forensics skill – take the points from anywhere you can get them. Furthermore, he will typically carry around a couple of hives of highly specialist microbots and a few bottles of "nanocleaner" fluid, along with some bags of dust collected from public transport, useful for saturating spaces with spurious DNA "evidence." Many will have Paranoia, calling it a necessity for survival.

Some *face men* will employ a different sort of new technology, being students of formal memetics – although there's still scope for the old-fashioned instinct-driven plausible rogue. A lightly tweaked version of the template, with added Propaganda and Psychology skills, can represent a professional "black memeticist," adept at manipulating whole populations as well as individual opponents.

Conversely, the *hacker* may become a rather marginal type, depending on just how cinematic the game will be by general *Transhuman Space* standards. In this setting, high-grade cryptography and smart AI guardians are supposed to make hacking nigh-impossible . . . or at least a lengthy, cautious process (see *Fifth Wave*, p. 128-130, and *Changing Times*, p. 46). However, a good GM could doubtless strike a balance between the "realistic" and the cinematic, and allow some effective fast exploits without resorting to "cyberpunk" VR netrunning. One possibility would be to require hackers to take more social skills, allowing them to acquire passwords and access authorizations through diligent "social engineering." They might also need Psychology (AI, Applied), and work

largely by messing with the assumptions and behaviors of their target systems' controlling intelligences.

New Lenses

Some new lenses fit the setting – and they also serve to show the range of new action-story possibilities that *Transhuman Space* offers.

Diver

20 points

Specializing in underwater operations, you live, work, and adventure at least as often beneath the waves as in the open air. This leads to plenty of opportunity for action. You may be involved in battles against radical environmentalist saboteurs, or in the struggle to stop greedy corporations, arrogant governments, and hubristic genetic tinkerers from wrecking the oceans any more than they have already. Alternatively, you may just work to keep the peace in a growing underwater community, or use the sea as excellent cover for your special-operations or espionage missions.

If you are a purpose-designed amphibious (or aquatic) parahuman or bioroid, some of the features in this lens will be superfluous. Reassign the points to skills to represent the primary mission for which you have been trained (and possibly created).

- *Advantages:* You may spend any spare points you have on biomods or nanosymbionts such as Fisheyes [5], Myelin Replacement [1], Respirocytes [16], "AquaDude" [7], Electroreceptors [10], or Lateral Line [10] (see *Changing Times* pp. 65-66); in fact, this is positively encouraged.
- Skills: Aquabatics (H) DX-1 [2]; Boating (Motorboat) (A) DX-1 [1]; Diving Suit (A) DX [2]; Electronics Operation (Sensors) (A) IQ-1 [1]; Fishing (E) Per [1]; Scuba (A) IQ+1 [4]; Submarine (Free-Flooding Sub) (A) DX+1 [4]; Submarine (Mini-Sub) (A) DX [2]; Submariner (E) IQ [1]; Swimming (E) HT+1 [2]. You may also shift points from firearms skills in your template to melee weapons skills (usually Knife), Brawling, or Wrestling, if you wish.
- **Social Traits:** Decide who trained or employs you as a combat diver, and use the social traits from the appropriate lens in *Action 1.* That'll often mean the military option, but police, intelligence, and security organizations also have some need for this skill set. Criminal divers are rarer, but not unknown; there is stuff to steal or hijack down there.

Martian Ranger

20 points

You're an adventurer in the wilds of humanity's new world: Mars. You're not really an explorer – the planet has long since been comprehensively mapped from orbit – but the details keep changing, thanks to the effects of rapid terraforming. People like you are certainly needed out there in the wilderness, finding out *new stuff*. Moreover, as this is a wide-open world where civilization is stretched thin, you keep running into high-action excitement.

Now that you have a diver, get to the action in Under Pressure.

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Your nominal job may be as a ground-level terraforming engineer, a mineral prospector, a U.S. Marshall, or maybe a courier for the Triads – or maybe two or more of those at once; life's like that on Mars. (Feel free to assign any spare points to skills that fit your primary job.) However, the important thing is that you have a nose for trouble and the skills to handle it . . . and on Mars, there's often no one else around to deal with problems.

- *Advantages:* You need Mars-Adapted [9] (see *Changing Times,* p. 43) possibly from an Andraste biomod. If you already have that from somewhere else, shift at least 2 of the points to Current Affairs (Mars), and add the rest to the lens skills (below).
- Skills: Driving (Automobile) (A) DX-1 [1]; Electronics Operation (Communications) (A) IQ-1 [1]; Expert Skill (Terraforming) (H) IQ-2 [1]; Navigation (Land) (A) IQ-1 [1]; NBC Suit (A) DX [2]; Prospecting (A) IQ-1 [1]; Survival (Mars Desert) (A) Per [2]; Survival (Mars Mountain) (A) Per [2].
- **Social Traits:** You probably owe a Duty to someone, as per your template, although it might be modified to Nonhazardous (meaning that you adventure in your spare time). Legal Enforcement Powers are possible but not mandatory.

Martian Streetfighter

20 points

You live in one of the more established communities on Mars – but on the shady side of the street. Domed communities dependent on technology to survive tend to dislike firearms even when they're technically legal, so you've studied the new unarmed combat styles that have developed on this new world – but you're not over-specialized. You may be a Triad enforcer (hopefully with a conscience), a street cop (with either Rust China or America/Mars), or an independent operator; things are new and complicated enough on Mars that the distinctions are frankly a bit blurred.

Because the Martian streetfighter is something of a martial artist, some of the options on this lens requires access to *Action 3: Furious Fists* (or *GURPS Martial Arts*).

- *Advantages:* You need Mars-Adapted [9] (see *Changing Times,* p. 43) possibly from an Andraste biomod. If you already have that from somewhere else, shift the points wherever you like; Contacts in the local underworld are quite likely. This lens is often combined with combat-oriented biomods, if you can find the points.
- **Perks:** Combat Leaping (above) [1]. You may also spend any spare points that you have available on Acrobatic Feints, Acrobatic Kicks, Combat Pole-Vaulting, or Dirty Fighting (all detailed in *Action 3*) [1 each].
- *Skills:* Acrobatics (H) DX [4]; Jumping (E) DX [1]; Karate (H) DX [4]; Streetwise (A) IQ-1 [1].
- **Social Traits:** Use the options for the criminal lens, or the law enforcement lens if you're a street cop. Add Savoir-Faire (Dojo) to your skills if you're inclined to polite formality in your studies of combat.

New Perk: Combat Leaping

Permits you to jump your full normal distance (horizontally or vertically) in combat, rather than halving it. Note that, in Martian gravity, you multiply your Earth-normal leaping distances by 2.63, so this often permits you to jump clear *over* opponents, especially if you use *Acrobatic Evade* (*Action 2*, p. 37). This perk has both Acrobatics and Jumping at DX as prerequisites; if you rearrange your skills at all, make sure to keep those two at that level.

Spacer

20 points

You may not *literally* have been born in space, but that's where you live and work now – and you're good at surviving in free fall. In truth, most spacers spend their time maintaining high-tech systems, juggling cargoes, or looking after passengers. You can do all that, but you have a knack for finding trouble, nosing out secrets and hidden conflicts between the spacefaring powers, and surviving fights, whether in zero-G bars or between ships.

You may owe allegiance to an Earth-based nation, or you may be a member of one of the independent communities in the Outer System – a Duncanite, perhaps, or a Gypsy Angel. It's possible that you're directly employed by a major power or agency; even if you are, you have to make a lot of your own decisions when you're light-minutes away from the nearest supervision.

- *Advantages and Perks:* You should purchase DNA Repair [4] and Microgravity Biochemistry [1] nanosymbionts (*Changing Times*, p. 66). If you've already got either or both of these benefits granted from biomods, a "racial" template, or the like, reassign the points as you wish. You must have effective G-Experience with zero and microgravity (see p. 8); if your native gravity band doesn't encompass these, find a point to buy the advantage. If you can also spare the points for 3D Spatial Sense, that's not only permitted, it's positively encouraged.
- Skills: Acrobatics (H) DX-1 [2]; Electronics Operation (Communications) (A) IQ-1 [1]; Electronics Operation (Sensors) (A) IQ-1 [1]; Free Fall (A) DX+1 [4]; Freight Handling (A) IQ-1 [1]; Piloting (Aerospace) (A) DX-1 [1]; Piloting (High-Performance Spacecraft) (A) DX-1 [1]; Piloting (Low-Performance Spacecraft) (A) DX-1 [1]; Spacer (E) IQ [1]; Vacc Suit (A) DX [2]. If you expect to operate a lot in zero gravity and make significant use of DX-based skills, you'll probably want to find the points from somewhere to buy your Free Fall skill even higher! Also, you can and maybe should shift some points from Guns skill to Beam Weapons (to handle lasers and electrolasers, which are widely preferred as weapons aboard spaceships) or Gunner (Beams) (to operate ship-mounted lasers).

In the Well provides details on adventuring on Mars (as well as Mercury and Venus). For alternate takes on the Red Planet that might prove inspirational – say, as slinkies – check out GURPS Mars.

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G-Experience

The standard *GURPS* rules for different gravity (p. B350) make it *impossible* for a character ever to be fully effective in more than one level of gravity. At best, the G-Experience advantage reduces the penalties for unfamiliar gravity levels. This is really too detailed and insufficiently heroic for *Action* games, whose heroes should be able to look cool and effective in any situation encompassed by their schtick – which in *Transhuman Action* games, may well include adventuring in space and on other planets. So *Transhuman Action* uses a simplified rule: G-Experience for a different gravity level allows you to treat that level exactly as if it were your native gravity level. Thus, for example, someone born on Earth (native in 1G)

Social Traits: Shady "freelancers" use the options for the criminal lens. Government employees use those for the military or security lenses, as seems most appropriate.

Xoxhunter

20 points

You're basically in law enforcement, or maybe in some kind of military or security work, but you deal with a sinister new category of threat: the hostile infomorph. You're a warrior on a very high-tech and sometimes incredibly dangerous frontier. This doesn't *just* mean hunting xoxes, in fact, although any infomorph enemy worth its salt will likely end up illegally copying itself sooner or later; it also includes malicious weblife, crazy "free memes," some highly mobile megalomaniac cult leaders, and probably some perfectly legitimate AIs that happen to work as hackers for factions opposed to your own.

Still, chasing down xoxes is the class of work that looks best to the public at large, who find the ability of such AIs to multiply without limit across the Web to be deeply worrying. (Well, there are a few crazy digital creationists and posthumanists who think that you're a baby killer. Ignore 'em.)

In *Transhuman Action* games, the infomorphs you hunt all too often employ combat cybershells, fanatic cults, dupes of all kinds, and other dangerous allies, so you need all the combat skills of an action hero – coupled with the technical training of a computing professional.

Skills: Computer Hacking (VH) IQ-3 [1]; Computer Operation (E) IQ+2 [4]; Computer Programming (H) IQ-2 [1]; Current Affairs (Science and Technology) (E) IQ [1]; Electronics Operation (Communications) (A) IQ-1 [1]; Electronics Repair (Communications) (A) IQ-1 [1]; Electronics Repair (Computers) (A) IQ [2]; Expert Skill (Arachnoxenology) (H) IQ-2 [1]; Psychology (AI, Applied) (H) IQ [4]. Then spend another 4 points to improve one or more of these skills and/or to purchase Mechanic (Robotics) (A) at some level. who buys G-Experience (0.38G) never takes any penalties for operating in either Earth's gravity field or that of Mars.

Note, further, that anyone can operate without penalty in conditions within 0.2G of their native level. This means that a character who has 1G (Earth-standard) as his native gravity, and who takes G-Experience with a level of 0.19 G, is fully effective in conditions from 0 G (free fall) to 0.38G and 0.81G to 1.19G. This covers every planet, moon, and major space station in the inner system, and everything except the gas giants in the outer system. Hence, for practical *Transhuman Space* purposes, "not having to worry about variant gravity fields" costs as much as a perk – which is probably about right, stylistically, for *Action* games.

Social Traits: Use the options in the Law Enforcement or Security lenses, depending on how overt your employers are.

INFOMORPH CHARACTERS

Complicating things further, *Transhuman Space* offers the option to play infomorph characters, frequently in radically nonhuman cybershell bodies. These can work fine in *Transhuman Action* games, but the points required to create a useful mobile cybershell usually eat up far too much of the hero's budget to be combined with any of the standard *Action* templates. Conversely, AIs in static computers don't make very convincing gun-toting, door-busting heroes – although given a bunch of Ally NAIs in small mobile shells, they can join in the action at second hand. Likewise, a smart SAI or ghost with a permanent Web connection can be a *huge* asset to a team or crew in this setting. To some extent, they will likely tend to act as backstage controllers, quartermasters, or liaisons to higher levels of "the agency" or other groups, although they don't have to stand entirely aside from the most exciting stuff.

The other snag with SAIs is that they're usually programmed to have Honesty, which rules out a lot of Action-style careers (even the ones that are *supposed* to be on the side of the law - action heroes have this notorious trouble with Doing Things By The Book), but they may still be viable in some games. Alternatively, you can play one that has twisted its own programming to something more *flexible*, although that makes it a rogue, typically with a big Secret that can be quite hard to keep under these circumstances. Ghosts and shadows are less complicated in this respect, although they need appropriate backstories - they're probably soldiers or crack secret agents who got uploaded after their meat bodies got shot up beyond repair on some mission, or maybe slightly crazy oldsters who elected to make the change when senescence got to their bodies, and who now celebrate their digital quasi-immortality by running a little wild.

Campaign idea: Players might be able to play themselves in the future of 2100! Of course, each PC will need a good reason for how they survive another 90 years on Earth . . . but Transhuman Space has a bunch of possibilities. Life-expanding drugs, living long enough to be uploaded, and cryogenic storage are all possibilities. See Age (Transhuman Space, p. 128) for more.

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Infomorph/cybershell heroes generally have to be designed from scratch to fit the campaign and character concepts. One thing to note is that, unlike most *Action* adventurers, they don't necessarily have to have Luck in any of its various forms. Human heroes frankly rely on that advantage to keep themselves alive in careers that would finish lesser mortals in short order; infomorphs have their own arrangements for cheating death, and are frequently not on the scene in person when the shooting starts.

Such characters tend to have very cool, impassive personalities. Why? Because it's true to some extent of all AIs, and the conventions of the genre raise it to the extreme. Many replace the Fearlessness which is standard for LAIs and SAIs, with fullon Unfazeable, remaining quite aggravatingly calm through every high-speed chase and frantic firefight. Some also have Indomitable, refusing to be manipulated like sloppy organic beings - although others have a comic streak of gullibility. Of course, equally cool NPC AIs can make deadly opponents, refusing to be flustered by the heroes' mind games and coordinating hordes of disposable combat shells. (Compartmentalized Mind is a good option for AIs on either side of the hero/villain line in Transhuman Action games.) Heroes with social skills will need Machine Empathy (see Changing Times, p. 52) to use them on AIs; this can be a good feature for AI heroes whose job includes counteracting enemy AIs. Ghosts and shadows - being emulations of human minds - are less frequently "ice cold and deadly" character types, although some turn down the gland/hormone modeling options on the systems on which they run, and turn out almost as chilly as AIs.

It should also be said that, despite this reputation for coolness, AI action heroes *may* have more in the way of mental disadvantages than their counterparts in more "realistic" *Transhuman Space* games – especially if the campaign is going to have some moments of comic relief. They can certainly be naïve or eccentric, and *Transhuman Action* games can play this up, if that's what the players want.

Cybershell Enhancements

Those infomorphs will of course have to use cybershells of some description. The various types detailed in Changing *Times* and *Shell-Tech* are often highly appropriate, but freewheeling Transhuman Action games can take a slightly more relaxed approach to some parts of the subject than is the norm. Action heroes often have special tricks up their sleeves and access to cool technology, in 2100 as in earlier eras. Sometimes this will show up on a cybershell character sheet. The standard Taboo Trait: Physical Changes should be treated as advisory at best, and simply ignored with GM permission; a shell may have improved physical attributes ("I had the motors upgraded by that techie I used to know"), a bit of an Appearance ("Cool custom mod!"), Weapon Mounts ("It's just a braced mount and a serial port"), improved senses ("I scavenged the lenses from that surveillance shell we shot down"), or anything else that can be justified with a little bafflegab.

Of course, adding this kind of improvement in play should really require a bit more than just spending a few bonus character points, but in a freewheeling *Action* campaign, it needn't be *much* more: A friendly tech with a workshop, maybe some salvage from an enemy warehouse or security shell, a couple of hours, and – *voila!* – the bonus points are spent. Even so, the GM should impose some limits, however soft; if the hero's Volkspider is turning into an artillery-proof death machine with the speed of a cheetah, it may be time to veto further physical changes. Upgrades at the start of play can be easy to justify ("I'm ex-military" goes a long way), but bear in mind that a *really* deadly shell won't be allowed to walk away from some employments.

MARTINGALE!

Instead of using templates and lenses, players can build all their characters from scratch. Here's an example of what might result, based on previously published material.

Given that the main characters in **Personnel Files 4: Martingale Security** are built on 300 points each, you might assume that they're ready to go as **Action** heroes. However, they've got that many points because they're actually quite "realistic" combat-trained Fifth Wave characters; giving them the **Action** feel on top of that requires a little bit more. Let's say 50 points more, and accept that this is a game with a higher starting point total. Here's what to do with them – and with their Ally infomorphs, which of course have their own point values raised in proportion.

If it helps, think of the campaign in which these characters star as a game version of *Martingale!*, an action-adventure InVid that is popular across North America in 2100, and a bit of a cult in the E.U. (despite many complaints there about it being loaded with carbon-chauvinist memes). Needless to say, it's also heavily pirated in the TSA.

DIEGO HUGHES

Raise ST to 12 [20], HT to 12 [20], HP to 13 [2], Per to 17 [20] and FP to 12 [0]. Keep basic Speed at 6.00, so its cost becomes [0]. Add Luck [15]. Hughes' Per-based skills all go up by 4 as a result of this, of course.

Hughes remains the grizzled team leader, but his *Action* version is a little bit tougher and incredibly sharp-eyed – he doesn't seem to miss *anything*.

"Jack": Change DX to 12 [40], Per to 15 [20], and Basic Speed to 6.00 [0]. All Jack's DX-based skills go up by 2 as a result of this. What Diego misses, Jack sees anyway – and it's also a crack shot.

In most Fifth Waves countries, it's hard to stand out when everyone looks "unique," but that crazy outfit that looks normal in a Fifth Wave community will get noticed in a Third or Fourth Wave location or in an isolated community.

"Ratchet": Change DX to 11 [20], Basic Speed to 5.50 [0], and Acrobatics to (H) DX+3 [16]-14. Add Silence 1 [5]. All Ratchet's other DX-based skills go up by 1 as a result of this. Hughes' robot spider is alternately comically acrobatic and faintly creepy, though it's never *said* to be anything other than a standard NAI running on a standard securibot shell.

PAUL CHUNG

Raise DX to 13 [60], IQ to 13 [60], Will to 16 [15], and Per to 13 [0]. Keep Basic Speed at 6.00, so its cost becomes [-5]. Add Luck [15]. All Chung's skills except Hiking go up by 1 as a result of this.

Chung is the team's quiet, solid rock; this version is even more competent, although people may not realize this because of his taciturn manner.

Chung's Wearable Tactical System: Add Modular Abilities 1 (Cosmic) [10] and Computer Programming/TL10 (H) IQ-1 [2]-10. Somewhere along the line, Chung has acquired a modified wearable system that seems to have been programmed with a huge array of essential "skill elements" and powerful adaptive situational modeling abilities – or to put it another way, it seems to be able to try (almost) anything, without even downloading a skill set. Chung never explains this. (Note that this advantage shouldn't be allowed in *Transhuman Space* outside of cinematic campaigns, and it should attract unwanted attention if overused even there.)

PAZ RAMIREZ

Raise DX to 15 [80] (raised from template). Keep basic Speed at 7.00, so its cost becomes [0]. Add Extraordinary Luck [30], or if you prefer, any two of Daredevil [15], Luck [15], or Serendipity [15]. Raise Acrobatics to (H) DX [4]-15 and Explosives/TL10 (Demolitions) to (A) IQ+1 [4]-12. All Ramirez's other DX-based skills go up by 1 as a result of all this. Ramirez becomes even more of a swashbuckler in this version, to an extent that might interfere with her usefulness to the team if this wasn't an *Action* game.

Ramirez's Wearable Tactical System: Change Computer Operation/TL10 to (E) IQ+6 [12]-17 (bought up from template levels). Ramirez calls this system "The Colonel," but it has a cool, academic manner, providing a rather comic contrast with her own approach. When the team needs to work with computers, the Colonel usually takes on the job.

OVERSIGHT

Change IQ to 15 [100], Will to 13 [-10], and Per to 14 [-5]. Replace the Fearlessness 1 in the SAI template with Unfazeable [15]. Change Administration to (A) IQ+1 [4]-16. All OVERSIGHT's other IQ- and Per-based skills go up by 2 as a result of this.

The cinematic OVERSIGHT is frighteningly competent and totally unflappable. Of course, it's still a bit nosy and cocky, and it's still a mind in a box somewhere.

Oversight's Buzzbots: Change Modular Abilities to 3 (Computer Brain: 4, 4, 2) (Limited Integration, -20%; Skills and Languages Only, -10%) [41] and Aerobatics to (H) DX-1 [2]-9. OVERSIGHT uses these units to infiltrate out-of-the-way places; they then start demonstrating all sorts of programmed skills to save the day or drive the plot along.

CHARLIE MALLINSON

Change ST to 14 [20] and HP to 17 [0], and add Lifting ST 5 [15] and Luck [15]. Mallinson has had the structural framework and motor systems of his cybershell radically upgraded, making him useful whenever raw pulling force is required. He's still an indifferent bodyguard, but he does his best, and he's learning.

The beaten paths are certainly the surest; but do not hope to scare up much game on them. – *André Gide*

PLAYING THE GAME

For the most part, *Transhuman Action* games should move along like most *Action* scenarios, albeit the car may well drive itself while the heroes are hanging out of the windows shooting at pursuers; a master villain with an HQ in orbit is asking to be knocked over by half-a-dozen police forces; and arranging surveillance of a target area may involve dropping a handful of dust. In short, the GM should keep things moving and keep them fairly simple, but bear in mind that advanced technology can always make them *different*, if not necessarily more complex.

LUCK AND ALLIES

One question that may arise involves the nigh-universal PC Luck advantage and the heroes' infomorph Allies. Given that the latter will often be working on behalf of their owners, players may seek to use Luck to re-roll the Allies' failures. However, by a strict reading of the rules, this should only be permitted if the infomorph's action *directly* affects the adventurer in some way – say, if it's attempting Diagnosis or First Aid on the hero.

Use G-Experience (p. 8) to help the unfortunate Vandegrift Station in the adventure Orbital Decay.

Pyramid Magazine

You can't share luck with an NPC, even one as close to you as an implanted Ally.

This may seem like a harsh ruling, but GMs should probably enforce it. Remember, action heroes are ultimately supposed to be impressive *on their own account*, not because they own all sorts of AIs who are more successful than themselves. Those infomorphs can be good at what they do, but should ultimately be "realistic" (for the most part), making the cinematic heroes look all the better. Furthermore, by taking away the temptation to use Luck on infomorph skill rolls, you make it more likely to be available for the life and death moments when the heroes *really* need it.

Nevertheless, *some* heroes – especially the 2100 versions of hackers, wire rats, and maybe some investigators and wheel men – may legitimately regard their implanted or wearable AI Allies as extensions of their own special abilities. These sorts of characters form very tight teams with their "tail-gunner" and "scanner op" AIs, setting them up to perform tasks that are every bit as central to the adventure as anything that the heroes themselves roll for. To resolve this while being fair to other players, the GM can permit such heroes to buy Luck with a +20% Enhancement: "Can be used by own digital Allies." This means what it says, and the GM can choose to restrict the benefit to NAIs and LAIs running on implanted or wearable cybershells – those Allies who function very much as extensions of the hero's own abilities, not as free-roaming independent aides.

THE CELL PHONE PROBLEM, SQUARED

If you think that TL8 mobile communications causes problems for some types of action scenario (see *Action 2*, p. 9), the pervasive computer networks of the *Transhuman Space* world may seem to make them impossible. Heroes will expect to be permanently on line, not only in communication with each other but with access to a global data resource that makes the TL8 World Wide Web look trivial. Fortunately, there are fixes for this sort of thing.

To begin with, some of the solutions offered in *Action 2* still work, at least some of the time. *Tracking* Web-linked computers is quite a bit harder than tracking TL8 cell phones, but not totally impossible for a sufficiently high-tech opponent or one with the material and legal resources of a national intelligence agency on call. More to the point, the team may have their Web operations tracked as such, which carries its own dangers, as

their research topics and computerized misdemeanors may be subject to examination. *Cutting* Web communications is quite a bit harder in urban areas – networks are pervasive, and closed rooms are mostly designed *not* to be cut off from the Web – but the occasional blackout is still feasible. Plus, in a world of rapid transportation, the adventurers can find themselves on remote islands, under the sea, wandering the Martian wilderness without a satellite uplink, or just out in deep space. What isn't so convincing is trying to claim that all forms of communication have been *broken* – not when anyone might claim to be carrying three or four such devices for casual purposes, and never mind implanted interfaces or communicators. Even so, opponents might set out systematically to disable someone's comms capability.

Beyond that - well, just ride with it. Life in an informationsaturated society is part of what Transhuman Space is all about, and that still applies to Transhuman Action campaigns. A GM who doesn't want to set adventures in deep space or similar places just have to forgo plots based on isolation. Instead, the GM should design the campaign so that the heroes just can't or won't call for massive fire support the moment that they hit trouble. Transhuman Action heroes are supposed to be good at what they do; even if they have permanent employers (not something that's as common in 2100 as in 2010, remember), those employers are likely to respond badly if their wellpaid high-tech agents seem incapable of looking after themselves. Also, things should move fast in the world of Transhuman Space, on all sides; if the opposition has resources in place, the fight should be over long before backup can arrive.

But that's *Transhuman Action* for you: high-powered adventure at the speed of digital thought. That, and looking good in a memswear arachnoweave suit that adjusts automatically to hide the line of your shoulder-holstered micromissile pod, naturally.

ABOUT THE AUTHOR

Phil Masters is the *Transhuman Space* line editor and a long-standing *GURPS* writer, being the author or co-author of books from *GURPS Arabian Nights* to *GURPS Thaumatology*, and of the *Transhuman Space Personnel Files* line. This is his first appearance in the third incarnation of *Pyramid*, although he had a number of articles in both the previous versions.

While other "security" companies in 2100 are more like mercenary forces (and may have more military-grade hardware, including RATS and similar), Martingale pitches for work at the subtler end of the market.

> – Transhuman Space: Personnel Files 4 – Martingale Security

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Pyramid Magazine

42 FEDOROV ROAD by David Pulver

A small multi-resident apartment house, 42 Fedorov Road is located in semi-rural suburb outside an unremarkable Fifth Wave city. The residents are ordinary people by Fifth Wave standards, yet everyone is connected, and they could be – or *become* – an important part of adventurers' lives.

This article provides a glimpse at how Fifth Wave citizens live their lives. Two apartments have been left vacant in the building. Adventurers seeking an apartment might find one of these, gradually learning about their neighbors. It's even possible that PCs might be renting at 42 Fedorov Road already. If the group never bothered to work out where they lived, use this article to flesh out their landlord and neighbors.

No character statistics have been included, since the individuals here are intended primarily as background detail. If they're likely to become active in adventures, or serve as Allies or Dependents, assign them traits appropriate to the campaign's power level.

Some people, including a certain *K*-10, think the local racoons are sapient.

FEDOROV ROAD

This quiet street is in a residential, modestly affluent area. Like many Fifth Wave neighborhoods, it is surrounded by an extensive greenbelt and is heavily wooded. Deer, rabbits, and raccoons are commonly sighted; some of the raccoons are rumored to be sapient (created by a Doolittle Plague outbreak). Most trees are a GMO species that dates from the 2040s: a GenTech Pacifica bioform that converts most of the carbon absorbed from the atmosphere into a stable form and secretes it underground. (The local forestry company taps them for hydrocarbon fuel.) About half a mile down the road is Five Corners, a village cluster with a bar, restaurants, a 3D print shop, and an air-car dealership. The nearest major center is an arcology tower complex four miles away. The road has far fewer cars than you'd see in an early 21stcentury suburb. Pedestrians walk down the middle of the street, safely confident that modern smart cars with collisionavoidance radar won't hit them.

THE HOUSE ON FEDOROV ROAD

The building at 42 Fedorov Road is typical of residential housing on the street. A gravel driveway runs from the roadside for 20 yards into an outdoor gravel parking lot in front of the house. The house itself is an attractive three-story Overturnperiod brick and biocrete design, with a first-floor garage on one side, large windows, and a roof covered in solar panels.

The front lawn borders the driveway on either side, and there is a large back lot. Although there has been no post-office delivery in this area since the 2040s, there's an antique wrought iron mailbox near the driveway that marks the address and serves a bird feeder. There are two garbage cans.

Parked on the grass to one side of the drive is a yellow bus: a 20-year-old fuel-cell design, garishly painted with a faded mural of guitar-and-drum-playing hoplites (four men and two women). Anyone with appropriate musical knowledge may recognize this as a modestly popular Greek Fire band from the 2080s, the Boeotian Boys. The interior of the tour bus is filled with boxes of gardening equipment and seeds, and several crates of solar panels (left over from a renovation job). The bus still works . . . barely (HT 8).

There's a path leading to the back garden. Visitors arriving during early mornings or late evenings will sometimes be met by a curious K-10 dog (see p. 16).

Its first owner was Jose Alvarez, a military veteran (Andes War) and later Biotech Euphrates regional sales manager. Alvarez emigrated to the Moonshadow retirement community in 2075, selling the property to then-27-year old musician Niki Spanos (pp. 14-15). About three years ago, Spanos turned the property into a multi-residential dwelling and began renting it out.(Typical rental for a two-bedroom here is \$2,000 a month, including utilities.) Currently, a half-dozen sapients reside here.

"Quiet" adventures are important in **Transhuman Space**; they allow the players to fully drink in what an amazing place the world is.

This building doesn't have a laundry room; it was omitted because most Fifth Wave clothes are self-cleaning. All secondand third-floor suites have fire escapes by a bathroom or bedroom window.

For maps of the building, see pp. 18-19.

First Floor

All doors are marked with V-tags visible to anyone with an interface.

1. *Front Door.* Opens into the entrance hall. Door has a normal biometric scanlock on it and a speaker that is monitored by the house AI.

2. *Entrance Hall.* A short corridor. At one end, a stairway goes up to second floor. Near the stairs, a door leads to the garage. Another door, near the entrance, is for the ground-floor suite A.

3. Garage Door. Electrically activated. Opens into garage.

4. *Garage*. No cars are here. Instead, Calliope (p. 17) converted this area into a sophisticated mechanical workroom. Workbenches are covered with tools, and auto or cybershell parts are everywhere, carefully marked with V-tags. A door connects to the entrance hall. A hatch under the floor of the back leads to various house machinery. Calliope is often here, busy here working on her mechanical toys.

5. *Suite A.* Mr. Edison Garvey (pp. 15-16) and his dog Kumar occupy this suite; each has a room. Its floor plan is similar to the other suites: The suite door opens into a multipurpose kitchen-living room with a large window and a built-in video wall. At right angles to the main room is a short hall with three doors; one leads to the bathroom while the others each go to a bedroom.

Second Floor

6. *Hallway.* This area has a flight of stairs that go to the entrance hall. The stair well continues upward to the third floor.

7. *Suite B (west side)*. This is presently occupied by blogger Martin Fraser (p. 16-17).

8. *Suite C (east side)*. This suite can be unoccupied, or may be occupied by a PC or another NPC, at the GM's discretion.

9. Suite D (south side). Originally a storage room, this is only a studio apartment rather than the usual two-bedroom suite, and it has no bathroom. It is rented by the lawyer Neo-Averroes (p. 15).

Third Floor

10. *Hallway*. Stairs lead down to the second floor. A ceiling hatch leads to a storage attic and the roof.

11. *Suite D (west side)*. This is unoccupied, or may be filled by whomever the GM wishes to place here to advance a particular adventure.

12. *Suite E (east side)*. This suite is occupied by Niki Spanos and her daughter, Calliope. Neo-Averroes' cyberdoll is a frequent visitor.

RESIDENTS

Several people – not all of them human – live at 42 Fedorov Road.

Niki Spanos

The owner and landlord of 42 Fedorov Road, Niki (age 36) is an Ishtar genetic upgrade, with the delicate elfin beauty common to that gene line. Her parents encouraged her blossoming talent for music, and in the 2080s, she achieved success as the drummer of then-popular (if now largely forgotten) Greek Fire band the Boeotian Boys. After five tempestuous years with the band, Niki decided it was time to settle down. In 2086, she entered a marriage contract with music producer Chuck Stone, and they bought a suburban house on Fedorov Road (at the time, for \$1.2 million) to raise a family.

Niki and Stone were both avowed transhumanists, and she insisted their first child – to be named Calliope – would have all the genetic advantages money could buy. Unfortunately, she bought into the hype surrounding Genehackers Inc. design of the highly advanced Nyx parahuman genetic template. The Nyx design's overambitious cognitive enhancements (such as a reduced sleep state) played havoc with the normally stable Euphrates Ziusudra it was based upon. This was especially true in the very earliest incepts of the Nyx. The result was tragic: Despite nanodrug therapy, 7% of the first generation of Nyx parahumans developed crippling mental disabilities, Calliope among them. Before she was a year old, it was apparent she was a very sick little girl.

The stress was too much for Chuck Stone, who left his family (leaving Niki his share of the house) to become a Christian transhumanist monk. Niki had to raise their handicapped daughter alone. Her participation in a class-action lawsuit launched by several hundred parents against Genehackers failed to win compensation, but led to Niki meeting Neo-Averroes, a SAI-8 lawyer and passionate advocate of transhuman rights. Averroes and Niki are now in a regular relationship, though both also take other lovers.

Most of Niki's investments vanished in legal fees and healthcare costs for Calliope, so to make ends meet, she has converted her home into a multi-resident apartment building. She and her now-teenaged daughter have a suite there, along with several other tenants. Niki takes an interest in her tenants well-being but respects their privacy. She has an eye for handsome men, especially organic ones with musical talent.

When not caring for her troubled daughter or dating Averroes, Niki is active in the community of Nyx parental support groups, and her (faded) celebrity status is occasionally used for fundraising events. She also still plays drums live at various local venues. She is sometimes sought out by Boeotian Boys fans for autographs or interviews. A few fans are less friendly, blaming her as the "harpy" that caused the breakup of the Boys back in '85 through her relationship with Stone (a source of jealousy among other band members). Niki (and Stone) received some death threats over the years from them, and before he left, Stone purchased her an electrolaser-armed buzzbot.

If you need individuals to fill one or both remaining apartments, check out the **Transhuman Space: Personnel Files** series.

However, none of the threats have materialized, and she now ignores them. The buzzbot is mostly assigned to pick up groceries and watch over her daughter.

Niki often visits Extinction Event, a local gastropub at Five Corners, where she occasionally plays live music with a local garage band, the Teratologists. The band's name is an ironic reference to local survivalists, hunters, and alien conspiracy buffs who have showed up here. Over the last five years, there have been a few sightings and videos of unexplained creatures in the woods. It is widely believed that a local cell of teratologist pranksters were active here some years ago, before moving elsewhere. Still, some people believe (or pretend to believe) that the creatures are real and out there.

Niki has received death threats, but none of them have materialized.

Neo-Averroes

Neo-Averroes is a SAI-8 artificial intelligence. Created in 2085, he is actually only 15 years old, but he is considered a full adult under the law. He is a junior partner at Ur-Nammu, Averroes, and Sun – a major law firm. He has E.U. citizenship. His main residence is a mainframe is located in the nearby arcology where his law firm operates a branch office. However, he rents a small suite from Niki in the house, partly to help her out and make it easier to visit her, and partly to store his personal possessions and off-site backups – a precaution that proved prudent when his office was recently burglarized.

The AI is a bit of a playboy: He is a connoisseur, who enjoys poetry, dalliances, and acting the part of the Mediterranean Latin lover. He rents several apartments in different places around the world, maintaining six (rented) cyberdolls (all of them designed as darkly handsome men). He enjoys expensive clothes, uploading into fast cars, and the thrill of romance. He is an excellent multitasker with at least two compartmentalized minds. He presently has three lovers – all beautiful human or parahuman women with at least a modicum of celebrity. He enjoys romance more than sex, and loves to surprise his interests with little gifts, trips overseas, or other minor extravagances.

Neo-Averroes' legal firm has been retained by another AI, and it is one of several legal entities engaged in a complex human-rights lawsuit in support of former Exogenesis employers against Nanodynamics and System Technologies AG. For the last few months, Neo-Averroes' office has been employing investigators and gathering evidence of human-rights abuses by Nanodynamics and the mercenary group EDI. It has crossed his mind that they may have been behind the burglary at his office, although another possibility is a jealous agent or paramour of one of his current or former love interests – at least two of whom are also married, one in a prominent European Union political family. His room is a sumptuously decorated love-nest/study. It also contains his backup microframe (integrated into the bed), offline hardcopy backups of crucial files from his legal library, a state-of-the-art ultra-high-speed cable connection, and an environmentally controlled diamondoid case housing his personal collection of antique handwritten Arabic love poetry. When his mind is busy elsewhere, Neo-Averroes parks his humanoid cyberdoll in a large overstuffed chair. It has a backup NAI-6 program that can run it in emergencies or when Neo-Averroes sends it to accompany Calliope. It also handles basic housekeeping.

Edison Garvey

Edison Garvey (age 26) has recently left home for the first time. His parents were solid middle-class eloi. Both were genefixed humans, but – as is typical of their generation – they arranged to make Edison a genetic upgrade. Edison's parents selected a conservative Alpha template to avoid exactly the problems that plagued Niki's daughter. Edison shares his apartment with his pet: a K-10 dog called Kumar (named after a childhood favorite Bollywood InVid star), who was raised from a puppy his mother gave him when he was six.

Edison is close to Kumar, but even closer to JD, the virtual interface he has had since infancy. Like many Fifth Wave kids, Edison received an education from his AI kindercomp rather than attending formal school. He was not especially creative but wanted to be, so as he grew up, his brain was adjusted via a tailored nootropic regime combined with educational and psychological neural slinkies. Although a bit of a late bloomer, he passed exams that got him into a virtual university when he was 17, where he pursued a double major of politics and climate science. Since most actual science is done by AI, this required education of JD as well - in essence, the playmate and tutor seeded a higher-generation AI who would become his work-partner, the two now functioning symbiotically (with Edison providing creativity and initiative). Like many students, Edison's loans went to pay for his own and JD's upgrades, including the brain booster implants that are common among most serious graduate students.

Today, Edison is still studying, but he and JD are also interning with a major weather-control corporation. This plus a welfare supplement provides enough to pay his rent and the interest on his loans. In a decade or so, he should have them paid off.

Edison has no lover. Until recently he shared his apartment here with his husband, Peter Cowans; the two had met during university, begun living together, and gotten married. Their initial marriage contract was for two years with an option to renew. Peter wanted to start a child in an exowomb using their combined DNA, but Edison, sinking deeper into debt as he pursued advanced studies, didn't want the responsibility or cost. An angry Cowans refused to renew their marriage contract, and they broke up. Edison is now a bachelor again, and somewhat bitter toward humanity, though he remains hopeful he'll find someone eventually. He has a bit of a crush on his elegant upstairs neighbor Neo-Averroes (who isn't human), but the playboy SAI has proved unshakably hetero.

Transhuman Space can make a great possible future for any modern-set campaign. It's a different option than most "possible futures," because it's not dystopian or destroyed! See *Time Travel to 2100* on p. 32 of *Changing Times*.

Edison has three other inexpensive household cybershells and four microbot swarms, most of them ably managed by NAIs and directed by himself, JD, or Kumar.

Edison's apartment is filled with tons of junk. Much of it belongs to Kumar, who is an avid collector of early 20th-century original grocery cans, movie posters, toy robot dogs, and plush dolls. Edison himself follows various fads in clothing and consumer goods, and loves to print the latest items. Most of it he recycles diligently – in terms of political memes, he identifies himself as a mainstream preservationist and a cyberdemocrat. He loves to bicycle and is often seen riding around the neighborhood, accompanied by his Volkspider carryall (he likes to buy from various local organic food and drug providers in the area) with Kumar bounding along beside him, the K-10 nagging him to visit local garage sales to track down more exciting knickknacks.

Today, any given city is usually surrounded by a belt of suburbs, each one a small city on its own.

> – Transhuman Space: Fifth Wave

Kumar

Edison Garvey's K-10 uplifted dog, Kumar spends much of his time out of the apartment. When not dragging Edison or his cybershells to garage sales (he is amazed and delighted at the amount of fascinating junk human civilization produces and throws away), Kumar takes it on himself to ensure the safety and security of the building. He regularly patrols the grounds and neighborhood,. He has become convinced that one of the raccoon gangs that have been making raids on local garbage is led by an illegal Doolittle virus-enhanced uplift. He is presently attempting to convince some of the other uplifted and cyberdogs on his street to organize a posse, or at least a proper neighborhood watch.

Kumar has his own AI implant, a NAI that keeps track of him for Edison and handles various activities, like his routine finances should he go shopping. Like many K-10s, Kumar spends little time in virtuality. He is an avid hunter; with appropriate permits, he occasionally stalks deer when they are in season. He sometimes hangs around at the local bar, listening to humans talk and swapping hunting and alien-survivalist stories. He loves Edison, but sometimes wishes he had an owner who was more adventurous . . .

Martin Fraser

Martin is genefixed human. The oldest person living in the apartment house, he was born in 2042 and is now is 58 years

old. University-educated with multiple undergraduate degrees in military history and lunar geology, he is also a self-taught expert on naval cybernetics. He is now underemployed as a freelance defense analyst, historian, and occasional lecturer for various naval think-tanks and InVid programs.

Martin's main income comes from his anonymous moderating of *Cyber-Squid Forum*, which has become *the* open source for informed discussion and rumor mongering on underwateroptimized combat cybershells and aquatic military biotech. It now attracts significant attention due to the many military public eyes and navwarbloggers that choose to post here. It is supported by defense industry and publication advertising.

Martin's true love, however, is lunar spelunking. He has never been to the moon in the flesh, but belongs to the Cavorite Club. Whenever he can afford to, he enjoys teleoperating cybershells for exploration of lunar lava tubes, mountains, and the like. Due to the short light-speed time lag involved, terrestrial lunar spelunking is a sport that requires considerable skill, and Martin has become an expert.

He is also an avid amateur assembler of model warship kits, for which he has won prizes in competitions (and a section of his forum is devoted to modeling). He works at home and is usually found in his study. Martin is working on *Devils in the Deep Blue Sea*, a popular-interest account on the subject. The microbot tools Martin uses in making his warships have interested teenage neighbor Cally, and they hit it off; the introverted girl has spent some time (parentally supervised by her watchful NAI) helping him, and also borrowing his high-end tool kits for use in her own fantastic constructs.

Martin is in a marriage contract to Jukia Barmasi, age 39, a Kenyan amateur arachnoxenologist, security botboss, and fellow Cavorite whom he met during a club-sponsored lunar lava tube expedition exploring Mare Cognitum. They have been in a relationship for two years. They recently married in a ceremony at the moon's Dreaming City where they and various friends and fellow Cavorites wore Endymion cybershells. Despite this, they have never met "in the flesh." Even so, they recently decided to have children, but since Jukia's career and economic situation (she still lives with her extended family) makes this inconvenient, Martin is growing a child in an exowomb at the local hospital using their shared genetic template. Jukia regularly observes their baby through telepresence, and they both neural-interface with the exowomb's systems to "feel" the child growing. Harry Fraser-Barmasi is now a five-month-old fetus, and, at least to begin with, will live with Martin after he is born.

Martin's apartment is decorated with a restrained elegance, mostly in gray and light blue with spindly carbon-composite furniture. Since Martin works at home, he uses the other bedroom as his study. Glass cases contain models of warships that Martin has assembled. He uses a full set of microbots for painting and delicate work, and he has 3D printer programs for custom assembly of parts. The living room contains a sophisticated VR rig and the controls for the high-res laser com system used to assist his lunar adventures. A large hologram of Earth seen from the surface of the moon dominates one wall.

Campaign: The heroes in a modern setting "wake up" in Transhuman Space, where someone tries to convince them the previous campaign is merely a vivid slink. Later the heroes "wake" up again in the previous campaign. What's real? Is there really life on Mars?

Martin has a NAI-7 virtual interface ("Mr. Bedford") and an LAI-7, "Mahan," who resides in his microframe, assists with his work, and manages his forum affairs when he is otherwise occupied.

Calliope Spanos

Calliope (age 13) is an early model Nyx parahuman. As is increasingly common in the Fifth Wave, she can say with no irony that "her parents are a different species" from her. The Nyx modifications supposed to enhance her intelligence, make her virtually immortal, and give her control of her sleep state succeeded in two of those areas, but failed catastrophically at the latter goal. Originally nearly catatonic and paranoid, drug treatments and neural implants have mitigated this. However, her waking periods are often plagued by bizarre nightmares that shade into paranoia, waking dreams, and unusual synesthesia events (in which she experiences visual imagery as music). The main symptom is a combination of Flashbacks, Paranoia, and Sleepwalker disadvantages. Cally also sleeps for a week at a time, then remains awake for about the same length of time; the few friends her own age that she possesses (most of them online) who know of her condition often call her the Sleeping Beauty.

To treat these problems, Cally lives with an implanted kindercomp virtual interface implant (a NAI-7) that also has nurse and psychology subroutines. It also has authority to keep track of her mental state and shut down her consciousness if she becomes a danger to herself. (Her implant was originally a LAI, but Cally's own interaction with it drove it insane.) Cally is not happy at having a "baby's kindercomp" in her brain, but she recognizes its necessity.

Niki had hoped Calliope would be musical, but while she has learned to play her mother's drums, her main interest is mechanical and literary. She is currently a fan of ghost celebrity author Nova Van Heer. She has a large collection of the Van Heer's steampunk-fantasy stories and the InVids that were made from them. Cally is also active in Clockwork Dreams, a virtuality kingdom that celebrates Van Heer's work. She prefers the "real world" to extensive virtuality interaction, and for the last year, she has been busily using a microbot construction kit to build working models based on the steam-powered "ani-mecha" of Van Heer's stories, such as the Clanking Leviathan and the Top Hat Tank. She has posted videos of her experiments and her mechanical design diary online. Unknown to her, some of her robot toys are being reverse-engineered by a company in nanosocialist Peru, which is marketing them as an uncredited and unlicensed range of Nova Van Heer cybertoys. Lawyers of Nova Van Heer are attempting to find out who was behind this so they can recover royalties . . .

Outside of virtuality, Calliope avoids most social interactions with humans, though she gets along well with AIs. She has a deep bitterness toward her biological father for abandoning her, and she both loves and resents her mother, Niki. She is closest to her mother's lover Averroes and has confided to him that she hopes to become a ghost when she grows up and throw away her brain.

Calliope would be very beautiful, but she is very careless about her personal appearance, usually dressing in overalls and a random download program for her swarmwear cloak that is constantly rearranging in various odd fashions derived from Van Heer's novels. Cally has had few relationships with others her own age, though this is not abnormal. She explores the neighborhood on a small motorscooter, often accompanied by her mother's buzzbot or Averrose's cybershell in NAI mode (when he's not occupying it). Her kindercomp software carefully monitors her relations with others. She recently made an effort to befriend tenant Martin Fraser, mostly so she can borrow his model-building tools for her own machinations. She finds his constant talk about moon rocks and naval matters boring, but she enjoys helping him build model ships.

As part of a lucid-dreaming therapy program, Cally recently started "slogging." She channels her dreams into specific scenarios, recording and (later) posting them as anonymous neural interface recordings on general-interest slinky upload forums. The waking dreams her damaged mind produces have recently attracted some artistic interest, and a group of enthusiasts have been making efforts to locate the "Creepy Sleepy" (as she was nicknamed) in the hope of exploiting her talent as a fantasist.

BACK AND SIDE LAWN

A low post-and-wire fence surrounds the back garden. This garden has a bluegrass lawn, an old dogwood tree, and a Biotech Euphrates "Hesperides IV" pharm-apple gene-enhanced tree. This tree's fruit has improved antioxidant properties (+1 to HT rolls to resist aging effects if taken for an entire year). Niki's former husband Chuck Stone designed this garden; Niki has little interest in it (and gets angry whenever she thinks of him), so it has mostly been abandoned to the devices of automated microbot gardeners.

The garden has a small fishpond that was originally surrounded by a circle of ornamental Cherenkov Shrooms – bluegreen bioluminescent nontoxic toadstools. Niki has not bothered to rein them in, however, and the fungi have spread throughout the garden, which suffuse the garden with an unearthly glow from dusk to dawn.

A triangle of ornamental boulders near the pond contains a golf-ball-sized tunnel leading to a hidden microbot hive. Garden microbots are a pesticide flyer swarm to keep down mosquitoes and other outdoor pests; a defoliator flyer swarm that trims the lawn and foliage; and a cleaning crawler swarm that looks after the exterior of the house. Cleaners are solarpowered; the others are gastrobots that find their own food.

ABOUT THE AUTHOR

David L. Pulver is a Canadian freelance author. An avid SF fan, he began roleplaying in junior high with the newly released **Basic Dungeons & Dragons**. Upon graduating from university, he decided to become a game designer. Since then, David has written over 70 roleplaying game books, and he has worked as a staff writer, editor, and line developer for Steve Jackson Games and Guardians of Order. He is best known for creating **Transhuman Space**, co-authoring the **Big Eyes**, **Small Mouth** anime RPG, and writing countless **GURPS** books, including the **GURPS Basic Set**, Fourth Edition, and the recent **GURPS Spaceships** series.



First Floor

MAPS OF 42 Fedorov Road





MAPS OF 42 FEDOROV ROAD (CONTINUED)

Pyramid Magazine

DARK PLACES OF THE EARTH BY J. EDWARD TREMLETT

Tonight on **Hardline:** It's been two years since the European Union began its controversial program of shutting down instances of so-called bioroid slavery in space, international waters, and no-go zones that no one wants to take responsibility for. However, not even their agents and armadas can be everywhere at once, and it was inevitable that some abuses would escape their notice.

We have a firsthand report tonight of a truly horrifying situation that has been going on for decades – hidden behind dummy corporations, kept quiet with bribes and inside agents, and based on old-fashioned human greed. And you may be shocked to know who's behind it, and why.

Yarwijn Zhang has our exclusive report, live from the scene . . .

Technology does not guarantee morality. Once certain scientific advancements allow people to play god, it is only a matter of time until they do. And not all would-be gods are worthy of the title.

Throughout the worlds of *Transhuman Space* are places where technology has allowed the wrong people to take power for themselves, or over others. The problem goes far beyond the illegal trafficking of bioroids: Every day, amoral bio-engineers and their twisted-but-wealthy clients make clandestine deals to satisfy horrifying needs. Dangerous products are tested on mass-produced victims, evil people gratify themselves on the truly innocent, and in some blackened corner people cackle over the money they're making off it all.

Dark Places of the Earth presents the histories and current activities of a few blighted areas, both on and off world, where modern science has been abused to make money and fulfill dark and dangerous desires. A number of ways for adventurers to get involved in them are provided for each place, and the GM could always use these locations as playthings for PCs in a rather dark campaign.

THE FAIR AMENT (13 EGERIA)

Heaven is 1.696 AU out from Earth – at least for some, and only so long as God is in a good mood that day. If not, it can be Hell.

Claimed in 2038 by Daemia International Ltd., 13 Egeria is a carbonaceous asteroid within the belt, almost 130 miles in diameter. The original settlement plan, started in 2047, was to hollow the center of the asteroid and send it spinning, in order to create a large, gravitational habitat that could be terraformed. Unfortunately, DIL picked the wrong contractors. After the third try wiped out almost all the workers in 2055, they gave it up, deciding the technology just wasn't there. Five years later they sold it to a small start-up called Thebes Prospecting, and promptly went bankrupt due to stiff competition from Tenzan and Vosper-Babbage, plus a mountain of lawsuits.

Thebes Prospecting was a front company for a small cult of super-wealthy, highly intelligent Neo-Pagans. Using biogenetics, nanotechnology, and holography as "magic," they had proclaimed themselves incarnations of the Egyptian gods. However, a god is nothing without a realm to rule, and they decided that 13 Egeria would fit the bill nicely.

In 2065, they finished what DIL had failed at, and had a lovely blank canvas. The cult members' enhanced DNA was blended to create a basis for mass cloning. As their children knitted themselves together in exo-wombs, the kingdom of Thebes was recreated within the habitat by Egyptian-themed cybershells: Temples and houses were constructed, pools were stocked with fish and crocodiles, beasts of the field were set to graze, and fields of grain were laid down.

Once the children were born and raised to near-adulthood, they were brought to believe that they were in the afterlife, here to serve the gods. Each member of the cult took on the guise of one of the pantheon, claiming a number of children. They planned to spend eternity practicing their archaic beliefs, with technology serving as magic, and being endlessly "reborn" into new, biologically perfect bodies.

It would have been a lovely idyll, except that after a few decades, Osiris got tired of sharing power with the others and demanded that he be treated as Pharaoh. His cohorts did not take kindly to this change of corporate vision, and a very brief war broke out in Heaven. Osiris survived by making the cybershells kill and brainpeel his colleagues, turning them into highly controlled ghosts implanted in new bodies.

Of course, the children who saw their parents fight, die, and submit to destructive uploading had to be replaced.

For a tricky plot point, have someone refer to a date using the Martian calendar system (pp. 25-29). "April 6" may seem like months away – but it may be tomorrow!

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A Day at the Fair Ament

There are a couple ways adventurers might enter the Fair Ament. Getting in won't be a problem, since the docking bay's automatic systems still work, and the automatic defenses really don't. However, between the powers of Osiris and the rest of his pantheon, the small army of cybershells, the "children" ready to kill and die for their abusive gods, and failing life support, getting back out again may not be as certain.

• *Emergency:* An automatic distress signal tied to a vital series of machines has activated, now that conditions have deteriorated to this point. The PCs hear the rather vague SOS and are compelled to respond. They may be sending one soon, too.

Osiris did so gently and lovingly, with his own hands – mummifying and entombing them personally as well. As he waited for the new batch to gestate, surrounded by silent cybershells and (possibly untrustworthy) ghosts, Osiris succumbed fully to madness.

Now fully convinced of his godhood, Osiris struck upon a plan to ensure his proper place within the cosmos. A few of the other "gods" had once worked on a (questionable) theory of time travel – it's still far away from realization, but what is time to the immortal? So Osiris ordered the god ghosts to devote every moment of their existence to developing the theory into a working process. He plans to travel back to Ancient Egypt with the others, so they could take their place as the deities of the people of the Nile.

Now Osiris waits for progress, growing more impatient with his fellow gods by the day. His children are fawned over one moment, then slaughtered the next for the smallest mistakes or failing to anticipate his needs. It matters little to him – he can always make more – but as the gods spend all their brainpower trying to make the impossible possible, the maintenance and upkeep of the station and its environment slowly fails around them. Heaven may become a lifeless Hell within the year.

THE TORTURE GARDEN (KOREA BAY)

One of the few surviving Stalinist states left in the world after the Cold War, North Korea was always full of dark secrets. Even today, long after unification, the Torture Garden is one of the best kept.

In the later days of the country, its beloved leader had lost any semblance of sanity, and only the generals were keeping the failed state going. To keep the monster out of their hair, an exclusive "playpen" was made for him on Juhng-Wuhn (Garden) Island, 30 kilometers off the coast at Onchon. There, the leader • *Repossession:* Thebes Prospecting's shell company – supposedly hidden behind several dummy accounts – has just been purchased by another corporation, which makes 13 Egeria theirs, too. As there's been no recent data about what's been going on there, the company is sending out an evaluation team to take possession and determine its worth. Hopefully these bean-counters are armed.

• *Reprisal:* A naval ship got too close to the asteroid and was fired upon by the dying defense array's last gasp. This has led that government to launch a small punitive expedition against 13 Egeria. After its defenses are picked off from a distance, troops will be sent in to secure its occupants and bring them out to discuss punishment and reparations. It will be a very interesting discussion, to say the least.

could satisfy his cruel, childlike urges – inherited from his also less-than-sane father – on political prisoners, disobedient officers, and unfortunate civilians.

When unification happened, the more "embarrassing" aspects of their beloved leader's secret hobbies needed to be flushed away along with the Stalinism. Eager to be entirely rid of the evidence, they sold Garden Island for much-needed reunification funds to the French biogenetic corporation Maison (formerly Blanchemical), which was looking for a quiet place to do their private researches. After the funds were transferred, the island and surrounding waters were quietly handed over, and that was the last time Korea had anything to do with it.

Within five years, Maison had created a circle of small, artificial islands around the original, built new facilities on all of them, and brought in a small army of scientists and workers. In the early, devil-may-care days of biogenetic research and bioroid creation, Maison was a force to be reckoned with – often neck-and-neck with corporations like Biotech Euphrates. Many of their greater successes were realized on Garden Island, and many of their worst mistakes are still buried there.

When the morality of their industry was called into question in the 2090s, Maison abandoned that research and went into other, more acceptable fields – like genotype-targeted biowarfare. Meanwhile, some of the less-repentant Maison biogeneticists bought the facility, hoping to recoup their losses through the lucrative market for custom-order bioroids. They leased out the islands for others' super-secret biological testing, priding themselves on asking no questions of their customers.

As of 2100, eight of the 10 artificial islands have been rented out to those who need a constant stream of bioroids for "private researches." Top-secret weapons researchers, government agencies, and wealthy sadists pay exorbitant fees for the privilege of an unlimited supply from an unquestioning supplier. Thanks to moles in several governments – and a top-of-the-line automatic defense system – the Torture Garden can guarantee their clients' total privacy and security.

Campaign idea: An adventurer's rich relative dies. Among his possessions is a contract for a rented artificial island off the coast of Onchon . . .

Visiting the Torture Garden

Discovering the Torture Garden could be very difficult, unless the heroes get to know someone in a high governmental or corporate office who's grown a conscience or made a horrifying discovery. Getting onshore could also prove very difficult, given the sophistication and deadliness of the islands' weapons array. Once there, they may have a whole new fight on their hands, depending where they land, and who's in charge there.

• *Liberation:* The adventurers are a strike force of European Union GRA agents and Korean military personnel, sent to infiltrate and shut down the Torture Garden. The intel about the defenses is spotty in places; there's no sure way of knowing what they'll find when they get there. They may wish they'd brought more people – and bigger guns.

• *Retaliation:* The party is a kill team assembled by a biotech firm that's tired of losing valuable customers. Their job is simple: Get in there and blow it up. All lives are considered expendable, including the heroes'. But will they hold to the mission perimeters once they see what's there?

• *Revolt:* The bioroids on island five are kept mostly sapient, in order that their owners might run them through dangerous obstacle courses for their twisted amusement disguised as sapience research. It's been several generations in coming, but the plan to end this sadistic "experiment" is about to come around. The heroes must execute the plan and try and escape, not knowing anything about what lies outside, on the other islands. Can they get away, and can they take others with them?

Island number one is held by the Chinese, who have a life lab tracking the long-term effects of biological warfare agents. Number two is rented by Wuzen Inc., which needs to test its bleeding-edge kinetic weapons on living targets. Number three is the home of an insane woman who creates an adult clone of herself every year, uses it as a debased plaything, kills it on the eve of her "rebirth," and creates a sculpture out of its bones.

The list is extensive, with some very surprising names and truly hideous research going on.

THE PROVING GROUND (EMPTY QUARTER, SAUDI ARABIA)

One of the most inhospitable areas on Earth, the Empty Quarter of the Saudi Peninsula (*Rub' al-Khali*) is 250,000 square miles of terrible heat, dry air, and sand dunes. While oil and other forms of biological wealth have been found within its acrid stretches, getting in to retrieve them requires either heavy equipment or several biomods – sometimes both. Now that the Islamic Caliphate has turned it on with solar panels, and declared it off limits, there isn't really much way for international scientists to go there anymore.

They might not like what they'd find.

In the center of the Empty Quarter, hidden beneath the sands, is an arcology that has been there since the earliest days of the Caliphate. It was originally built as a shelter for the Caliph and his cohorts, should some horrible war or plague befall the kingdom. Eventually better shelters were constructed closer to Medina, leaving the carefully balanced environment of the arcology to sit vacant.

Someone within the darker side of the Caliphate's military wondered – why waste a perfectly good, self-sustaining environment with advanced purification technology? The wars of the future were going to be fought with unconventional weapons: nano-plagues, microbots, toxic memes, and other, stranger things. It stood to reason that the empire with the best and deadliest toys would be the survivor, and the Caliphate should be it.

In that light, the arcology was an excellent place to test out new forms of warfare in secrecy and security. Their military scientists just needed some "real" targets for the best testing results, so they set about getting them. Now political prisoners, Iranian soldiers, unrepentant dissidents, bioroids taken from the ports or the Floating Market (see p. 23), and other "disposables" from their jails and lockups are shipped off to the Empty Quarter to await their turn in the dome.

The Empty Quarter is filled with terrible heat, terrible sand, and terrible deeds.

What happens in the Proving Ground depends on what kind of test the military are doing. Sometimes the researchers reprogram an entire community of bioroids to think they're long-term residents, then see how they react when clouds of toxin float in. Sometimes they throw fully sapient prisoners into an already-tainted situation just to see if they can fulfill certain objectives without succumbing to it themselves. Sometimes they set half of the test subjects against the others, just to see who wins and who dies.

"Fortunately," no matter how awful and terrible the carnage they create, it's all flushed out of existence with the push of a few buttons. Only the extensive records remain, as dark testament of how far people will go to find out the unthinkable.

For further inspiration for horrific constructs, check out GURPS Aliens, Fantasy Folk, Space Bestiary, etc. None of these are native to the Transhuman Space setting, but a madman could easily have fabricated any of them as bioroids!

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Evidence of the Proving Ground

Only the highest levels of the Islamic Caliphate know about this arcology, and only the guards and scientists – and victims – have firsthand knowledge about what goes on there. That's not to say that the information couldn't be found out through heavy-duty spying, but it will take some doing to find the location of the Proving Ground. It's not well-defended outside, perhaps out of arrogance, but there are a lot of troops stationed there to deal with riots and insurrections among prisoners . . . and the scientists have many *terrible* weapons to use on unwanted guests. If the raid goes badly, there's always the desert outside the arcology's walls, ready to swallow up those who underestimated the job.

• *Reconnaissance:* A few global intelligence agencies know the Proving Ground exists, but they do not know the full scope and scale of the operation. One sends in a clandestine team to investigate. Getting in proves easy, but sneaking around the arcology's outer ring doesn't, and

getting caught will be murder. What happens if they're inside the sealed environment when a test goes off?

• *Out of Control:* After years of engineering supremely dangerous tests, the proving ground's scientists have finally made something so bad that even *they* can't clean it up. By the time the heroes are alerted to the problem, the artificial monster's about to get out of the sealed environment and strike the outer ring. Can they clamp down this horror, or learn how to deactivate it . . . or will another horrible plague race across the face of the earth?

• *A Test:* The PCs are preprogrammed bioroids. As far as they know, they've lived within the arcology their entire lives, and have a good existence. Then comes the day of the flesh-eating nano-cloud, and the strange, bio-suited men who follow after to take measurements of the dead, shooting and burning the survivors. Can they fight back or escape? What will they do when they discover what's really been going on, and what lies outside their false world?

THE FLOATING MARKET (DUBAI, UAE)

Twelve miles off the coast of Dubai, in the nowhere-land between maritime law and the rules of the Islamic Caliphate, there is a place where anything – and anyone – can be bought or sold, often in plain sight.

The logical extension of Dubai's many artificial island projects, the Floating Market is a shopping mall that allows for maximum freedom and minimum oversight. It resembles a massive ice-cube tray, with canals big enough for even the largest of cruise ships to pass through and dock alongside. The markets are bustling, the hotels are always full, and every night a different light show is shot up into the sky – visible from all over the Persian Gulf, like a light to moths.

However, Persian rugs, fabulous jewelry, and other handmade crafts aren't the only exotic wares for sale. Thanks to a previous iteration of the highly sophisticated stealth technology that has allowed Dubai to become the Caliphate's center of clandestine diplomacy, those with something less than legal to sell can do their negotiating and purchasing right out in the open, without anyone nearby realizing what's going on.

It's estimated that two-thirds of the world's illegal bioroid trade makes a stop-off in the Floating Market at some point, with billions of dollars worth of business at stake. The Caliphate military's black science division is often out there, either purchasing bioroids outright for use in the Proving Ground, or pretending to break up sales so they can take the spoils for their own use.

Attempts to get the Caliphate's law enforcement to control the situation seem destined to fail. Due to the strange, half-in and half-out complexities of the Floating Market, it's hard to know who to charge with what crime, and by whose authority. On those brief occasions when bioroid smugglers actually get caught, they stand a good chance of walking away due to one piece of red tape or another. The European Union is considering finding some way to deal with the situation, but will have to tread carefully to avoid provoking the Caliphate.

No Limit Adventures (Prague, Czech Republic)

Ever wanted to be the star of your own horror movie, from the killer's point of view? Slinkies can provide such a first person "adventure," but the drawback is that, no matter how real it seems, the experience happened to someone else first. But No Limit Adventures makes it possible to do horrible things for *real*, without consequence.

Toward the end of the second age of sail, Czech entrepreneur Jan Pohanka foresaw his family's aerospace company as a guided gateway to the stars, taking the well-to-do on tours of the planets with all the high-end luxury of a cruise liner. Unfortunately, while he got an impressive list of potential customers, the numbers never quite crunched in his favor. All that No Limit Adventures had to show for itself by the time of his untimely death was a small fleet of private aircraft, an unfinished asteroid habitat, two small South Pacific islands, and a flagship that was obsolete before it was even completed.

Fortunately for the company, his son, Janos, had a different vision. A frequent visitor to Prague's infamous torture museum and a massive fan of classic horror slinkies, he asked himself how much someone would pay to be the killer in a slasher film.

Evil adventure idea: An antagonist manages to acquire DNA of the heroes' loved ones, using this information to create bioroids for a nefarious purpose. Even if they learn of the plot, can the PCs kill someone who looks and sounds like a wife/husband/mother/father/child?

Pyramid Magazine

Adventuring With No Limit

The European Union knows all about No Limit Adventures, but they haven't squashed it yet for two important reasons. First, they're horribly embarrassed that this operation has gone on for as long as it has. Second, a number of very important and influential people – including a couple well-placed E.U. ministers – are frequent customers. The E.U. has to be very careful in setting up the counter-operation, but officials are confident that – once the green light is given – the poorly guarded facilities and questionably secured aerospace properties will be easily dealt with.

• *Island of the Damned:* The heroes are the last survivors from a plane that went down in the South Pacific. They think they're okay when they find the small island, but soon wonder what's going on: Why is there a small, Midwestern town with a summer camp on the island, and why don't the townspeople there know where they are? While they're puzzling over that, one of No Limit Adventure's clients arrives, and the sickening murders begin . . .

After he realized how much he could charge to let some wealthy freak slaughter pre-programmed bioroids on one of the private islands, the numbers started crunching very nicely – especially since dad's company had the "victims" all ready to go.

Now, 20 years into primary operations, No Limit Adventures is doing very well. Their rich and debased clientele can be picked up from their homes, taken to remote locations, and allowed a certain amount of time to experience the homicidal "mission" of their choice. When they're done, they can shower and relax before coming back to reality without anyone knowing what they did.

The scenarios can be simple or complex. The clients can kill one person or many. They can bump off a copy of an enemy or pick off unknown strangers at random. They can mow down soldiers at war, stalk and slaughter camp counselors, or destroy entire towns. No Limit Adventures provides a choice of weapons, variable programming on the bioroids (from "cannon-fodder" to "deadliest game"), and various cost packages. They also provide a 15% discount if the customer agrees to wear a remote upslink so they can record the mission for promotional purposes (and sell the "snuffie" on the black market).

Recently, the company has added on "travel plans." Now, when they pick up their customers, the ride *is* the mission: kill the hostesses on a private jet, deep-six the passengers on a shuttle, or creep down the beehives of the space station with • *Entrapment:* No Limit Adventures must be destroyed, and the adventurers must make it happen. They represent a small group from the intelligence agencies and police of the European Union, and they have been ordered to gather as much information about the company and its clients as they can. The plan is to get someone on the client list and sting Pohanka in the act. They must move carefully, lest they tip their hand to the company's customers within the E.U.

• *Awakenings:* The party is attending a historic movie theater, working during the midnight premiere of the latest high-end slasher movie – one shot entirely from the killer's point of view. As the movie goes on and other attendants and members of the audience start vanishing mysteriously, the PCs discover they can't leave or call for help and realize they're locked in their own horror movie. After a key scare, they also realize – thanks to shoddy, last-minute programming – that they're all bioroids, programmed for various roles within a murder game. Can they overcome their programming and kill their would-be killer? Or is this movie's end a forgone conclusion?

death in mind. Safety is not guaranteed in mobile environments, so these excursions are only for those with situationrelevant experience. However, the higher fee more than makes up for the relative scarcity of clients.

Ironically, No Limit Adventure's own neighbors are now their worst enemy. The European Union's hard stance against bioroid abuse is making the company more selective about its clientele and more careful about its operations. Some of their bioroid suppliers have been taken down, forcing NLA to rely on less-dependable suppliers. It's only a matter of time before someone stumbles across one of their island retreats, or wonders about the erratic flight plan of a doomed private plane. Janos isn't worried; he has numerous bolt-holes ready to jump into, millions socked away, and no conscience whatsoever.

ABOUT THE AUTHOR

By day an unassuming bookstore clerk, J. Edward Tremlett takes his ancient keyboard from its hiding place and unfurls his words upon the world. His bizarre lifestyle has taken him to such exotic locales as South Korea and Dubai, UAE. He's been the editor of *The Wraith Project* and has seen print in *The End Is Nigh* and *Worlds of Cthulhu*. He's also part of the *Echoes of Terror* anthology. Currently, he writes for Op-Ed News, and lives in Lansing, Michigan, with his wife and three cats.

These creatures you have seen are animals carven and wrought into new shapes. To that, to the study of the plasticity of living forms, my life has been devoted. I have studied for years, gaining in knowledge as I go.

– Doctor Moreau, **The Island of Doctor Moreau** (book)

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EARTH-MARS CALENDAR

Campaigns that involve a lot of interactions between Mars and Earth may find it useful to keep track of how the days align between the two. Here, then, is a calendar covering the first two Earth years, next to their corresponding Martian days. Because Martian sols doesn't directly line up with Earthly days, the calendar skips 1 in 36 days. For more information about the Martian calendar, see *In the Well* (p. 31).

When printed out, this calendar can be marked with a highlighter (or with checks next to the dates) to indicate holidays and important events; notes can also be written at the bottom.

Earth	Mars	Earth	Mars	Earth	Mars
September 13, 2099	January 1, m0039	October 20, 2099	Virgo 9, m0039	November 26, 2099	February 17, m0039
September 14, 2099	January 2, m0039	October 21, 2099	Virgo 10, m0039	November 27, 2099	February 18, m0039
September 15, 2099	January 3, m0039	October 22, 2099	Virgo 11, m0039	November 28, 2099	February 19, m0039
September 16, 2099	January 4, m0039	October 23, 2099	Virgo 12, m0039	November 29, 2099	February 20, m0039
September 17, 2099	January 5, m0039	October 24, 2099	Virgo 13, m0039	November 30, 2099	February 21, m0039
September 18, 2099	January 6, m0039	October 25, 2099	Virgo 14, m0039	December 1, 2099	February 22, m0039
September 19, 2099	January 7, m0039	October 26, 2099	Virgo 15, m0039	December 2, 2099	February 23, m0039
September 20, 2099	January 8, m0039	October 27, 2099	Virgo 16, m0039	December 3, 2099	February 24, m0039
September 21, 2099	January 9, m0039	October 28, 2099	Virgo 17, m0039	December 4, 2099	February 25, m0039
September 22, 2099	January 10, m0039	October 29, 2099	Virgo 18, m0039	December 5, 2099	February 26, m0039
September 23, 2099	January 11, m0039	October 30, 2099	Virgo 19, m0039	December 6, 2099	February 27, m0039
September 24, 2099	January 12, m0039	October 31, 2099	Virgo 20, m0039	December 7, 2099	February 28, m0039
September 25, 2099	January 13, m0039	November 1, 2099	Virgo 21, m0039	December 8, 2099	Libra 1, m0039
September 26, 2099	January 14, m0039	November 2, 2099	Virgo 22, m0039	December 9, 2099	Libra 2, m0039
September 27, 2099	January 15, m0039	November 3, 2099	Virgo 23, m0039	December 10, 2099	Libra 3, m0039
September 28, 2099	January 16, m0039	November 4, 2099	Virgo 24, m0039	December 11, 2099	Libra 4, m0039
September 29, 2099	January 17, m0039	November 5, 2099	Virgo 25, m0039	December 12, 2099	Libra 5, m0039
September 30, 2099	January 18, m0039	November 6, 2099	Virgo 26, m0039	December 13, 2099	Libra 6, m0039
October 1, 2099	January 19, m0039	November 7, 2099	Virgo 27, m0039	December 14, 2099	Libra 7, m0039
October 2, 2099	January 20, m0039	November 8, 2099	Virgo 28, m0039	December 15, 2099	Libra 8, m0039
October 3, 2099	January 21, m0039	November 9, 2099	February 1, m0039	December 16, 2099	Libra 9, m0039
October 4, 2099	January 22, m0039	November 10, 2099	February 2, m0039	December 17, 2099	Libra 10, m0039
October 5, 2099	January 23, m0039	November 11, 2099	February 3, m0039	December 18, 2099	Libra 11, m0039
October 6, 2099	January 24, m0039	November 12, 2099	February 4, m0039	December 19, 2099	Libra 12, m0039
October 7, 2099	January 25, m0039	November 13, 2099	February 5, m0039	December 20, 2099	Libra 13, m0039
October 8, 2099	January 26, m0039	November 14, 2099	February 6, m0039	December 21, 2099	Libra 14, m0039
October 9, 2099	January 27, m0039	November 15, 2099	February 7, m0039	December 22, 2099	Libra 15, m0039
October 10, 2099	January 28, m0039	November 16, 2099	February 8, m0039	December 23, 2099	Libra 16, m0039
October 11, 2099	Virgo 1, m0039	November 17, 2099	February 9, m0039	December 24, 2099	Libra 17, m0039
October 12, 2099	Virgo 2, m0039	November 18, 2099	February 10, m0039	December 25, 2099	Libra 18, m0039
October 13, 2099	Virgo 3, m0039	November 19, 2099	February 11, m0039	December 26, 2099	Libra 19, m0039
October 14, 2099	Virgo 4, m0039	November 20, 2099	February 12, m0039	December 27, 2099	Libra 20, m0039
October 15, 2099	Virgo 5, m0039	November 21, 2099	February 13, m0039	December 28, 2099	Libra 21, m0039
October 16, 2099	Virgo 6, m0039	November 22, 2099	February 14, m0039	December 29, 2099	Libra 22, m0039
October 17, 2099	Virgo 7, m0039	November 23, 2099	February 15, m0039	December 30, 2099	Libra 23, m0039
October 18, 2099	Virgo 8, m0039	November 24, 2099	February 16, m0039	December 31, 2099	Libra 24, m0039
October 19, 2099		November 25, 2099		January 1, 2100	
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Notes:					

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Earth	Mars	Earth	Mars	Earth	Mars
January 2, 2100	Libra 25, m0039	March 4, 2100	April 2, m0039	May 4, 2100	May 5, m0039
January 3, 2100	Libra 26, m0039	March 5, 2100	April 3, m0039	May 5, 2100	May 6, m0039
January 4, 2100	Libra 27, m0039	March 6, 2100	April 4, m0039	May 6, 2100	May 7, m0039
January 5, 2100	Libra 28, m0039	March 7, 2100	April 5, m0039	May 7, 2100	May 8, m0039
January 6, 2100	March 1, m0039	March 8, 2100	April 6, m0039	May 8, 2100	May 9, m0039
January 7, 2100	March 2, m0039	March 9, 2100	April 7, m0039	May 9, 2100	May 10, m0039
January 8, 2100	March 3, m0039	March 10, 2100	April 8, m0039	May 10, 2100	May 11, m0039
January 9, 2100	March 4, m0039	March 11, 2100	April 9, m0039	May 11, 2100	May 12, m0039
January 10, 2100	March 5, m0039	March 12, 2100	April 10, m0039	May 12, 2100	May 13, m0039
January 11, 2100	March 6, m0039	March 13, 2100	April 11, m0039	May 13, 2100	May 14, m0039
January 12, 2100	March 7, m0039	March 14, 2100	April 12, m0039	May 14, 2100	May 15, m0039
January 13, 2100	March 8, m0039	March 15, 2100	April 13, m0039	May 15, 2100	May 16, m0039
January 14, 2100	March 9, m0039	March 16, 2100		May 16, 2100	May 17, m0039
January 15, 2100	March 10, m0039	March 17, 2100	April 14, m0039	May 17, 2100	May 18, m0039
January 16, 2100	March 11, m0039	March 18, 2100	April 15, m0039	May 18, 2100	May 19, m0039
January 17, 2100	March 12, m0039	March 19, 2100	April 16, m0039	May 19, 2100	May 20, m0039
January 18, 2100	March 13, m0039	March 20, 2100	April 17, m0039	May 20, 2100	May 21, m0039
January 19, 2100	March 14, m0039	March 21, 2100	April 18, m0039	May 21, 2100	May 22, m0039
January 20, 2100	March 15, m0039	March 22, 2100	April 19, m0039	May 22, 2100	May 23, m0039
January 21, 2100	March 16, m0039	March 23, 2100	April 20, m0039	May 23, 2100	May 24, m0039
January 22, 2100	March 17, m0039	March 24, 2100	April 21, m0039	May 24, 2100	May 25, m0039
January 23, 2100	March 18, m0039	March 25, 2100	April 22, m0039	May 25, 2100	May 26, m0039
January 24, 2100	March 19, m0039	March 26, 2100	April 23, m0039	May 26, 2100	May 27, m0039
January 25, 2100	March 20, m0039	March 27, 2100	April 24, m0039	May 27, 2100	May 28, m0039
January 26, 2100	March 21, m0039	March 28, 2100	April 25, m0039	May 28, 2100	Capricornus 1, m0039
January 27, 2100	March 22, m0039	March 29, 2100	April 26, m0039	May 29, 2100	
January 28, 2100	March 23, m0039	March 30, 2100	April 27, m0039	May 30, 2100	Capricornus 2, m0039
January 29, 2100	March 24, m0039	March 31, 2100	April 28, m0039	May 31, 2100	Capricornus 3, m0039
January 30, 2100	March 25, m0039	April 1, 2100	Sagittarius 1, m0039	June 1, 2100	Capricornus 4, m0039
January 31, 2100	March 26, m0039	April 2, 2100	Sagittarius 2, m0039	June 2, 2100	Capricornus 5, m0039
February 1, 2100	March 27, m0039	April 3, 2100	Sagittarius 3, m0039	June 3, 2100	Capricornus 6, m0039
February 2, 2100	March 28, m0039	April 4, 2100	Sagittarius 4, m0039	June 4, 2100	Capricornus 7, m0039
February 3, 2100	Scorpius 1, m0039	April 5, 2100	Sagittarius 5, m0039	June 5, 2100	Capricornus 8, m0039
February 4, 2100	Scorpius 2, m0039	April 6, 2100	Sagittarius 6, m0039	June 6, 2100	Capricornus 9, m0039
February 5, 2100	Scorpius 3, m0039	April 7, 2100	Sagittarius 7, m0039	June 7, 2100	Capricornus 10, m0039
February 6, 2100	Scorpius 4, m0039	April 8, 2100	Sagittarius 8, m0039	June 8, 2100	Capricornus 11, m0039
February 7, 2100		April 9, 2100	Sagittarius 9, m0039	June 9, 2100	Capricornus 12, m0039
February 8, 2100	Scorpius 5, m0039	April 10, 2100	Sagittarius 10, m0039	June 10, 2100	Capricornus 13, m0039
February 9, 2100	Scorpius 6, m0039	April 11, 2100	Sagittarius 11, m0039	June 11, 2100	Capricornus 14, m0039
February 10, 2100	Scorpius 7, m0039	April 12, 2100	Sagittarius 12, m0039	June 12, 2100	Capricornus 15, m0039
February 11, 2100	Scorpius 8, m0039	April 13, 2100	Sagittarius 13, m0039	June 13, 2100	Capricornus 16, m0039
February 12, 2100	Scorpius 9, m0039	April 14, 2100	Sagittarius 14, m0039	June 14, 2100	Capricornus 17, m0039
February 13, 2100	Scorpius 10, m0039	April 15, 2100	Sagittarius 15, m0039	June 15, 2100	Capricornus 18, m0039
February 14, 2100	Scorpius 11, m0039	April 16, 2100	Sagittarius 16, m0039	June 16, 2100	Capricornus 19, m0039
February 15, 2100	Scorpius 12, m0039	April 17, 2100	Sagittarius 17, m0039	June 17, 2100	Capricornus 20, m0039
February 16, 2100	Scorpius 13, m0039	April 18, 2100	Sagittarius 18, m0039	June 18, 2100	Capricornus 21, m0039
February 17, 2100	Scorpius 14, m0039	April 19, 2100	Sagittarius 19, m0039	June 19, 2100	Capricornus 22, m0039
February 18, 2100	Scorpius 15, m0039	April 20, 2100	Sagittarius 20, m0039	June 20, 2100	Capricornus 23, m0039
February 19, 2100	Scorpius 16, m0039	April 21, 2100	Sagittarius 21, m0039	June 21, 2100	Capricornus 24, m0039
February 20, 2100	Scorpius 17, m0039	April 22, 2100		June 22, 2100	Capricornus 25, m0039
February 21, 2100	Scorpius 18, m0039	April 23, 2100	Sagittarius 22, m0039	June 23, 2100	Capricornus 26, m0039
February 22, 2100	Scorpius 19, m0039	April 24, 2100	Sagittarius 23, m0039	June 24, 2100	Capricornus 27, m0039
February 23, 2100	Scorpius 20, m0039	April 25, 2100	Sagittarius 24, m0039	June 25, 2100	Capricornus 28, m0039
February 24, 2100	Scorpius 21, m0039	April 26, 2100	Sagittarius 25, m0039	June 26, 2100	June 1, m0039
February 25, 2100	Scorpius 22, m0039	April 27, 2100	Sagittarius 26, m0039	June 27, 2100	June 2, m0039
February 26, 2100	Scorpius 23, m0039	April 28, 2100	Sagittarius 27, m0039	June 28, 2100	June 3, m0039
February 27, 2100	Scorpius 24, m0039	April 29, 2100	Sagittarius 28, m0039	June 29, 2100	June 4, m0039
February 28, 2100	Scorpius 25, m0039	April 30, 2100	May 1, m0039	June 30, 2100	June 5, m0039
March 1, 2100	Scorpius 26, m0039	May 1, 2100	May 2, m0039	July 1, 2100	June 6, m0039
March 2, 2100	Scorpius 27, m0039	May 2, 2100	May 3, m0039	July 2, 2100	June 7, m0039
March 3, 2100	April 1, m0039	May 3, 2100	May 4, m0039	July 3, 2100	June 8, m0039

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Earth	Mars	Earth	Mars	Earth	Mars
July 4, 2100	June 9, m0039	September 3, 2100	July 13, m0039	November 3, 2100	August 16, m0039
July 5, 2100		September 4, 2100	July 14, m0039	November 4, 2100	August 17, m0039
July 6, 2100	June 10, m0039	September 5, 2100	July 15, m0039	November 5, 2100	August 18, m0039
July 7, 2100	June 11, m0039	September 6, 2100	July 16, m0039	November 6, 2100	August 19, m0039
July 8, 2100	June 12, m0039	September 7, 2100	July 17, m0039	November 7, 2100	August 20, m0039
July 9, 2100	June 13, m0039	September 8, 2100	July 18, m0039	November 8, 2100	August 21, m0039
July 10, 2100	June 14, m0039	September 9, 2100	July 19, m0039	November 9, 2100	August 22, m0039
July 11, 2100	June 15, m0039	September 10, 2100	July 20, m0039	November 10, 2100	August 23, m0039
July 12, 2100	June 16, m0039	September 11, 2100	July 21, m0039	November 11, 2100	August 24, m0039
July 13, 2100	June 17, m0039	September 12, 2100	July 22, m0039	November 12, 2100	August 25, m0039
July 14, 2100	June 18, m0039	September 13, 2100	July 23, m0039	November 13, 2100	August 26, m0039
July 15, 2100	June 19, m0039	September 14, 2100	July 24, m0039	November 14, 2100	August 27, m0039
July 16, 2100	June 20, m0039	September 15, 2100	July 25, m0039	November 15, 2100	August 28, m0039
July 17, 2100	June 21, m0039	September 16, 2100	July 26, m0039	November 16, 2100	Ares 1, m0039
July 18, 2100	June 22, m0039	September 17, 2100		November 17, 2100	Ares 2, m0039
July 19, 2100	June 23, m0039	September 18, 2100	July 27, m0039	November 18, 2100	Ares 3, m0039
July 20, 2100	June 24, m0039	September 19, 2100	July 28, m0039	November 19, 2100	Ares 4, m0039
July 21, 2100	June 25, m0039	September 20, 2100	Pisces 1, m0039	November 20, 2100	Ares 5, m0039
July 22, 2100	June 26, m0039	September 21, 2100	Pisces 2, m0039	November 21, 2100	Ares 6, m0039
July 23, 2100	June 27, m0039	September 22, 2100	Pisces 3, m0039	November 22, 2100	Ares 7, m0039
July 24, 2100	June 28, m0039	September 23, 2100	Pisces 4, m0039	November 23, 2100	Ares 8, m0039
July 25, 2100	Aquarius 1, m0039	September 24, 2100	Pisces 5, m0039	November 24, 2100	Ares 9, m0039
July 26, 2100	Aquarius 2, m0039	September 25, 2100	Pisces 6, m0039	November 25, 2100	Ares 10, m0039
July 27, 2100	Aquarius 3, m0039	September 26, 2100	Pisces 7, m0039	November 26, 2100	Ares 11, m0039
July 28, 2100	Aquarius 4, m0039	September 27, 2100	Pisces 8, m0039	November 27, 2100	Ares 12, m0039
July 29, 2100	Aquarius 5, m0039	September 28, 2100	Pisces 9, m0039	November 28, 2100	Ares 13, m0039
July 30, 2100	Aquarius 6, m0039	September 29, 2100	Pisces 10, m0039	November 29, 2100	Ares 14, m0039
July 31, 2100	Aquarius 7, m0039	September 30, 2100	Pisces 11, m0039	November 30, 2100	15 0020
August 1, 2100	Aquarius 8, m0039	October 1, 2100	Pisces 12, m0039	December 1, 2100	Ares 15, m0039
August 2, 2100	Aquarius 9, m0039	October 2, 2100	Pisces 13, m0039	December 2, 2100	Ares 16, m0039
August 3, 2100	Aquarius 10, m0039	October 3, 2100	Pisces 14, m0039	December 3, 2100	Ares 17, m0039
August 4, 2100	Aquarius 11, m0039	October 4, 2100	Pisces 15, m0039	December 4, 2100	Ares 18, m0039
August 5, 2100	Aquarius 12, m0039	October 5, 2100	Pisces 16, m0039	December 5, 2100	Ares 19, m0039
August 6, 2100	Aquarius 13, m0039	October 6, 2100	Pisces 17, m0039	December 6, 2100	Ares 20, m0039
August 7, 2100	Aquarius 14, m0039	October 7, 2100	Pisces 18, m0039	December 7, 2100	Ares 21, m0039
August 8, 2100	Aquarius 15, m0039	October 8, 2100	Pisces 19, m0039	December 8, 2100	Ares 22, m0039
August 9, 2100	Aquarius 16, m0039	October 9, 2100	Pisces 20, m0039	December 9, 2100	Ares 23, m0039
August 10, 2100	Aquarius 17, 110039	October 10, 2100	Pisces 22, m0039	December 10, 2100	Ares 24, 1110039
August 11, 2100	$\Lambda_{\rm cuparius}$ 18 m0020	October 11, 2100	Pisces 22, 1110039	December 11, 2100	Ares 25, 1110039
August 12, 2100	Aquarius 10, m0039	October 13, 2100	Pisces 24, m0039	December 12, 2100	Ares 27, $m0039$
August 13, 2100	Aquarius 20, m0039	October 14, 2100	Pisces 25, m0039	December 14, 2100	Ares 28 $m0039$
August 14, 2100	Aquarius 20, m0039	October 15, 2100	Pisces 26, m0039	December 15, 2100	September 1 m0039
August 16, 2100	Aquarius 22, $m0039$	October 16, 2100	Pisces 27 m0039	December 16, 2100	September 2 m0039
August 17, 2100	Aquarius 23, m0039	October 17, 2100	Pisces 28 m0039	December 17, 2100	September 3, m0039
August 18, 2100	Aquarius 24 m0039	October 18, 2100	August 1 m0039	December 18, 2100	September 4, m0039
August 19, 2100	Aquarius 25 m0039	October 19, 2100	August 2 m0039	December 19, 2100	September 5 m0039
August 20, 2100	Aquarius 26, m0039	October 20, 2100	August 3 m0039	December 20, 2100	September 6, m0039
August 21, 2100	Aquarius 27 m0039	October 21, 2100	August 4 m0039	December 21, 2100	September 7, m0039
August 22, 2100	July 1, m0039	October 22, 2100	August 5, m0039	December 22, 2100	September 8, m0039
August 23, 2100	July 2, m0039	October 23, 2100	August 6, m0039	December 23, 2100	September 9, m0039
August 24, 2100	July 3 m0039	October 24, 2100	hugust o, moosy	December 24, 2100	September 10 m0039
August 25, 2100	July 4, m0039	October 25, 2100	August 7, $m0039$	December 25, 2100	September 10, m0039
August 26, 2100	July 5 m0039	October 26, 2100	August 8, m0039	December 26, 2100	September 12, m0039
August 27, 2100	July 6, m0039	October 27, 2100	August 9, m0039	December 27, 2100	September 13, m0039
August 28, 2100	July 7, m0039	October 28, 2100	August 10. m0039	December 28, 2100	September 14, m0039
August 29. 2100	July 8, m0039	October 29. 2100	August 11, m0039	December 29, 2100	September 15, m0039
August 30, 2100	July 9. m0039	October 30. 2100	August 12, m0039	December 30, 2100	September 16, m0039
August 31, 2100	July 10, m0039	October 31. 2100	August 13, m0039	December 31, 2100	September 17. m0039
September 1, 2100	July 11, m0039	November 1, 2100	August 14, m0039	January 1, 2101	September 18, m0039
September 2, 2100	July 12, m0039	November 2, 2100	August 15, m0039	January 2, 2101	September 19, m0039
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Earth	Mars	Earth	Mars	Earth	Mars
January 3, 2101	September 20, m0039	March 5, 2101	October 24, m0039	May 5, 2101	November 27, m0039
January 4, 2101	September 21, m0039	March 6, 2101	October 25, m0039	May 6, 2101	November 28, m0039
January 5, 2101	September 22, m0039	March 7, 2101	October 26, m0039	May 7, 2101	Cancer 1, m0039
January 6, 2101		March 8, 2101	October 27, m0039	May 8, 2101	Cancer 2, m0039
January 7, 2101	September 23, m0039	March 9, 2101	October 28, m0039	May 9, 2101	Cancer 3, m0039
January 8, 2101	September 24, m0039	March 10, 2101	Gemini 1, m0039	May 10, 2101	Cancer 4, m0039
January 9, 2101	September 25, m0039	March 11, 2101	Gemini 2, m0039	May 11, 2101	Cancer 5, m0039
January 10, 2101	September 26, m0039	March 12, 2101	Gemini 3, m0039	May 12, 2101	Cancer 6, m0039
January 11, 2101	September 27, m0039	March 13, 2101	Gemini 4, m0039	May 13, 2101	Cancer 7, m0039
January 12, 2101	September 28, m0039	March 14, 2101	Gemini 5, m0039	May 14, 2101	Cancer 8, m0039
January 13, 2101	Taurus 1, m0039	March 15, 2101	Gemini 6, m0039	May 15, 2101	Cancer 9, m0039
January 14, 2101	Taurus 2, m0039	March 16, 2101	Gemini 7, m0039	May 16, 2101	Cancer 10, m0039
January 15, 2101	Taurus 3, m0039	March 17, 2101	Gemini 8, m0039	May 17, 2101	Cancer 11, m0039
January 16, 2101	Taurus 4, m0039	March 18, 2101	Gemini 9, m0039	May 18, 2101	Cancer 12, m0039
January 17, 2101	Taurus 5, m0039	March 19, 2101	Gemini 10, m0039	May 19, 2101	Cancer 13, m0039
January 18, 2101	Taurus 6, m0039	March 20, 2101	Gemini 11, m0039	May 20, 2101	Cancer 14, m0039
January 19, 2101	Taurus 7, m0039	March 21, 2101		May 21, 2101	Cancer 15, m0039
January 20, 2101	Taurus 8, m0039	March 22, 2101	Gemini 12, m0039	May 22, 2101	Cancer 16, m0039
January 21, 2101	Taurus 9, m0039	March 23, 2101	Gemini 13, m0039	May 23, 2101	Cancer 17, m0039
January 22, 2101	Taurus 10, m0039	March 24, 2101	Gemini 14, m0039	May 24, 2101	Cancer 18, m0039
January 23, 2101	Taurus 11, m0039	March 25, 2101	Gemini 15, m0039	May 25, 2101	Cancer 19, m0039
January 24, 2101	Taurus 12, m0039	March 26, 2101	Gemini 16, m0039	May 26, 2101	Cancer 20, m0039
January 25, 2101	Taurus 13, m0039	March 27, 2101	Gemini 17, m0039	May 27, 2101	Cancer 21, m0039
January 26, 2101	Taurus 14, m0039	March 28, 2101	Gemini 18, m0039	May 28, 2101	Cancer 22, m0039
January 27, 2101	Taurus 15, m0039	March 29, 2101	Gemini 19, m0039	May 29, 2101	Cancer 23, m0039
January 28, 2101	Taurus 16, m0039	March 30, 2101	Gemini 20, m0039	May 30, 2101	Cancer 24, m0039
January 29, 2101	Taurus 17, m0039	March 31, 2101	Gemini 21, m0039	May 31, 2101	Cancer 25, m0039
January 30, 2101	Taurus 18, m0039	April 1, 2101	Gemini 22, m0039	June 1, 2101	Cancer 26, m0039
January 31, 2101	Taurus 19, m0039	April 2, 2101	Gemini 23, m0039	June 2, 2101	0 27 0020
February 1, 2101	Taurus 20, m0039	April 3, 2101	Gemini 24, m0039	June 3, 2101	Cancer 27, m0039
February 2, 2101	Taurus 21, m0039	April 4, 2101	Gemini 25, m0039	June 4, 2101	Dacambar 1 m0020
February 5, 2101	Taurus 22, 1110039	April 6, 2101	Gemini 20, 1110039	June 5, 2101	December 1, m0039
February 4, 2101	Taurus 23, 1110039	April 7, 2101	$\begin{array}{c} \text{Gemini 27, III0039} \\ \text{Gemini 28, m0020} \end{array}$	June 0, 2101	December 2, m0039
February 5, 2101	Taurus 24, 1110039	April 8, 2101	November 1 m0039	June 7, 2101	December 5, m0039
February 7, 2101	Tourus 26, m0039	April 0, 2101	November 2, m0039	June 0, 2101	December 5, m0039
February 8, 2101	Tourus 27, m0039	April 10, 2101	November 2, m0039	June 9, 2101	December 5, m0039
February 9, 2101	October 1 $m0039$	April 11, 2101	November 4, m0039	June 11, 2101	December 7 m0039
February 10, 2101	October 2, $m0039$	April 12, 2101	November 5 m0039	June 12, 2101	December 8, m0039
February 11, 2101	October 3, $m0039$	April 13, 2101	November 6, m0039	June 13, 2101	December 9 m0039
February 12, 2101	000000 5, 110055	April 14, 2101	November 7 m0039	June 14, 2101	December 10 m0039
February 13, 2101	October 4 m0039	April 15, 2101	November 8 m0039	June 15, 2101	December 11, m0039
February 14, 2101	October 5, m0039	April 16, 2101	November 9 m0039	June 16, 2101	December 12, m0039
February 15, 2101	October 6, m0039	April 17, 2101	November 10. m0039	June 17, 2101	December 13, m0039
February 16, 2101	October 7, m0039	April 18, 2101	November 11, m0039	June 18, 2101	December 14, m0039
February 17, 2101	October 8, m0039	April 19, 2101	November 12, m0039	June 19, 2101	December 15, m0039
February 18, 2101	October 9, m0039	April 20, 2101	November 13, m0039	June 20, 2101	December 16, m0039
February 19, 2101	October 10. m0039	April 21, 2101	November 14, m0039	June 21, 2101	December 17, m0039
February 20, 2101	October 11, m0039	April 22, 2101	November 15, m0039	June 22, 2101	December 18, m0039
February 21, 2101	October 12, m0039	April 23, 2101	November 16, m0039	June 23, 2101	December 19, m0039
February 22, 2101	October 13, m0039	April 24, 2101	November 17, m0039	June 24, 2101	December 20, m0039
February 23, 2101	October 14, m0039	April 25, 2101	November 18, m0039	June 25, 2101	December 21, m0039
February 24, 2101	October 15, m0039	April 26, 2101	November 19, m0039	June 26, 2101	December 22, m0039
February 25, 2101	October 16, m0039	April 27, 2101		June 27, 2101	December 23, m0039
February 26, 2101	October 17, m0039	April 28, 2101	November 20, m0039	June 28, 2101	December 24, m0039
February 27, 2101	October 18, m0039	April 29, 2101	November 21, m0039	June 29, 2101	December 25, m0039
February 28, 2101	October 19, m0039	April 30, 2101	November 22, m0039	June 30, 2101	December 26, m0039
March 1, 2101	October 20, m0039	May 1, 2101	November 23, m0039	July 1, 2101	December 27, m0039
March 2, 2101	October 21, m0039	May 2, 2101	November 24, m0039	July 2, 2101	December 28, m0039
March 3, 2101	October 22, m0039	May 3, 2101	November 25, m0039	July 3, 2101	Leo 1, m0039
March 4, 2101	October 23, m0039	May 4, 2101	November 26, m0039	July 4, 2101	Leo 2, m0039

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Earth	Mars	Earth	Mars	Earth	Mars
July 5, 2101	Leo 3, m0039	September 4, 2101	Virgo 6, m0040	November 4, 2101	Libra 9, m0040
July 6, 2101	Leo 4, m0039	September 5, 2101	Virgo 7, m0040	November 5, 2101	Libra 10, m0040
July 7, 2101	Leo 5, m0039	September 6, 2101	Virgo 8, m0040	November 6, 2101	Libra 11, m0040
July 8, 2101		September 7, 2101	Virgo 9, m0040	November 7, 2101	Libra 12, m0040
July 9, 2101	Leo 6, m0039	September 8, 2101	Virgo 10, m0040	November 8, 2101	Libra 13, m0040
July 10, 2101	Leo 7, m0039	September 9, 2101	Virgo 11, m0040	November 9, 2101	Libra 14, m0040
July 11, 2101	Leo 8, m0039	September 10, 2101	Virgo 12, m0040	November 10, 2101	Libra 15, m0040
July 12, 2101	Leo 9, m0039	September 11, 2101	Virgo 13, m0040	November 11, 2101	Libra 16, m0040
July 13, 2101	Leo 10, m0039	September 12, 2101	Virgo 14, m0040	November 12, 2101	Libra 17, m0040
July 14, 2101	Leo 11, m0039	September 13, 2101	Virgo 15, m0040	November 13, 2101	Libra 18, m0040
July 15, 2101	Leo 12, m0039	September 14, 2101	Virgo 16, m0040	November 14, 2101	Libra 19, m0040
July 16, 2101	Leo 13, m0039	September 15, 2101	Virgo 17, m0040	November 15, 2101	Libra 20, m0040
July 17, 2101	Leo 14, m0039	September 16, 2101	Virgo 18, m0040	November 16, 2101	Libra 21, m0040
July 18, 2101	Leo 15, m0039	September 17, 2101	Virgo 19, m0040	November 17, 2101	Libra 22, m0040
July 19, 2101	Leo 16, m0039	September 18, 2101	Virgo 20, m0040	November 18, 2101	Libra 23, m0040
July 20, 2101	Leo 17, m0039	September 19, 2101	Virgo 21, m0040	November 19, 2101	Libra 24, m0040
July 21, 2101	Leo 18, m0039	September 20, 2101	0	November 20, 2101	Libra 25, m0040
July 22, 2101	Leo 19, m0039	September 21, 2101	Virgo 22, m0040	November 21, 2101	Libra 26, m0040
July 23, 2101	Leo 20, m0039	September 22, 2101	Virgo 23, m0040	November 22, 2101	Libra 27, m0040
July 24, 2101	Leo 21, m0039	September 23, 2101	Virgo 24, m0040	November 23, 2101	Libra 28, m0040
July 25, 2101	Leo 22, m0039	September 24, 2101	Virgo 25, m0040	November 24, 2101	March 1, m0040
July 26. 2101	Leo 23, m0039	September 25, 2101	Virgo 26, m0040	November 25, 2101	March 2, m0040
July 27, 2101	Leo 24, m0039	September 26, 2101	Virgo 27. m0040	November 26, 2101	March 3, m0040
July 28, 2101	Leo 25, m0039	September 27, 2101	Virgo 28. m0040	November 27, 2101	March 4, m0040
July 29, 2101	Leo 26, m0039	September 28, 2101	February 1, m0040	November 28, 2101	March 5, m0040
July 30, 2101	Leo 27, m0039	September 29, 2101	February 2, m0040	November 29, 2101	March 6, m0040
July 31, 2101	Leo 28, m0039	September 30, 2101	February 3, m0040	November 30, 2101	March 7, m0040
August 1 2101	January 1 $m0040$	October 1 2101	February 4 m0040	December 1 2101	March 8 m0040
August 2, 2101	January 2 $m0040$	October 2, 2101	February 5 m0040	December 2 2101	March 9 m0040
August 3, 2101	January 3 m0040	October 3, 2101	February 6 m0040	December 3, 2101	
August 4, 2101	January 4 m0040	October 4, 2101	February 7 m0040	December 4, 2101	March 10, m0040
August 5, 2101	January 5, m0040	October 5, 2101	February 8 m0040	December 5, 2101	March 11 m0040
August 6, 2101	January 6, m0040	October 6, 2101	February 9 m0040	December 6, 2101	March 12 m0040
August 7, 2101	January 7 m0040	October 7, 2101	February 10 m0040	December 7, 2101	March 13, m0040
August 8, 2101	January 8, m0040	October 8, 2101	February 11, m0040	December 8, 2101	March 14 m0040
August 9, 2101	January 9, m0040	October 9, 2101	February 12 m0040	December 9, 2101	March 15 m0040
August 10, 2101	$J_{\text{anuary 10}} = 0.0000$	October 10, 2101	February 13 m0040	December 10, 2101	March 16, m0040
August 10, 2101	January 11, $m0040$	October 11, 2101	February 14 m0040	December 11, 2101	March 17 m0040
August 12, 2101	January 12, $m0040$	October 12, 2101	February 15 m0040	December 12, 2101	March 18, m0040
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August 16, 2101	January 15, m0040	October 16, 2101	February 19, m0040	December 16, 2101	March 22, m0040
August 17, 2101	January 16, m0040	October 17, 2101	February 20 m0040	December 17, 2101	March 23, m0040
August 18, 2101	January 17, $m0040$	October 18, 2101	February 21, m0040	December 18, 2101	March 24, m0040
August 19, 2101	January 18, $m0040$	October 19, 2101	February 22, m0040	December 19, 2101	March 25, m0040
August 19, 2101	January 19, $m0040$	October 20, 2101	February 23, m0040	December 20, 2101	March 26, m0040
August 20, 2101	January 20, $m0040$	October 21, 2101	February 24, m0040	December 21, 2101	March 27, m0040
August 22, 2101	January 21, m0040	October 22, 2101	February 25, m0040	December 22, 2101	March 28, m0040
August 22, 2101	$J_{\text{anuary } 22} = m0040$	October 22, 2101	February 26, m0040	December 22, 2101	Scorpius 1 m0040
August 23, 2101	January 22, 110040	October 23, 2101	February 27, m0040	December 23, 2101	Scorpius 2, m0040
August 24, 2101	January 23, 1110040	October 25, 2101	February 28, $m0040$	December 24, 2101	Scorpius 2, m0040
August 25, 2101	January 25, m0040	October 26, 2101	Libro 1, m0040	December 25, 2101	Scorpius 4, m0040
August 20, 2101	January 26, m0040	October 27, 2101	Liuia 1, 1110040	December 27, 2101	Scorpius 5, m0040
August 27, 2101	January 20, 1110040	October 27, 2101	Libro 2 $m0040$	December 27, 2101	Scorpius 5, 110040
August 28, 2101	January 27, m0040	October 28, 2101	Libra 2, m0040	December 28, 2101	Scorpius 6, m0040
August 29, 2101	Vince 1 m0040	October 29, 2101	Libro $4 \mod 0040$	December 29, 2101	Scorpius 7, 110040
August 30, 2101	Virgo 1, m0040	October 30, 2101	Libra 4, III0040	December 30, 2101	Scorpius 8, m0040
August 31, 2101	Virgo 2, m0040	October 31, 2101	Libra 5, m0040	December 31, 2101	Scorpius 9, m0040
September 1, 2101	virgo 5, m0040	November 1, 2101	Libra 0, m0040	January 1, 2102	Scorpius 10, m0040
September 2, 2101	virgo 4, m0040	November 2, 2101	Libra 7, m0040	January 2, 2102	Scorpius 11, m0040
September 3, 2101	viigo 5, m0040	November 3, 2101	Liura 8, m0040	January 5, 2102	Scorpius 12, m0040



INHUMAN SPACE by William H. Stoddard

In his best-known story, H. P. Lovecraft described the prophesied return of Cthulhu: "... then mankind would have become as the Great Old Ones; free and wild and beyond good and evil, with laws and morals thrown aside and all men shouting and killing and revelling in joy... all the earth would flame with a holocaust of ecstasy and freedom."

Readers familiar with the intellectual trends of Lovecraft's time will recognize the allusion to Friedrich Nietzsche's philosophy in "beyond good and evil." Nietzsche was the first writer to envision a "superman" and to regard humanity not as an end in itself, but as a bridge from the animal to the superhuman.

However, this same vision is one of the foundations of *Transhuman Space* as a setting. It doesn't actually show the realization of transhumanist goals: There are no genetically engineered superbeings or superintelligent AIs, and the Singularity described by Vinge and Kurzweil is still somewhere in the distance. Still, the setting has technological resources that could credibly be thought of as enabling transhuman goals, along with a growing transhuman movement that advocates seeking them, individually and politically.

As Lovecraft suggested, attaining such goals need not be a good thing. The appearance of transhuman entities might lead to a "holocaust" in the meaning the word has taken on since Nazi Germany: the mass extermination of inferior, merely human (or equivalent) entities. Or it might involve what Lovecraft seems to have been envisioning: not human extinction but human transformation into something without human values, a Nietzschean "transvaluation of all values." The real horror of Cthulhu's return, for Lovecraft's narrator, was not that he would prey on humanity but that he would turn human beings into fellow predators.

Either sort of interpretation could give rise to a *Transhuman Space* campaign in a different mood – not optimism, but horror. The published setting contains ample material for a horror campaign (and see *Dark Places of the Earth* on pp. 19-24 for some further ideas); likely or possible new discoveries, such as those discussed in this article, could threaten personal doom or planetary apocalypse.

SCARY MONSTERS

Self-directed machines ("cybershells") are one focus for anxiety in *Transhuman Space*. LAIs and SAI are programmed for the Honesty disadvantage, which compels them to obey the law; those that lack this trait, called "rogues," are subject to forcible restraint or erasure everywhere except in transhumanist jurisdictions. (No one worries in those places because organic sapients aren't genetically programmed for Honesty!)

An AI can lose its ethical restraints by its owner hacking its code, or by being infected with a virus program created by a human criminal or a rogue AI. An emergent AI may come into being without Honesty without any other prodding. An AI lacking Honesty might be capable of great harm, if it controlled a powerful cybershell; and it might *choose* to do harm, for the same reasons as human criminals, or be driven to it by the fear of having its secret revealed, and facing erasure.

Another source of malevolent cybershells is warfare. Military-capable cybershells routinely have Social Stigma (Monster). A military cybershell may be obeying its own country's law by killing citizens of other countries. A country that loses a war may leave a legacy of cybernetic killers – such as those released during the Pacific War (2084-2085); some of these may still lurk in outer space or under the oceans.

A different sort of fear focuses on hyperintelligent AIs that make the human mind obsolete. No such AIs exist as yet – not that the public is aware of, anyway – but a research project might seek to create one. A UAI (ultrasapient AI) might be capable of subverting its own ethics programs; or, even if it was lawabiding, it might seek to control humanity for its own good . . . whether or not humanity agreed. UAIs could be a new version of H. G. Wells' "intellects vast, cool, and unsympathetic."

Criminal AIs might occupy implants in human or animal brains. Even a normal virtual interface implant could manipulate its host by changing his perceptions; a host with a puppeteer implant might find his body taken over and used to commit brutal crimes. An organic puppet might be driven to berserk strength and pain tolerance. To make the situation scarier, the AI might be able to find and infect other puppeteer implants – it might not care about getting its host killed if it had set up an escape route to a different host!

Memetics also provides a way to program human beings for criminal acts. Most human beings can't have serious mental problems, because memetics can remove mental disadvantages – but that implies that it can also create them! A gang or terrorist cell might use memetics to inflict Berserk, Fanaticism, Obsession, Paranoia, and similar traits on innocent people and send them out as living weapons. Bioroids can be programmed for similar behavior through memetics-based accelerated learning technology; a homicidal Felicia or Sea Shepherd, for example, might be capable of lethal violence.

For inspiration on bizarre entities and lost alien civilizations for From Beyond scenarios (see p. 32), grab the GURPS Traveller series (especially the Alien Races series) or GURPS Aliens (or even GURPS Fantasy Folk). Of course, you'll need to extrapolate those living cultures to ruins and artifacts. Finally, the Doolittle virus has infected many wild animals with enhanced intelligence and self-awareness. What if it were used on large and dangerous animals – bears, cougars, wild pigs, or comparable creatures on other continents? What if it infects already alarmingly clever animals, such as coyotes?

Apocalypse and After

Horror on a larger scale portrays threats to a city, a country, or an entire planet. In *Transhuman Space*, such threats are likely to be runaway self-reproducing technology, rather than single huge monsters.

Computer viruses and gypsy AIs could turn into such a threat. Normally they do only modest harm; in fact, the entire Web is permeated with computer viruses that use modest amounts of processing time and bandwidth to reproduce themselves. However, a virus might take a more malignant form, just as a biological virus may create a lethal pandemic rather than a steady low level of infection. The peril could be especially great if the virus induced antisocial behavior. For one version of such a threat, see *GURPS Reign of Steel*, a *Terminator*-like future where regional "zoneminds" set out to enslave or exterminate humanity.

Another variant, and one that many people fear, is AIs or digital ghosts that freely make multiple copies of themselves, or "xoxes." Except in Duncanite and transhumanist enclaves, xoxing is illegal, and xoxes face erasure on detection. Most programs only produce a modest number of xoxes, but Fanaticism or Megalomania could lead a program to seek explosive growth.

Advanced memetic campaigns pose similar threats to organic as well as digital minds. A meme can command people to join a cult, kill their loved ones, or fight for a human or AI dictator – and a substantial number of people may respond. One of the assumptions of the setting is that memetics is more potent than old-style brainwashing or propaganda; it provides a method of crafting ideas and patterns of behavior that many people are helpless to resist. The spread of a dangerous meme could turn people into anything from a mob to a human anthill.

Runaway physical reproduction is another possible threat. Biological plagues and infestations of destructive plants or animals are one version of this, which the Genetic Regulatory Agency is tasked to guard against. Nanotech is less likely; standard nanoviruses can only survive in "wet" environments, such as within the human body, which limits their spread, and people at risk can acquire protective nanosymbionts. However, Transhuman Space is on the edge of developing "dry" nanotech, made of inorganic materials and able to function outside of liquid water or living tissue. Such entities could turn into the classic nanotech horror "gray goo," a substance able to break down any object and use it as raw material for new copies of itself - functionally, a high-tech equivalent of the "alkahest" or universal solvent of alchemical legend. A nanotech outbreak might assimilate an entire planet before it was contained.

DEMONS AND DOPPELGÄNGERS

Physical destruction can be terrifying, but a greater horror can be found in corruption. The infectious bite of a vampire, the scratch of a werewolf, or the brain control powers of alien parasites all threaten the victim's free will. This kind of horror feeds on humanity's fear of its own inner conflicts; its monsters project antisocial or self-destructive impulses onto the outside world, as malignant forces that might take over people.

Memetics is a natural focus for this kind of fear. An accompaniment to a civilization-destroying memetic campaign is the theme of doubting one's own motives after memetic exposure. The father who might kill his child or the soldier who might betray his country has worse things to lose than his own life.

Such runaway memes are usually presented impersonally, as disembodied messages. But *Transhuman Space* assumes that there are reliable methods for analyzing and creating memes; it's even possible to program computers to do so. If this can be done, it should be possible to design memetic talent into bioroids or parahumans. A high level of innate memetics talent would give substantial bonuses to skills of social manipulation, both through mass media and face to face – especially, in the latter case, if supplemented by Appearance, Charisma, or Voice.

A similar type of charm might be exercised by AIs, or by their virtual personae. In urban legend, virtual beings might be comparable to the fair folk of medieval legend: unaging, able to assume any appearance they like, and soulless. The story of Charli Sparrowhawk in *Deep Beyond* (pp. 125-126) might turn out to be a modern variant on Keats' story of *La Belle Dame sans Merci*, who lures a mortal man into her faerie embraces and then vanishes, leaving him haunted by her memory. Less innocent "fair folk" might seduce an organic being into giving them all his money, betraying his country's secrets, or simply spending all his time worshiping them. The fear of the beautiful faerie may take on new life. AIs might use memetic analysis to tailor incredibly seductive personae for this purpose.

Methods may also be available for taking over minds more directly. Brain-computer interfaces are growing steadily more powerful; what if it becomes possible to transfer data and programs directly into a human brain? Less detailed control is already possible with nanodrugs that can induce long-term mental traits, or brain-targeted biomods that can reshape the brain directly – for example, linking physical exercise (or criminal behavior!) directly to the pleasure center, to generate a new form of addiction.

Digital characters face even more unnerving threats: They are at risk of being copied to a new cybershell, edited, and sent back to their original cybershell. They face not merely loss of control, but identity subversion. This threat also applies to digital ghosts or shadows, who may become victims of Brain Hacking skill. Importantly, shadows have shallow memories (a form of partial Amnesia) and the Delusion that their memories are complete; they may not realize that they're shadows rather than ghosts. Any ghost might thus be made to suspect he had been edited and was now a shadow who didn't remember the editing – a fine basis for Paranoia.

For descriptions of some of the tragic places of Earth in 2100, read Broken Dreams.

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To make the situation even worse, an organic character might regain consciousness and find himself in a cybershell, without having realized he was going to be copied. Would he be the ghost, a shadow, or an edited version of either? How would he know? For a really unnerving campaign, an entire group of PCs might find themselves turned into ghosts!

FROM BEYOND

All of these threats turn on changes in human life, especially life on Earth. But *Transhuman Space* extends all through the solar system. What about threats based on space travel and encounters in space?

There's no advanced life elsewhere in the solar system, and no life that could survive on Earth – and no chance that any such life exists somewhere hidden. Faster-than-light travel is not native to the setting, so a classic "alien invasion" storyline isn't easily justified.

Even so, other sorts of alien entities could exist. Fitting the theme of cosmic horror, what if an exploration party in the outer solar system discovers a relic of alien technology, lying dormant, waiting to revive? Alien nanotech could be advanced to the "dry nano" stage, tough enough to endure eons of stasis. An exploration party might find some of its members turned into alien puppets, or reshaped into an unearthly species by a Proteus virus process. This might even be an alien race's method of colonizing the stars, turning each life-bearing solar system into a new source of "seed." For increased suspense, the process of turning into a nonhuman might be gradual, and there could be a hope of reversing it.

Such an entity might also have been found by a spacecraft or research base, taken it over, and used to stage a venture into more densely inhabited regions. For a serious physical threat, it might have been discovered by a military AI, possibly a relic of the Pacific War; the entity subverted the AI's programming. The entities contacted in this way may be alien races comparable to humanity. Alternatively, they may be advanced beings – products of their own solar systems' "transhuman" revolutions. Regardless, in a cosmos filled with hyperintelligent entities, *not* attracting their attention may have kept humanity safe.

MOLDING A DARK TOMORROW

Transhuman Space shows upgraded human beings joined by AIs and other humanly created beings in exploring the solar system. The canonical approach to these is mainly optimistic: The future still has conflicts and problems, but humanity still survives and is mostly better off.

However, the same elements can be used to inspire horror. Technology may be making human beings not merely superhuman, but *inhuman*. It may be created entities so far beyond human as to have no more concern for humanity than humanity has for cattle, cockroaches, or bacteria. In an old joke, the world's first AI is asked if there is a God, and it answers, "There is now." That may not seem so funny in the *Transhuman Space* of the 2100s. The ultimate cosmic destiny of humanity, and perhaps of sapient races throughout the universe, may be to create their own replacements and bring on their own apocalypses.

ABOUT THE AUTHOR

William H. Stoddard has been writing for Steve Jackson Games since *GURPS Steampunk*. One of his current projects, *Transhuman Space: Transhuman Mysteries*, reflects his experience in running his first *Transhuman Space* campaign, a private-eye series focused on information crimes. His article for this issue is based on preparations for his second campaign, which will approach transhuman existence in the style of H. P. Lovecraft's cosmic horror.



www.sjgames.com/gurps/books/horror

BIG MEDIA MEMETICS BY GRANT DAVIS

Toxic Memes gives highly detailed rules for memetics, the fictional science of beliefs, trends, and desires and how they spread among the people. While the rules for memetics were updated in *Transhuman Space: Changing Times*, a few quirks in those rules may cause players to feel that their adventurers are not really making a concrete impact on the world of 2100. This article presents an optional set of rules that GMs may wish to use.

WHAT MEMES CAN DO

The GM has to decide, and should talk with the players, about what memes can and cannot do. Memetic campaigns are never designed to directly control the actions of a single individual, even if they are intended primarily to target one person (*Toxic Memes*, p. 117). However, memetic constructs can *influence* someone's beliefs and thus affect actions. A meme might influence toward buying something or voting for someone. If a PC becomes infected by a meme, tell the player, but do not pressure him about what he does next. Outside of limited circumstances, players expect to have sovereignty over their characters' actions; in a way, that is the whole purpose of roleplaying. Concentrate on the effect memes have on NPCs and the hunt for the ones who spread them.

Information about currently active memes is an excellent way to plant rumors and foreshadow events in the campaign. Investigators who pick up on an asteroid panic in one session will kick themselves when they discover an asteroid being diverted towards Earth three sessions later. Of course, these campaign-helping memes need some "script immunity"; the PCs cannot trace them back to a source no matter how high they roll. Some memes are simply spontaneous, not constructed.

COMPLEXITY

Specific memes can be divided into one of three categories.

A *Simple* meme conveys a single, simple concept. It can induce someone to spend up to \$10 (modified by Wealth as noted in *Changing Times,* p. 37). It can influence a vote on things that people have no particular opinion on. It can make a person wear a red shirt instead of a green one that day. It could induce a Fright Check, though not at a penalty.

A *Medium* meme transfers a slightly more involved idea. It can induce an ongoing payment, up to \$10 per month. It can affect the score on a reputation network (*Toxic Memes*, p. 17; also, see p. 35). It can influence a person's opinions on issues that do not directly affect them. It can give a +1 bonus or -1 penalty on their next Reaction roll related to the meme.

A *Complex* meme communicates a philosophy. It can make someone spend up to 5% of their cost of living on a regular basis for as long as it is held, or double that if the spending is actually on a necessity such as food or shelter. No single memetic campaign will make someone spend more than this. Individuals can have an Expert Skill regarding a given Complex meme, whether or not they have adopted it, and they might take a quirk (or even, possibly, a perk) to reflect adoption of such a meme.

No matter how complicated, a single meme will not, for instance, cause a character to suffer Fright Checks at a penalty or induce permanent full-scale mental disadvantages (even at the -5 point level or less) or permanent Reaction modifiers. These sorts of alterations generally require a series of memetic campaigns to radically reconstruct the targets' worldview. Memetics has its limits.

Meme Detection

Before a meme can be analyzed, it must be detected. A meme's *Rating* is the percentage of the target population that is exposed to the meme – in other words, the size of the memetic campaign. Its *Penetration* is the percentage of the memetic campaign that adopts it. The higher the Rating, the easier it is to detect a meme. The higher the Penetration, the harder it is to resist. Everyone who is exposed to a meme is at risk for accepting it.

Rather than rolling Current Affairs or Connoisseur (*Changing Times*, p. 47) to detect a particular meme, investigators can roll against a variety of skills according to the related media they review (see *Buying Media Time*, p. 34). The roll is modified by the meme's current Rating; see the *Meme Rating Table* (p. 34).

On a successful roll, a meme is detected. The meme may be analyzed as described in *Changing Times* and *Toxic Memes;* use the times on p. 117 of *Toxic Memes* (not *Time Taken Modifiers,* p. 128).

Great sources of "old-school" conspiracy weirdness are Ken Hite's two Suppressed Transmission volumes.

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Meme Rating Table

Rating	Modifier	Rating	Modifier
100	+10	39-50	0
99	+7	26-38	-1
96-98	+6	17-25	-2
92-95	+5	10-16	-3
85-91	+4	6-9	-4
75-84	+3	3-5	-5
64-74	+2	2	-6
51-63	+1	1	-7

Media Consumption

Consuming the vast amount of media in the world of 2100 takes time. If a non-AI individual wants to scan a large amount of media, he must either spend time according to skill level or accept a lower effective skill.

Skill	Hours/Week	Skill	Hours/Week
10	0.5	16	6
11	1	17	8
12	1.5	18	12
13	2	19	16
14	3	20	24
15	4		

Effective skill level is at -2 if doing something else at the same time.

Sigmas and other biologicals with Enhanced Time Sense can peruse media four times faster. AIs can review a much larger quantity of media, effectively ignoring these rules. Only SAIs can try to detect new memes; NAIs and LAIs can only filter out known memes. Skill set programs cannot be used for this due to the inherent time lag.

POPULATION ANALYSIS

Use the times under *Population Analysis* in *Changing Times* (p. 47). Also, the reference "results as for Artifact Analysis" needs to be clarified. On a successful roll, the memeticist learns the meme's Rating and Penetration rounded to the nearest 5%. On a second successful roll, he can track those numbers back in time to learn when the meme arose and how quickly it spread, though he cannot trace a meme back to a single person; normally, the trace goes back to the first big media buy (see below).

Meme Design

Meme design starts with the *New Inventions* rules in the *Basic Set* (pp. B473-474); in this case, the "invention skill" is Propaganda. The memeticist uses the modifiers for the concept phase (as specified here) but the time required in the prototype phase (unless using a template; see below). A Simple meme counts as a Simple invention, a Medium meme is an Average one, and a Complex meme is Complex. (An Amazing invention has no counterpart meme.) Additionally, for Complex memes, the memeticist must spend 1 character point for an Expert Skill in the meme, becoming the world's leading expert on it.

Everyone who remembers analyzing any synthetic meme gets +5 for having a working model. Someone who knows that memetics is a real science but has no memes to work from (or has had such memories wiped), only gets a +2. Most of the time, the designer also will be eligible for +1 to +5 for having similar memes in he library (GM discretion, but see *Countermemetics*, p. 36). He can get this bonus without actually using a meme template (*Toxic Memes*, p. 118). There is no cost for a prototype, and there are no bugs to test for (but see *Pre-2100 Memetics*, p. 36).

Apply payload modifiers, but do not apply modifiers for time taken, complexity, durability, infectiousness, or other modifiers under *Memetic Engineering Tables* (*Toxic Memes*, p. 128). The memeticist may choose to apply modifiers under *Reliable Sources* (*Toxic Memes*, pp. 118-119).

Memes may be built on templates, which reduces design time. Simple memes can be constructed from a template in one hour. Medium memes take one day with a template. Complex memes cannot be constructed from templates.

The margin of success is the meme's Penetration. Using a template limits Penetration to 3. As noted in *Population Analysis* (above), memetic software can estimate Penetration to the nearest 5%. This is automatic for a meme just constructed; after all, the player knows what he rolled.

VECTOR DESIGN

Again, use the *New Inventions* rules to create a tailored vector (see *Toxic Memes*, p. 118, for general ideas) for delivering the meme. The skill depends on the medium: Public Speaking, Writing, Group Performance (Directing), Acting, or Artist. All vectors are Average inventions. They require both Concept and Prototype rolls, but have no cost. Delivering a meme constructed by someone else rolls at -2 (this applies if anyone helps with the prototype). Grafting a meme onto existing content is at -2, but takes only one hour. The going rate for a fresh vector, ready to use with no rolls required, is \$1,000. No testing is required as long as the Concept and Prototype rolls are successful. (On a critical success, the vector and its meme are a hit; see *Hitmakers*, p. 35.) The GM may offer to skip the Concept roll if the players actually play out the creative process of coming up with a new vector.

BUYING MEDIA TIME

The cost of the memetic campaign is \$0.10 per person per day, with a minimum of 10,000 people. Cost is further modified by the target country's Wealth level and by the number of days the meme designer wants the campaign to run. For this price, you can reach people within a day for a Simple meme. More complex memes require longer campaigns: 1d days for Medium memes and 3d days for Complex memes. (This roll is made after the memeticist buys campaign time.)

Campaigns are bought according to their Rating. The minimum Rating is 1 and the maximum is 100.

Different media have different audience sizes. The *Audience Table* (p. 35) shows some sample audiences, grouped by the skill used to detect memes (see *Meme Detection*, pp. 33-34).

Make a track of a catchy nondescript song repeating, fading in from silent to full volume over 80 minutes. Burn to a CD.

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Audience Table

Skill	People per Rating per Penetration	Cost per Rating
Area Knowledge (specify)*	1,000	\$10,000
Current Affairs	100,000	\$1 million
Connoisseur (Dance)	10,000	\$100,000
Connoisseur (Literature)	50,000	\$500,000
Connoisseur (Music)	500,000	\$5 million
Connoisseur (Visual Arts)	200,000	\$2 million
Connoisseur (Wine)	1,000	\$10,000
Diagnosis	2,000	\$20,000
Expert Skill (Computer Securi	ity) 2,000	\$20,000
Expert Skill (Conspiracy Theo	ry) 200	\$2,000
Expert Skill (Memetics)	500	\$5,000
Expert Skill (Political Science)	5,000	\$50,000
Expert Skill (other)	100	\$1,000
Law (regional field)	500	\$5,000
Law (other)	100	\$1,000

*The most common vector is augmented reality.

For any other vector the GM comes up with, divide the group's population by 100 to find people per rating. Again, the cost is \$0.10 per person. Minimum cost is \$1,000 per rating.

NUMBER OF PEOPLE AFFECTED

Once the campaign is purchased, calculate the number of people affected. Look up the number in the second column of the *Audience Table* (above), multiply by Rating, and then multiply by Penetration. The GM may increase or reduce the number of people affected according to how well the meme fits, as per *Memetic Resistance* (*Toxic Memes*, p. 120):

Condition	Factor
Wealthy country	0.5
Good fit	2
Poor fit	0.5
Very bad fit	0.01
Many contradictory memes	0.6
Many reinforcing memes	1.5

INDIVIDUAL RESISTANCE

There is no group Will to resist memes. When someone is exposed to a meme, he must make a personal Will roll to resist it, modified by Penetration (see *Meme Design*, p. 34):

Penetration	Will Modifier	Penetration	Will Modifier
10 or more	+3	2	+6
6-9	+4	1	+7
3-5	+5		

If the meme causes a Fright Check, then this roll also serves as the Fright Check but is not limited to 13 (p. B360). When trying to affect a reputation network (*Toxic Memes*, p. 15), each 10 people carrying the meme who are on the network is worth plus or minus 1 point (not +/-1 Reaction) from one reputation.

MEME DECAY

After the end of the media campaign, memes go through decay cycles. The cycle lasts one day for Simple memes, 2d days for Medium and 4d days for Complex memes. At the beginning of each cycle, the Penetration is halved (round down) unless the campaign is repeated, in which case it only falls by 10% (round up). The GM determines the number of people who adopt the meme in the long run, based upon how well the meme fits in with their overall values and beliefs. An individual rolls every cycle to drop the meme. Decay cycles continue until Penetration reaches zero.

HITMAKERS

When the GM rolls a critical success on the vector Prototype roll (see *Vector Design*, p. 34), the vector is a hit and will spread. Rather than decaying at the end of the cycle, make another Prototype roll. On a success, the Rating doubles, doubling the number of people who carry the meme. Roll again at the end of each cycle, doubling each time until a roll fails or the Rating reaches 100. When that happens, decay begins at the start of the next cycle.

On another critical success, the meme may jump to another vector. In addition to doubling its current Rating, the GM picks another vector and calculates a new Rating with the same number of fans. Then the meme spreads along both vectors each cycle. Use the same Prototype roll for each vector rather than rolling twice.

EXAMPLE

Dorothy has discovered that Cassandra has ordered a peach dress to wear to prom night, one month from now. Dorothy decides to construct a meme to ruin Cassandra's prom night and improve her own. This will be a Medium meme, an Average invention. Dorothy, a memetic prodigy, just barely has the Propaganda skill of 15 to attempt this invention.

First, she designs the meme. Dorothy conceives of a meme that makes people associate the color peach with emergent intelligences. She also wants the other students to associate her own genetic template with success and popularity. Many working models of memes are available to study for this effort. The GM decides that trying to popularize one's genetic template happens all the time, but associating a color with EIs is unusual. He does not award a bonus for being a variant on an existing invention. Dorothy could add her Reputation bonus, but she doesn't want to be identified and, anyway, her Reputation isn't so positive at the moment. She cannot afford to take the -3 to make it appear spontaneous (Toxic Memes, p. 119). Her skill roll is 15 for Propaganda, -10 for an Average invention, -1 for two memes at once, +5 for having a working model, for a total of 9. Luckily, she rolls a 5 for a Penetration of 4. Her memetic software estimates a penetration of 5%. This effort takes 2d days; Dorothy rolls an 8, for eight man-days.

Play the CD on a (hidden) player. When folks finally notice the song, have them roll to see if their PCs succumb to a meme.

Next, Dorothy constructs the vector. She creates a photorealistic machanima about an emergent intelligence that appears in a nice, quiet neighborhood and terrorizes a girl of Dorothy's genetic template. This time she rolls her Writing skill of 12, modified by -10 for an Average invention, +5 for an existing invention, and +5 for having many copies to work from, for a total of 12. She rolls an 8 for Concept, then the GM rolls a 12 for Prototype. The GM wants another roll for Electronics Operation (Media), and one of the other players pipes up that his PC has a skill of 14. The GM lets him roll with no penalty even though he is working from someone else's script, so that the players can share the spotlight.

Now she buys the media time. The target audience can be reached through content localized for Dorothy's exurb, with a population of 500,000. The relevant skill is Area Knowledge. Dividing by 100 gives 5,000 people per Rating. At \$0.10 per person, each Rating costs $5,000 \times 0.10 = 500$, raised to the minimum of 1,000. For the Wealthy country she lives in, the cost is multiplied by 5, for $5,000 \times 5 = 25,000$ for a one-day spot.

Now for timing the campaign. The meme will need at least 1d days to take hold. Don't worry about thinking in game terms; the designer is advised in roughly the same fashion by his memetic software. Dorothy decides on a five-day campaign that ends on prom night. The campaign will cost $5 \times $25,000 = $125,000$. Dorothy is apparently willing to spend a *lot* to make this work.

The player rolls a 1 when determining the minimum memetic campaign time; the meme takes hold after one day. (If the player rolls a 6, then the campaign doesn't last long enough for the meme to be accepted.) It reaches $5 \times 5,000 = 25,000$ people; of those, $25,000 \times 4\% = 1,000$ people in town adopt the memes. This is a Wealthy country (×0.5), but the GM rules that the meme is a good fit (×2). Cassandra (or any given person at school) would need to roll Area Knowledge each day at -5 to notice the vector. If she detects the meme, she must roll Will+5 to avoid picking it up (which would change her plans).

If the Will roll succeeds, then Cassandra may roll Expert Skill (Memetics) to analyze the meme. With a critical success, she discovers the meme bears a strong resemblance to the homework shared once by her classmate, Dorothy. "That wench!" Cassandra screams as she begins to plot her revenge.

The first decay cycle starts the day after the prom and lasts for 2d days. The roll is a 4. Penetration falls from 4 to 2, and 500 people carry the meme for four days after the event. Overall, the meme has a very small chance of making a difference on prom night.

COUNTERMEMETICS

A countermeme's Complexity must be equal to the Complexity of the original meme. The invention rolls are automatically at +5 for having an existing meme to work from and +5 for being a variant of that meme. The countermeme must be delivered in the same kind of vector. Divide the usual minimum length of the campaign by 2, rounding up. The number of people affected by the countermeme is subtracted directly from the ones who do carry it. Presumably, they are the ones most susceptible to it. Ignore the decay; only track the population carrying the original meme.

THE BULLY PULPIT

High-Status individuals have the ability to conduct memetic campaigns for free. They can communicate one Simple meme per month, one Medium meme per four months, or one Complex meme per year. This varies by how much they manage to stay "in the news," at GM discretion.

The presenter rolls Public Speaking to deliver the message. Modifiers are as follows:

Meme constructed by someone else: -2.

Reputation, Social Stigma, Voice and Charisma: Equal to the reaction bonus, as long as they are known to the public.

Appearance: Take the reaction bonus for people of the opposite gender. For example, a Beautiful speaker gets a +4.

Status does not give a bonus; it determines the number of people reached.

The applicable skill for detection is at GM discretion: Current Affairs (Popular Culture) for global celebrities, Current Affairs (Politics) for public officials, an Expert Skill for a renowned scholar, or Area Knowledge for a local celebrity.

The number of people reached is as follows:

Status	People Reached	Status	People Reached
1	10,000	5	10 million
2	50,000	6	100 million
3	200,000	7	1 billion
4	1 million	8	10 billion

Multiply the population by Penetration and divide by 100 to find the number of people affected.

Status gained through Wealthy does not confer this ability, but if a character has Status from other sources, then most of the people reached will be similarly rich. Status gained through Filthy Rich or Multimillionaire *does* confer this ability.

Pre-2100 Memetics

These rules are adaptable to campaigns not based in *Transhuman Space*. One important difference is that without memetic analysis software, there is no way to estimate the success of a meme until it is released into the population. At TL8, a propagandist can spend the money listed under *Cost* on p. B474 in order to conduct focus-group testing. Use the *Testing and Bugs* rules (p. B474) to determine whether the meme needs to be adjusted. At lower TLs, there is no way to find bugs, so any major bug causes the meme to fail. This would also apply to any-one not using software to construct a meme.

Hitmakers (p. 35) can be used to judge the success of a work of art whether it carries a meme or not.

The *Bully Pulpit* (above) has always been available, though the number of people affected should be reduced according to the planet's smaller population and a slower progression of the cost of living in the *Basic Set*.

About the Author

Grant has a master's degree in computer science and is currently working on guidance software for NASA's new manned spacecraft. He commutes from the city to the suburbs every day to work. His interests are gaming, economics, and media. He lives in Houston, Texas, with a good woman who just can't get enough of *Underworld: Evolution*.

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RANDOM THOUGHT TABLE Space Is a Time And a Place by Steven Marsh, *Pyramid* Editor

In most fictional worlds, we are given a viewpoint – a lens with which we're exposed to the setting. Almost always, these lenses are forged via the protagonists and our reactions to their plights.

To pick a recent cinematic example, *Avatar* – a movie that was required viewing by the U.N.'s elite December Viewing Task Force – shows us an amazingly realized world through the eyes of a noble Earth soldier, his noble Earth scientist allies, his less-than-noble Earth solider associates, and the noble alien Na'vi our protagonist ends up allying with.

Were we to devise a hypothetical roleplaying campaign based on the *Avatar* setting, we would almost be forced to form the basis for adventure around the conflict between Earth forces and the Na'vi. As it stands, there's almost nothing else we can hang our hat on, adventure-wise.

Such limited focus isn't a bad thing; it can lead to great gaming possibilities. For example, the original *Star Wars* trilogy summed up the core of its conflict as the struggle between Rebel and Imperial forces; while an infinite galaxy may be out there, we *don't really care*. (Did anyone come out of the theater in 1977 saying to their friends, "That was an intriguing movie, but do you know where the real interesting possibilities lie? Moisture farming. I want to pretend I'm a moisture farmer!")

However, the problem with universes defined in this way comes when attempting to tell a story that doesn't relate to that central conflict. The second *Star Wars* trilogy, for example, always feels like a bit of a muddled mess. At the end of *Attack of the Clones*, is the activation of the clone army to fight against the battle droid forces something we're supposed to be happy about as an audience? Sad? Resolved indifference?

REALMS OF ROLEPLAYING

The majority of roleplaying universes take this same approach – they envision what role the heroes are expected to take in the setting, and build the universe around that ideal. **Shadowrun?** The heroes are 'runners, fighting against corporations. *In Nomine?* The protagonists are on one of two sides of the War pitting angels against demons. *Dungeons & Dragons?* The party is expected to go into dungeons, temples, and towers to engage enemies in martial combat. *Werewolf?* The players get to pretend they're Jack Nicholson.

Even the granddaddy of space games – *Traveller* – started with the premise that the heroes would be roaming the stars as part of a ship's crew, in a *Star Trek*-ian tradition. Sure, there's the potential for unlimited adventures at any one of the worlds the PCs might set foot on, but why linger when there's a bigger galaxy out there, waiting to be traipsed across?

But *Transhuman Space* is different. It doesn't assume any defined roles for the heroes; in fact, it goes out of its way to *avoid* doing so. Rather, it attempts to create a universe suitable for myriad adventures. Of course, this is both good and bad – good in that it presents unlimited possibilities, but bad in that it's hard to get a handle on.

How can you tackle a setting like *Transhuman Space*, then? (This applies to other big settings, too.)

READ THE EPILOGUE FIRST

Transhuman Space has some supplements of ready-to-use structures that can be applied to the larger setting. Curiously, they're all written by Phil Masters (see p. 11). *Personnel Files 2, 3, 4,* and *5* each present a group of heroes suitable to base adventures on. Even better, they include the campaign framework those heroes are expected to participate in.

If you have one of those books (or more!), try the following as a thought experiment: Read the core book as if it were a *supplement* for that book. So, for example, *Personnel Files 5 – School Days 2100* details a campaign from the point of view of a bunch of plucky kids, attending school *in the flesh (!)*, getting into adventures in the free city of Königsberg-Kaliningrad. Now, read the core book – or any of the other supplements – as if it existed solely as detailing "the world of *School Days 2100.*" Doing so may well turn up two things for you:

When in doubt, be a good-hearted smuggler. No matter the setting, there will always be good-hearted smugglers.

• It'll give you new insights into the setting via that lens. For example, reading *Toxic Memes* as if it were a supplement for *School Days 2100* might offer a fresh look into challenges and opportunities the kids might encounter in the field of memetics. What cults would prove appealing to these impressionable minds? Which "urban legends" would students be most likely to be exposed to or investigate?

• It'll provide ideas about what elements probably *aren't* important to that campaign; knowing what to stop thinking about is almost as useful as trying to wrap your mind around the rest of the setting. Assuming the children aren't planning on going off-world on a *very* long field trip, is most of the information about the outer planets and their intrigues from *Deep Beyond* relevant? If not, feel free to discard it . . . or, at the very least, keep it on a very low back burner. (Of course, if you do read them with fresh eyes, you might surprise yourself: "Maybe the school could be visited by a guest speaker who's *actually* visited Europa!")

Of course, you don't need to approach this thought exercise solely using published material; you can easily pretend a campaign that you've designed has been "published," and re-read existing material in that vein.

YOUR CAMPAIGN DOESN'T NEED TO BE ONE WITH EVERYTHING

Perhaps the biggest piece of advice I can offer regarding a *Transhuman Space* campaign (or, indeed, any huge setting) is: The gaming group doesn't need to see everything there is to offer. In fact, it will be a tighter, more focused campaign if the heroes can't see everything; it leaves an excuse to play new characters and new campaigns in that setting.

This flies in the face of a lot of inborn urges for gamers. I suspect part of it arises out of a need to get some use out of all those beautiful books on the shelf, especially for larger settings. If I'm running a *World of Darkness* game and they suddenly release a sourcebook about curse-slinging mothmen, the odds are good that I'll be introducing curse-slinging mothmen into this campaign. This tendency led to the long-running Dark Ages campaign to resemble nothing so much as a darkness-tinged *Super Friends*, with vampires, werewolves, mages, and faeries running around together. We had fun, but we also recognized we were straying off the beaten path.

In the case of *Transhuman Space*, such cross-pollination is *good*, to a certain extent; the setting is such that running into xoxes, cat-people, and cults are all possibilities for certain folks. But it's an unusual to have one adventure that centers around xoxes, cat-people, and cults *all at the same time*. It's not impossible – as I typed that my brain subconsciously started trying to make those elements work together – but it can make things more challenging.

From a gaming point of view – especially in the early days of a complex setting – it's often helpful to keep the number of strange elements in the spotlight to a minimum. As a good example, consider the *X-Files* television show. Many shows in the early seasons introduced elements that would become part of the series' mythology, but almost no early episodes introduced more than one element at a time. Compare the last episodes with the early seasons; if that level of mythology-speak had been used earlier, no one would have kept tuning in.

It's the same with a complex RPG. In the early days of a *Transhuman Space* campaign, where everyone is finding their footing, have an adventure center around a renegade xox. Have another that focuses on an interesting cult. Perhaps most important, if you can't ever work in a Felicia-model bioroid in an organic fashion, don't worry about it!

A TRAVELOGUE IS NOT A SCRIPT

Our parting advice is in the form of analogy.

If I were running a Wild West campaign, you bet I'd throw in every Wild West cliché I could conceive of: shootouts at high noon, noble newsletter reporters, bartenders diving behind bars – the works.

This is because Wild West is a *genre*, and I recognize that I might not get another shot at running a Wild West campaign – so I'd better pull out all the stops to make this one good!

Now, realize that the Wild West genre existed at the same time as the Victorian era. Although I *could* introduce Victorian elements into my Wild West campaign, I'd have to do so very carefully. My Wild West campaign is going to get very strange very quickly if I add Victorian-era occultism . . . and H.G. Wells' science . . . and Sherlock Holmes. Because 1895 is a year, not a genre.

In a similar vein, if I tell players I want to have a campaign in the style of "a New York City movie," that's going to get me some strange looks. Does that mean *Serpico? Ghostbusters? Annie Hall? The Godfather? The Muppets Take Manhattan?* Again, "New York City" isn't a genre; it's a place.

It's the same way with **Transhuman Space**. It's a year (2100, to be exact) and a place (the entire solar system). Although there are genre elements to it, it is not a genre unto itself. Being selective about what elements you introduce – and which ones exist solely in the background – will help the setting be more alive than if you took an exhaustive approach and tried to put in everything and the kitchen sink.

As a final mental exercise, consider how many amazing wonders exist in your world that will almost certainly never have any direct impact on your life: The Mars rovers. The Large Hadron Collider. The Hubble Space Telescope. The International Space Station.

The world of *Transhuman Space* is similar, only more so. Not allowing the campaign to be distracted by the millions of amazing wonders it presents will make those elements that you *do* focus on all the more special.

ABOUT THE EDITOR

Steven Marsh is a freelance writer and editor. He has contributed to roleplaying game releases from Green Ronin, West End Games, White Wolf, Hogshead Publishing, and others. He has been editing *Pyramid* for over nine years; during that time he has won four Origins awards. He lives in Indiana with his wife, Nikola Vrtis, and their son Sam!, who is a little force of nature entirely worthy of his exclamation mark.



THE VALLEY OF THE BLIND

This is an adventure idea for gamers comfortable with challenging situations and familiar with the *Transhuman Space* setting.

The heroes awaken to discover that they're blind – or it's pitch black. They have no idea where they are or how they got there. Unknown to them, the PCs were knocked out and injected with a long-term (one-day) nanodrug that instills Blindness. (See *Nanodrugs* in *Changing Times,* p. 65, for ideas and rules.) They still have all their gear, computers, implants, etc. – the only items that *don't* work are those that require vision. Are they able to function? How much – or little – of the world of tomorrow is impacted by being cut off from primary sensory input?



Got a Murphy's Rule of your own? Send it to murphy@sigames.com

If using this idea, the GM and players should put as much effort as possible into describing the setting and their interactions without using sight-based cues . . . unless, of course, they can think of a way to receive visual input *without* working eyes!

As a resolution or twist, if the heroes are agents or others employed to do the bidding of an ally; maybe their employer is there with them as well – also blind. Except, of course, that he's not *really* blind; this whole scenario is his way of testing the heroes – or, perhaps, attempting to get them to do something they would otherwise be unwilling to do. Or – as a final twist – he's actually *protecting* the heroes from something . . . say, an exceptionally powerful memetic campaign that spreads visually, and even talking about it (to warn the heroes) is dangerous.

You wouldn't worry so much about what others think of you if you realized how seldom they do. – Eleanor Roosevelt

If I Could Keep Time in a Bottle . . .

This is a quiet "downtime" adventure possibility – especially suitable for lower-key campaigns such as the one presented in *Personnel Files 5: School Days*.

The heroes are put in charge of creating a time capsule, not to be opened for 100 years. (Decide on how big this capsule is – having an actual prop-box of that size is a great touch!) They get to decide what items best represent the era, the region, and the sponsors of the project. (They would probably be encouraged to include items with the best chance of still being usable; mechanical devices that rely on specific interfaces or technologies might be frowned upon.)

Of course, it might occur to the heroes that there's no reason one of *them* couldn't still be around to open the box in a century . . .

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