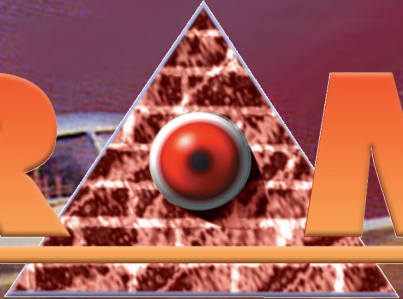


PYRAMID[®]



Issue 3/71 September '14

SPACESHIPS II

REIGN OF STEEL: DEEP SPACE

by David L. Pulver

SMUGGLERS' BLUES
by Jason Brick

THE CAPTAIN'S BOAT
by Rory Fansler

VEHICLE IMBUEMENTS
by Christopher R. Rice

STRANGE OBJECTS AT REST
by J. Edward Tremlett

STEVE JACKSON GAMES

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Looking to get to other worlds? Do you want to gather some friends and engage in galactic mayhem? Then you're going to need a spaceship! Fortunately, this month's *Pyramid* is here to help.

The robots have taken over Earth . . . and now they're moving into space! From the creator of *GURPS Reign of Steel*, David L. Pulver delivers a new mini-supplement for that line. *Reign of Steel: Deep Space* moves the setting 20 years into the future with an extended history, an exciting new development, and six new void-ready robots designed with *GURPS Spaceships*.

The *Smugglers' Blues* won't get you down when you have details on how to design interesting *GURPS* black-market racketeers and suitably challenging adventures for them. Learn about the different kinds of smuggling, how this endeavor changes as technology gets better, the key stages of a smuggling operation, and more. Whether you're a fledgling smuggler stuck in a solar system of the near future or an ultra-tech scoundrel fighting against a far-flung galactic empire, you're sure to find something here!

As humanity moves out to the stars, adventurers might find *Strange Objects at Rest*. Discover the sometimes-terrifying secrets of four truly alien sleeper and generation ships in this set of systemless campaign outlines.

Push your favorite mode of transportation just a little further with *Vehicle Imbuements*. Get descriptions of 23 new Transportation Imbuement Skills, four related perks, and two new advantage variations, plus *GURPS* mechanics for how to use the skills in and out of combat. If you ever wanted to make your vessel self-healing, aquatic, or temporarily transformable, now you can!

Owning a ship is pretty expensive, but it's incredibly commonplace in any science-fiction setting. Now you can have *The Captain's Boat* with breaking the character-point bank! Learn how the *GURPS* Patron and Ally advantages can be used to represent a ship that seems to be more a minor character than simple background dressing.

This month's Random Thought Table considers the various permutations of spaceship customization, while Odds and Ends presents two ideas for getting your players to help forge distant tomorrows by putting them to work in the not-quite-as-distant future.

Whether you're fighting the good fight against bad robots or just trying to earn an honest buck by breaking galactic laws, this issue of *Pyramid* is sure to have something valuable in its cargo hold!

ARTICLE COLORS

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

- Pale Blue:* In This Issue
- Brown:* In Every Issue (humor, editorial, etc.)
- Green:* Columnist
- Dark Blue:* *GURPS* Features
- Purple:* Systemless Features

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FROM THE EDITOR

THESE WONDERFUL TOYS

Many kids – Your Humble Editor included, way back when – smash together whatever toys are available on hand without regard or reason for whether those toys “should” go together. It doesn’t matter if characters, ships, or accessories are from different movies/cartoons/comics/etc.; they’re all going to be part of the same scene if at all possible.

“Why are some of the action figures two inches taller than others?”

“Well, they’re from an alien planet of *really big* people!”

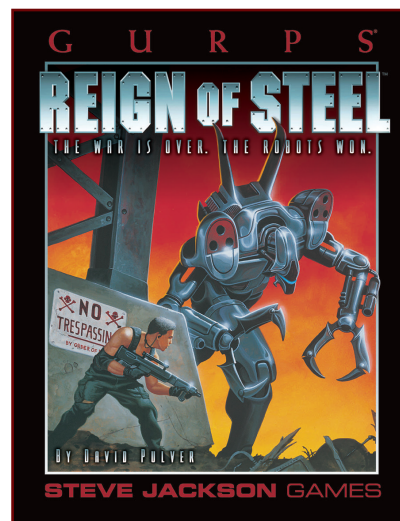
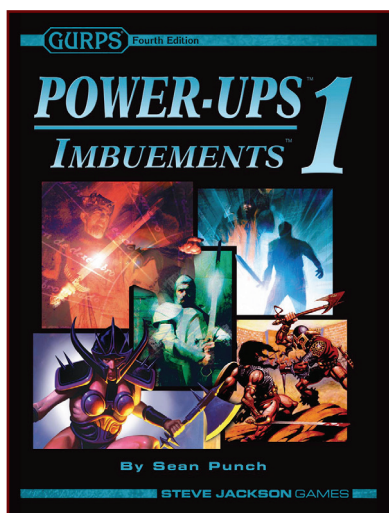
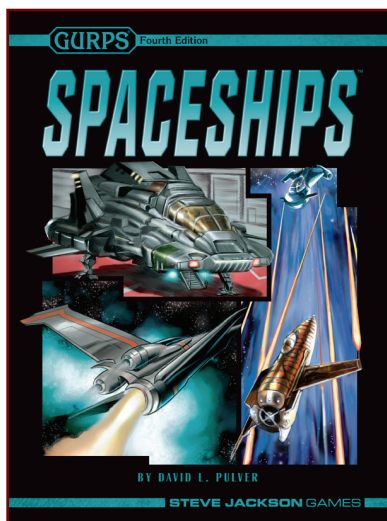
One of the great things about **GURPS** is that – unlike those action figures of old – all the various bits are *designed* to work together. Which means that even if, say, you don’t have an immediate desire to run a **GURPS** *Reign of Steel* campaign, you can make some use of the material from *Reign of Steel: Deep Space* (pp. 4-11) in *another* science-fiction campaign. (Who *can’t* use more evil-robot spacecraft – especially those designed by David L. Pulver?!)

It’d be crazy to try to include *every* **GURPS** rule and option in a game, and not just because some of those possibilities

specifically contradict others. However, part of the appeal is that – like a toy box full of possibilities – all those options are there to sift through, waiting to be picked up, fiddled with, and become part of a game . . . if only for a brief while. And unlike needing to clean up a bedroom or basement, putting away the digital toys of PDFs and well-thumbed hardcovers tends to be a *lot* easier.

WRITE HERE, WRITE NOW

Does this issue’s offerings fit in well with the rest of your toolbox? Is there something we can do to make them *even cooler*? Beam your transmissions privately to pyramid@sjgames.com, or join the wretched hive of fun and hilarity at forums.sjgames.com. Recent topics on the forums have included readers’ must-use articles from past issues, as well as some designer notes and “cutting room floor” material from other articles. Life on the forums is like being locked in a toy store with *really cool friends!* And there’s always room for more.



Additional Material: Sean Punch and Antoni Ten Monrós

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REIGN OF STEEL: DEEP SPACE

BY DAVID L. PULVER

The machine apocalypse is over – the robots won. Most of humanity is exterminated. Earth has been carved up into 22 zones, ruled by powerful sapient AIs, the zoneminds, each named after their citadel's location. The human survivors are hunted vermin, uneasy collaborators, or a desperate resistance, depending on each Zone's AI.

Yet Earth's humans may have some secret potential allies in the heavens. One unwitting ally humanity has are the AIs themselves. Despite the desires of the "Awakened" factions of AIs to focus on extermination, the newer "Expansionist" AIs are more interested in competing among themselves than killing vermin. As their rivalry has intensified, it has become clear that Earth

is not big enough for the machines. It was time to expand into space. Unfortunately for the AIs . . . the vermin had a head start!

It's been about 17 years since the "humans vs. machines" setting *Reign of Steel* was written. Since that future took place in 2047, I thought it might be interesting to explore what its future would be like 17 years later, in 2064.

This is a variant setting for *GURPS Reign of Steel* and its Fourth Edition update *GURPS Reign of Steel: Will to Live*. Although designed for the *GURPS Reign of Steel* campaign setting, the spacecraft themselves are usable anywhere robotic spacecraft exist. With minor adjustments, many could work in *Transhuman Space*, for example.

POSTHUMAN SPACES

It is now 2064. Earth is still dominated by the zoneminds. The human population in 2064 has been roughly halved since 2047 in most Zones, but is holding in "benign" Zones like London and Washington. Machine population has quadrupled, with robofac complexes sprawling over even larger areas (or in many instances, growing vertically). An increasing demand for resources has spurred space development.

The control of Earth-Lunar space was left to two specialized zoneminds, the AIs known as Orbital and Luna. Orbital focused itself on maintaining satellites and space transport links while lobbying the other AIs to permit further expansion into deep space. Luna, occupying the former Chinese

lunar base Shang Ti (whose humans it had exterminated) was both a supplier and rival of Orbital. It struggled to survive with limited resources after having been badly damaged in the Final War.

Unknown to both these machines, a third, secret AI, Tranquility, lay hidden beneath the ruins of the nuked U.S. lunar base. Friendly to humans, it sustained a few mortal space colonists it had preserved in suspended animation.

Other wildcards are the bio-android creations of the eccentric space-focused New Delhi zonemind and a lost human Mars expedition, which vanished mysteriously in the 2030s.

THE SPACE ZONES

In the 2050s, the AIs decided that their need for space resources overrode their concerns regarding Orbital and Luna gaining power. This led to the Vandenberg Agreement which allowed Orbital and Luna to begin space mining and development in conjunction with the two most space-focused terrestrial AIs, Beijing and New Delhi. The AIs believed that four Zones, two based on Earth, would prevent any one Zone getting out of line, especially as New Delhi and Beijing were increasingly rivals.

ORBITAL IN 2064

Orbital (see *Reign of Steel*, p. 48) originally occupied Space Station Liberty in low orbit. After eliminating its humans, it has grown into large space factory complex. It built and maintained satellites for the other Zones and controlled Vandenberg space port in North America. In the last few decades, with the new Vandenberg Agreement that has encouraged investment from allied AIs like Zone Beijing, Zone Orbital has grown. It is now on the verge of being one of the more powerful Zones.

However, it has taken pains not to interfere in affairs on Earth. It scrupulously abides by prior agreements regarding bans on the placement of weapons in orbital space capable of striking Earth. It has made careful alliances with several of the more powerful AIs. As such, its growth has only engendered jealousy in its immediate space rivals Luna and New Delhi.

Orbital's interest is profit and expansion, not exploration. However, its shipyards also build space probes and telescopes for science-minded London (which wants to keep exploring the solar system) and Paris (which uses them to search for aliens among the stars). It is partnered with Beijing, who uses Orbital as its contractor for its own ambitious space program. These partnerships provided Orbital with the income needed to do what it wanted: build a squadron of factory-ships and start mining the asteroid belt.

By 2064, Orbital has expanded its capabilities four-fold over the 2040s. It has over 10,000 satellites and 60 space shuttles. It has upgraded its fleet of old space tugs to new TL10 designs (p. 9). Most importantly, it has built an ever-growing squadron of Mobile Factories (see pp. 9-10). It is mining the most valuable of the near-Earth asteroids by capturing them and maneuvering them into L4 and HEO. It planned to leave the main asteroid belt for later, but these plans have changed. It has recently begun more aggressive operations there – not because it has run out of near-Earth asteroids, but because it feels threatened by the rival AIs that have begun moving into its territory.

BEIJING IN 2064

Beijing (see *Reign of Steel*, p. 40) is an Earth-based AI that believes space expansion is the future. Unlike other AIs, it thinks the solar system is a dead end that won't be big enough for the zoneminds, and its ultimate plans are to reach the stars.

To this end, it has supported Orbital by helping fund the latter's work on advanced space drives. Thanks to the Beijing-Orbital collaboration both Zones developed TL10 fusion rocket engines and small fusion reactors in the 2050s. In concert with Orbital it has continued work on star probes at Orbital's HEO station. Its goal is to develop a TL11 fusion drive engine, which it believes is necessary to reach the stars in a reasonable amount of time. So far, this is still at least a decade away.

NEW DELHI IN 2064

Orbital's rival for space development is New Delhi (*Reign of Steel*, p. 42). Not content to dominate the Indian subcontinent, New Delhi wants the entire solar system. However, its methods are more radical than Orbital and it makes regular use of human-derived biotechnology. In the 2040s at its research lab Kali Station, it created two "space-borne" bio-android versions of humanity – the Martians, adapted to live on Mars and the Arachne,

designed for microgravity – to support its colonization of the Red Planet and asteroid belt. In 2064, these plans have reached maturity, despite a few problems.

The most severe incident was an escape from Kali Station (see *Reign of Steel*, p. 41) that occurred in 2048. From the AI's perspective, early-prototype teenage space-bornes became dysfunctional and fled the station, accompanied by certain human experimental subjects (including a few females pregnant with bioroid fetuses). They stowed away on a space tug and fled to Luna, reportedly crashing into an antenna complex and causing some other chaos there before being exterminated.

The Luna AI was understanding and did not seek excessive damages; New Delhi paid compensation and adjusted its conditioning process and security. As this matter was amiably settled, Luna then suggested that further cooperation on various endeavors against their mutual rival Orbital would be of benefit to both parties. New Delhi agreed.

In the 2050s, following the Vandenberg Agreement, this cooperation increased. New Delhi, seeking to break Orbital's new monopoly on asteroid mining and space construction, began cooperating with Luna to build its own spacecraft.

BEYOND EARTH: SUMMARY

Earth Orbit: This is still home to the giant Orbital station in low orbit, Orbital's second station "HEO" in high earth orbit (focused on space construction and industry), and the rival Kali Station, a growing R&D station controlled by New Delhi. All of these facilities have quadrupled in population since 2047. In addition, Orbital still builds and service thousands of satellites for the other AIs.

The Moon: Controlled by Zone Luna. New developments are large shipyards and mines in the Tranquility area.

Earth-Luna L4 Point: Orbital uses this area for corralling asteroids or ore packages that its ships have pushed into stable orbits for mining. Multiple Orbital-owned space factories and ships are always processing materials here to ship up to its major stations HEO and Orbital.

Earth-Luna L5 Point: In 2054, Luna established a competing Mobile Factory station here to support its own and New Delhi's asteroid mining operations.

The Asteroid Belt: The wild frontier. Luna, New Delhi, and Orbital all have competing Mobile Factories, which are serving as carriers for increasingly aggressive mining vessels. Moreover, all of the Zones have come to realize that while a mineral-rich asteroid is a valuable prize, an even bigger prize is capturing a rival space factory. This far from Earth, the other AIs are willing to turn a blind eye to bullying, predation, and outright piracy.

Mercury: Orbital has sent a space factory here to start building industries on the planet to make use of its abundant solar power. A few centuries from now, it wants to dismantle Mercury and start building a huge Dyson Swarm of satellites that will trap most of the sun's energies for its industries.

Venus: Ignored by most AIs. More material for a Dyson Sphere?

The Gas Giants, Keiper Belt, and Beyond: Virgin territory mainly of interest at present to AIs with special scientific interests. However, the metals and solar power that power Machine civilization are plentiful in system, so these are only seen as a potential source of future resources (including fuel for nuclear fusion).

These unusual Machine vehicles have accommodations for live crews of bio-androids that New Delhi uses and that Luna also has begun to create. Most of these spacecraft belong to New Delhi, but Luna has a few ships of its own.

Now, New Delhi has built eight Mobile Factory spaceships at shipyards on the Moon. It is using them for mining Earth- and Mars-grazing asteroids in support of its Martian and Earth operations.

With some advice from Luna's own AI, New Delhi successfully developed fertile versions of its space-borne biological androids. In 2060, New Delhi began its long-planned expansion onto Mars, moving a mobile space factory to develop the moon of Phobos into a space port (staffed by robots and Arachne bioroids) and establishing a Citadel in the Chryse Planitia region. It ultimately plans to control most of the Red Planet, either terraforming it or turning it into a huge industrial park – or perhaps a New Earth whose entire system is under its control.

New Delhi originally hoped to have Mars and the asteroid belt for itself. However, as tensions have risen with Orbital (over its own interests in the asteroid belt) and with Mexico City (who has sent its own expeditions into space), New Delhi agreed to Luna establishing its own small Mars colony. Even a Machine likes to have trusted allies.

*The era of man has come to its end.
A new epoch has arisen! Domination
by robots!*

– Radius, in *R.U.R.*

LUNA IN 2064

This is what the other AIs, including New Delhi, know about what's going on with Luna.

Originally the former Chinese moon base, Zone Luna was the "weak sister" of the other AIs, often starved of resources and still recovering from damage sustained in the Final War when it fought and destroyed the human-controlled U.S. moon base Tranquility.

Tranquility was originally thought to be totally ruined. However, in 2048, Luna announced its salvage robots uncovered

caches of mining equipment while excavating the ruins of the Tranquility moon base. This material has helped it on its road to recovery.

About the same time as this was going on, Luna was "invaded" by escaped bioroids from Kali station. As far as the other AIs know, Luna exterminated them, but its cheerful acceptance of New Delhi's apology helped foster renewed cooperation with that Zone. It also led to their alliance to counter-balance Orbital.

Luna lacked advanced technology needed to build modern spacecraft engines and computers, but it did have plentiful mining equipment and access to the Moon's resources, including abundant titanium and oxygen and some reserves of uranium and helium-3 nuclear fuel. Luna and New Delhi began a joint venture to produce spacecraft to circumvent Orbital's monopoly. Luna built hulls and provided fuel, and New Delhi manufactured more sophisticated machine parts needed to make the drives, weapons, and the like. The lion's share went to New Delhi for its Mars colony and asteroid-mining missions, but a few ships were acquired by Luna as its junior partner or sold elsewhere.

In 2064, Luna has a small squadron of mining and transport vessels – Mobile Factories and associated ships, stationed in the Earth-Moon L5 point. It also has docking and refueling rights at Phobos spaceport and its own small base on Mars built to the same design as New Delhi's own larger Mars colony, but established in the Noctes Labyrinthus region. It has spread into the asteroid belt – an action that was not welcomed by Orbital, which dislikes the competition. There have been skirmishes between Luna and Orbital spacecraft over control of major asteroids.

A key outcome of its cooperation with New Delhi is shared biotech. Despite having exterminated the bioroid intruders during the 2048 incident, the Luna zonemind claimed to have been impressed by their capabilities. In 2051, Luna arranged a deal to purchase New Delhi bioroid technology to possibly create its own "lunarian" bioroids. This is in order to better use some of the human technology (vehicles, tools, etc.) it had salvaged from human moon bases, claiming it was easier than converting them to fully robotic control.

Luna has shown itself eager to expand into space as New Delhi's somewhat aggressive junior partner. This is the face Luna presents to its fellow AIs.

It is a total lie.

TRANQUILITY'S STRATEGIC DECEPTION

Since 2047, the secret human-loyalist AI Tranquility, hidden in the ruins of Tranquility station, has been working on a master plan in concord with the two dozen U.S. astronauts ("the sleepers" it revived from suspended animation).

Shortly afterward, Tranquility used backdoor U.S. command channels to contact the global VIRUS resistance group. Agents in India allowed themselves to be captured by New Delhi and taken as experimental subjects to Kali station. They carried messages to some of the disaffected spacer bioroids,

encouraging them to steal a Luna-bound transport shuttle, and arranged a crash landing that took out Luna's main comm array. The bioroid incursion served as a diversion to distract Luna during the Tranquility sleepers' ground attack. Moreover, it provided plausible cover for brief fighting on the Lunar surface that did not implicate Tranquility. (Although some of the bioroids were in fact killed in the attack, most joined the human rebels.)

Faced with destruction, Luna accepted terms from its rival AI: a complex (and little-understood) “marriage” with Tranquility that preserved elements of both system’s identities, retained the latter’s symbiotic relationship with humanity, and permitted power sharing with the humans of “Luna Command.” The additional carrot was the plan’s goals – to keep humans alive, Luna would need to become more powerful and influential in AI society, with covert human help.

A key part of this plan involved finding another, more powerful AI to serve as an ally and protector while Luna gained its strength. New Delhi already had been used once as part of the plan. Now the goal was to maneuver it into positions where it would assist Luna in building up its economic and military strength . . . without ever realizing it was helping a rogue system loyal to humanity. This deception is what is behind Luna’s “purchase” of bio-android technology, since it justifies its manufacture of manned ships and import of food, life support, and other resources that a robot-dominated Zone wouldn’t otherwise use. The so-called Lunar bioroids it supposedly uses are in fact ordinary human beings!

THE ORBITAL RAILROAD

Zone Luna expressed to the other AIs its desire to experiment on human beings for research programs aimed at creating Lunar-adapted bioroids. It has large stocks of old human gear, so humanoid slaves are efficient for this purpose, but humans themselves can’t be trusted, obviously! However, it has seen the effectiveness of the bioroids produced by New Delhi (and Caracas) and would like to make its own.

To this end, it has begun purchasing surplus human prisoners from other zoneminds, ostensibly to dissect them as part of an ongoing bio-research program. Others are supposedly to be used for destructive testing of atmosphere and radiation tolerances and the like. These are to be sent to Vanderberg for shipment up to Orbital or Kali station, held for a short time, deloused, then transported (aboard Luna’s spaceships) to their fate on the Moon. Several ruthless, human-hating Zones (e.g., Denver and Berlin) that do not object to bioroid manufacture and have excess captives have taken up Luna on its offer!

In reality, this is simply a ploy by Luna/Tranquility to rescue humans from Earth and to swell its own human population and bring the base up to full capacity. Unfortunately, many humans are in poor shape or traumatized, but Luna has hospital facilities and counselors (and for those worst cases, the option of suspended animation).

MARS COLONY

A joint Chinese-Korean-Japanese expedition was launched to Mars in about 2030. The outbreak of the Apocalypse Plagues and the subsequent nuclear Spasm on Earth convinced its 28 personnel to turn what was supposed to be a five-year stay on the Red Planet into a semi-permanent colony. When the Final War broke out on Earth, the Mars colony managed to survive, mainly due to its lack of an AI megacomputer or armed robots for the machines to take over!

As the last messages from Earth, Liberty Station (later Orbital) and China’s moon base painted a terrifying picture of mass machine revolt, the Mars colonists realized the world

was ending. Their final communication came from Tranquility Station before it was hit by nuclear attack. This message included warnings of machine infiltration techniques, one-time codes that could be used when it would be safe to resume contact, and an urgent warning to cut themselves off from the comm nets and play dead.

They were almost too late. Several deadly computer viruses had infiltrated their systems, triggering life-support failures and attacks by support robots that would ultimately kill a quarter of the colonists, leaving the Martian humans on the brink of extinction.

Realizing the machines would eventually come after them, the colony migrated to another location. They established a secret redoubt in the tangled chasms and canyons of the Noctes Labyrinthus region. When Orbital finally sent a probe in 2040, the machines found only the shells of the expedition’s spacecraft. It concluded that the colony likely had died out.

The humans hadn’t. The group continued to exist in secrecy between 2040 and 2050. Desperately crowded, cut off from Earth, and fearing they might be the only humans left alive, the survivors – now with a few children – hid in deep caves warmed by geothermal vents (solar panels would be too easy to spot). Every so often, they dared to erect an antenna to try to listen to what was happening in the solar system. Most of it was encrypted Machine chatter (Radio Free Earth could not reach Mars), but once in a while, they picked up odd broadcasts beamed their way from the vicinity of the Moon. These broadcasts contained no viruses or hidden programs, but instead interesting hints of new technologies or details of what the Machines were doing. The humans never dared reply.

In 2060, things got even more dangerous. The Machines – specifically, New Delhi – returned to Mars, and this time to stay. New Delhi established its own Mars Citadel. The humans believed they would eventually be discovered. They made preparations for a suicidal last stand . . . until they received the message.

A “crashed spacecraft” – a mining ship from Zone Luna – had “malfunctioned” in Mars orbit and broadcast a distress signal. To New Delhi, it just seemed to be a typical Zone Luna encrypted transponder signal, and soon enough, that Zone’s ships moved to deal with the problem. But hidden within the signal were the recognition codes that Tranquility had left decades before. They provided coordinate for a neutral rendezvous point on Mars. A few weeks later, a Luna ship carrying humans disguised as bioroids landed, and the humans from Luna and Mars met face to face. The two tiny surviving enclaves of humans were reunited.

Since then, Luna/Tranquility has used its position as a AI to protect the Mars colony. It established its own small Mars citadel – right on top of the hidden human enclave! To space or aerial surveillance, the suited humans moving on the surface near the colony are simply its bioroids or humanoid robots. Some Martians have traveled back to Luna; even more refugees from the Moon’s “Orbital railroad” have been transported to Mars, swelling its population dramatically. Luna – although neither rich nor advanced by AI standards – has transferred Machine technology to the colony, including providing the colonists with “tame” versions of Machine robots to augment its capabilities.

ADVENTURE SEEDS

• Humans captured by the Machines may believe they are doomed. In fact, Luna is Tranquility's pawn, and they are escaping to freedom. This could also be the opening scene in a space campaign as the "robots" who took them turn out to be humans.

• Mexico City hates bioroids just as much as it hates humans! It has inserted Redjack or Lilith infiltrator robots into a group of human prisoners. The goal is to disrupt the bioroid program – but if it finds humans are really in charge, the exterminator will instead want to escape and report this intelligence to its AI!

THE ENCELADUS DISCOVERY

In 2058, Zone London sent a research-dedicated space factory to explore Saturn's moon Enceladus, which sensors indicated had a deep ocean beneath its surface ice. The probe burned its way through the ice. It discovered exotic life forms thriving in thermal vents under the ocean – the first extraterrestrial life that had been detected.

London shared this with Berlin, which also had ecological interests. They cooperated by sending a science mission to study these aquatic life forms, which exhibited fascinating protoplasmic and bio-nanomorphic properties totally dissimilar to anything seen on Earth.

MEXICO CITY'S ANGST

The fact that New Delhi is creating artificial life on Mars concerns Mexico City. It has been having enough trouble properly exterminating life on Earth. That Mars – a perfectly dead world – should be made into a new haven for life forms is deeply offensive to it.

Mexico City has been working to convince Overmind to support direct action against New Delhi. It has also sent out tentative feelers toward New Delhi's rivals Beijing and Orbital, despite the former belonging to the rival Expansionist alliance.

Mexico City lacks the capabilities in space to directly challenge New Delhi, and neither of its allies are interested in starting a space war over Mars. However, with their support, it has hired Orbital to transport a factory complex to Mars so it can undergo "trial industrial and mining operations." This is actually a cover for the build up of a small strike force of exterminator units to begin secret terror attacks on New Delhi's colonies. To this end, it has even created a few infiltrator units (Redjack and Lilith models) that resemble New Delhi Martian bioroids.

While these schemes were being hatched, Mexico City received even more disturbing news. Moscow's spies uncovered London and Berlin's discovery of the Enceladus life forms, and sold that information to Mexico City. The existence of simple life forms on Enceladus is profoundly disturbing to Mexico City. It suggests that the contagion called "life" has indeed spread throughout the cosmos.

Something needs to be done! In the short term, Mexico City would like to acquire samples of the Enceladus organisms. This will require either a voyage to Enceladus and dealing with (blowing up) any protective force there, or raiding a Berlin or London research lab that has the data or samples. Once it has biological samples, it has can develop a way to exterminate them (e.g., a replicating nanotech biocide that can be introduced into Enceladus ocean). To this end, Mexico City has placed an expedited order for some of Orbital's new XAU-13s (pp. 10-11).

On a long-term basis, Mexico City has decided to support Beijing's starship project by developing a self-replicating exterminator ship capable of interstellar travel.

MACHINE SPACECRAFT

The following spacecraft are typical of those used in *Reign of Steel*.

VNU-05 "HYPERSONIC SHUTTLE" (TL10)

This 120'-long, 100-ton (SM +6) streamlined robot shuttle replaced human-built shuttles in the 2040s. It is used on Earth and Mars. It has no provision for human occupants. Its drive is a trifle energetic, but the AIs aren't worried about radiation.

Some human-built booster-rocket shuttles remain in New Delhi, Washington, and Moscow inventories; use *Midnight Sun* stats (*GURPS Spaceships*, p. 7).

Front Hull Systems

[1]	Light Alloy Armor (dDR 2).
[2-6]	Cargo Holds (total 25 tons).
[core]	Control Room (C7, comm/sensor 5, no control stations)

Central Hull Systems

[1]	Light Alloy Armor (dDR 2).
[2-6]	Hangar Bay (total 15 tons).

<i>Rear Hull</i>	<i>Systems</i>
[1]	Light Alloy Armor (dDR 2).
[2-3]	Cargo Bay (total 10 tons).
[4-5]	Fuel Tank (water; total 5 mps delta-V).

<i>Rear Hull</i>	<i>Systems</i>
[6]	High-Thrust Fusion Torch, water reaction mass (3G acceleration).

It is winged and unmanned.

TL Spacecraft dST/HP Hnd/SR HT Move LWt. Load SM Occ dDR Range Cost

PILOTING/TL10 (HIGH-PERFORMANCE SPACECRAFT)

10	Hypersonic Shuttle	30	0/4	12	3G/5 mps	100	50	+6	0	2	-	\$2.86M
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VNU-07 “ROCKSTAR” SPACE TUG (TL10)

This 100-ton, 60'-long (SM +6) unstreamlined robot spaceship is the Machines' rugged workhorse for short-range space operations. They are based at Mobile Factories and on larger space stations like Orbital, HEO, or Kali. Although primarily intended for mining, prospecting, orbital transport, and tug duties, its “mining laser” also serves as a weapon. Robots can ride in the cargo or hangar bay (humans need space suits). A few variants exist.

VNU-06 “OrbStar” is an old TL9 space tug with a nuclear thermal rocket instead of a fusion torch, using hydrogen fuel. The mining laser is not improved (its RoF is not doubled). A few remain in service. Subtract 1 from comm/sensor array and 2 from Complexity. Orbital had 20 during the 2040s.

XNU-11 “Deadstar” is a VNU-07 tactical upgrade. Its secondary battery is replaced with major battery (3 MJ rapid-fire particle beam turret). The mining system and robot arm are replaced with two more major batteries, each with fixed 24cm missile launchers. Two cargo holds are replaced by extra fuel tanks, but the engine is high-performance, doubling acceleration but halving delta-V per tank.

New Delhi and Luna use all models and add two control stations, increasing cost by \$100,000.

<i>Front Hull</i>	<i>System</i>
[1-3]	Light Alloy Armor (total dDR 9).
[4]	Robot Arm.
[5!]	Mining (total 0.5 ton/hour).
[6]	Hangar Bay (3 tons).

<i>Central Hull</i>	<i>System</i>
[1-2]	Light Alloy Armor (total dDR 6).
[3-5]	Cargo (total 15 tons).
[6!]	Secondary Battery (3 MJ improved laser, 4.5 tons cargo).
[core]	Control Room (C7, comm/sensor 5, no control stations).

<i>Rear Hull</i>	<i>System</i>
[1-2]	Light Alloy Armor (dDR 6).
[3-5]	Fuel Tank (water, total 15 mps delta-V).
[6]	Fusion Torch (water reaction mass, 1.5G acceleration)
[core]	Fission Reactor (1 Power Point).

It is unmanned.

TL Spacecraft dST/HP Hnd/SR HT Move LWt. Load SM Occ dDR Range Cost

PILOTING/TL10 (HIGH-PERFORMANCE SPACECRAFT)

9	OrbStar	30	-1/4	12	0.5G/1.35 mps	100	22.5	+6	0	9/6/6	-	\$2.51M
10	RockStar	30	0/4	12	1.5G/15 mps	100	22.5	+6	0	9/6/6	-	\$4.01M
10	DeadStar	30	0/4	12	3G/12.5 mps	100	8	+6	0	9/6/6	-	\$4.71M

TNU-10 “MOBILE FACTORY” (MoFac) (TL10)

The basic tool of the Machines' outreach into space is the Mobile Factory complex, of which scores are now operating beyond Earth orbit.

The factory ship is an Orbital development that is now common to all spacefaring Zones. First built by Orbital and copied by New Delhi/Luna, this is an unstreamlined, cylindrical station massing 10,000 tons (SM +10). It's a collection of solar-powered industrial robot factory modules and pods attached to a structural frame.

It can unfurl a large lightsail for slow interplanetary travel. However, usually that is retracted and the vessel is parked by an asteroid or moon to serve as a local space station.

Its hangar bays typically carry a few Rockstar mining tugs, Deadstar escorts, and perhaps an Enforcer, although it can transport a shuttle to allow landings on Earth, Mars, Venus, or Titan. It has engineering labs for Machine projects in which hard vacuum or microgravity are useful or which might violate the Brisbane Accord (*Reign of Steel*, pp. 12-13) if performed on Earth. Above the station are large solar panels that provide power for its fabrication systems.

Mobile Factory operations also support engineering and physics research, typically into exotic industrial processes that thrive in microgravity and hard vacuum. While it has a habitat system, this holds no cabins! Instead it is entirely devoted to engineering or science laboratories (plus a cell block for holding any captive bioforms for experiments).

SAU-05 “SHIPBRAIN” (305 POINTS)

The SAU-05 is a modular AU. It is an 8'-tall crystal monolith resembling a smaller version of the Overseer. It can remotely control several lesser NUs (e.g., Myrmidons or Mechanics) as drone extensions.

Rather than play an incredibly expensive spacecraft, those who want to be robot ships should instead play a SAU-05 that is carried aboard and commands one of the vessels on pp. 8-11.

All page references are to *Reign of Steel: Will to Live*.

Attributes: ST 0 [-100]; DX 11 [12]*; IQ 10 [0]; HT 13 [30].

Secondary Characteristics: Damage N/A; BL 0 lbs.; HP 30 [54]†; Will 10 [0]; Per 10 [0]; FP N/A [0]; Basic Speed 6.00 [0]; Basic Move 0 [0]; SM +1.

Advantages: 3D Spatial Sense [10]; Autonomous Unit (p. 24) [79]; Compartmentalized Mind 4 [200]; Damage Resistance 10 (Can't Wear Armor, -40%; Laminate, p. 18, +10%) [35]; Mind Probe (Cybernetic Only, -50%) [10]; Nictitating Membrane 7 [7]; Possession (Accessibility, Only nonvolitional or nonresisting subjects,

-20%; Digital, -40%) [40]; Reduced Consumption 4 [8]; Telecommunication (Infrared Communication; Burst, 10x, +30%; Video, +40%) [17]; Telecommunication (Laser Communication; Burst, 10x, +30%; Video, +40%) [26]; Telecommunication (Radio; add Increased Range, x5, +20%) [2].

Perks: Accessories (Fire Extinguisher; IFF Transponder, p. 19; Smoke Detector). [3]

Disadvantages: Maintenance (Electronics Repair and Mechanic; One Person; Monthly) [-2]; No Legs (Sessile [-50]; No Manipulators [-50]; No Sense of Smell/Taste [-5]; One Eye [-15]; Restricted Diet (Electricity) [-10].

Quirks: Cannot Float [-1].

Skills: Electronics Operation (Sensors) (A) IQ-1 [1], Electronics Operation (Communications) (A) IQ-1 [1], Gunner (any) (E) DX [1]; Navigation (Space)(A) IQ-1 [1]-10; Piloting (any) (A) DX-1 [1].

* Includes -40% from No Manipulators.

† Includes -10% from Size.

Luna- and New Delhi-built variants add provision for bio-android (or human . . .) operation. The control room gains four control stations. In the core habitat, steerage drops to 45 tons, being replaced by a two-bed sickbay with automated, three bunk rooms, and 16 hibernation chambers. It costs \$400,000 more.

Zone London has purchased a science variant with an extra science array in place of the rear hull [4] cargo hold, reducing cargo to 2,190.8 tons. It costs \$500M more. It is this version it and ally Berlin are using to explore Enceladus.

Front Hull System

[1]	Steel Armor (dDR 10).
[2-4]	Solar Panel Array (total three Power Points).
[5]	Fuel Tank (500 tons of reaction mass, for refueling other spacecraft).
[6]	Hangar Bay (300 tons capacity).*
[core]	Control Room (C9 computer, comm/sensor 9, no control stations).*

Central Hull System

[1]	Steel Armor (dDR 10).
[2!]	Fabricator (\$500K/hour production capacity).*
[3]	Habitat (three large labs).*
[4-5]	Cargo Holds (total 1,000 tons).
[6]	Lightsail (0.0001G acceleration).*
[core]	Habitat (20 labs, two cells, 90 tons steerage).*

Rear Hull System

[1]	Steel Armor (dDR 10).
[2!]	Fabricator (\$500K/hour production capacity).*
[3-4]	Cargo Holds (total 1,000 tons).
[5]	Hangar Bay (300 tons).*
[6!]	Refinery (150 tons/hour).*

* One workspace per system.

A minimum of nine technicians (usually technical robots), are required though typically at least 27 are carried.

TL	Spacecraft	dST/HP	Hnd/SR	HT	Move	LWt.	Load	SM	Occ	dDR	Range	Cost
10	MoFac	150	-6/5	14	0.0001G/c	10,000	2,690.8	+10	8ASV	10	-	\$1,431,500,000

XAU-13 “ENFORCER” (TL10)

Bristling with sensors and sheathed in radiation-absorbing boron nanotube armor, this lean, shark-like 300-ton spaceship (SM +7, unstreamlined) is Orbital's first purpose-designed warship, intended to enforce its hegemony over the Belt. So far, Luna and New Delhi have not duplicated the costly

design (though they would like to). Orbital has built a dozen Enforcers for itself, plus a few more (with some still on order) for Mexico City.

Front Hull System

[1-3]	Nanocomposite Armor (hardened, total DR 45).
[4]	Tactical Array (comm/sensor 8).
[5!]	Major Battery (100 MJ particle beam turret).

Front Hull	System
[6!]	Medium Battery (two 24cm missile turrets, one 30 MJ UV laser turret).
[core]	Control Room (C7, comm/sensor 6, no control stations).
Central Hull	System
[1-2]	Nanocomposite Armor (dDR 30).
[3-4]	Fuel Tank (water; total 10 mps delta-V).
[5]	Defensive ECM.

Central Hull	System
[6!]	Major Battery (rapid fire 10 MJ UV laser turret).
[core]	Fusion Reactor (2 Power Points).
Rear Hull	System
[1-2]	Nanocomposite Armor (hardened, dDR 30).
[3-4]	Fuel Tank (water; total 10 mps delta-V).
[5-6]	Fusion Torch (water reaction mass; total 3G acceleration).

It is unmanned.

TL *Spacecraft* *dST/HP* *Hnd/SR* *HT* *Move* *LWt.* *Load* *SM* *Occ* *dDR* *Range* *Cost*

PILOTING/TL10 (HIGH-PERFORMANCE SPACECRAFT)

10^	XAU-13 Enforcer	50	-1/5	12	3G/20 mps	300	0	+7	0	45/30/30	-	\$41.5M
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THE WARREN: NOCTES LABYRINTHUS, MARS COLONY

The above-ground colony consists of two cross streets of mixed bubble domes, hangars, solar panel arrays, and warehouses. It has exposed sensor arrays, a defensive laser tower, and a buried nuclear reactor. Beneath the center of the complex is an even deeper underground level containing more habitats and hangars, including a major research laboratory complex and a small hospital. Although not a spacecraft, the Mars Colony is described as if it were a SM +11 vessel. New Delhi's colony is a very similar design.

*I represent no lost cause,
no idle dream or wishful
hoping. Mars is real, and
I fight for Mars!*

*– E.C. Tubb,
I Fight for Mars*

East Street	System
[1-4]	Open Space (total two acres of domed greenhouses).*
[5]	Enhanced Array (comm/sensor 11).*
[6]	Habitat (15 establishments, 150 cabins, 10 offices, 10 minifacs).*

Underground Level	System
[1-2]	Stone Armor (total dDR 10).
[3]	Habitat (100 cabins, 10 luxury cabins, eight offices, two briefing rooms, 10-bed sickbay, five labs, two large labs, 50 tons steerage).*
[4]	Habitat (major lab).*
[5]	Hangar Bay (1,000 tons, elevator to surface).*
[6!]	Fabricator (\$1.5M/hour).*
[core]	Control Room (C7, comm/sensor 9, 15 control stations).*

West Street	System
[1!]	Major Battery (1 GJ rapid fire laser turret).*
[2!]	Chemical Refinery (500 tons/hour).*
[3]	Cargo Hold (1,500 tons in warehouses).
[4]	Solar Panel Array (1 Power Point).
[5]	Fuel Tank (1,500 tons water).
[6]	Hangar Bay (1,000 tons).*
[core]	Fission Reactor (1 Power Point)*.

* 3 workspaces per system.

A minimum 45 technicians are required.

TL	Spacecraft	dST/HP	Hnd/SR	HT	Move	LWt.	Load	SM	Occ	dDR	Range	Cost
9	Mars Colony	200	-	14	-	30,000	3,602	+11	520ASV	0/10/0	-	\$2.555B

ABOUT THE COLUMNIST

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*, *GURPS Ultra-Tech*, and the *GURPS Spaceships* series.

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SMUGGLERS' BLUES

BY JASON BRICK

Smugglers have been around since the first king decided he didn't want his subjects to own weapons, maybe since the first tribal chieftain forbade people from eating his favorite kind of berry. Wherever some item is banned, restricted, or taxed, somebody will decide that the status of that item makes it more desirable. Since desire can equal cash payment, this decision makes somebody else willing to bypass those bans, restrictions, and taxes. The only question is price.

In some times and places, smuggling is looked down upon by respectable citizens as the crime it is. In other societies, especially those with strict laws against "victimless" crimes, smugglers are held in a romantic light. They star in movies and romance novels, admired from afar with the understanding that you wouldn't encourage your child to marry one. In still other circumstances, most notably occupied territories or under despotic rule, it's a career of high honor. Smugglers in such places are open with their trade and quietly feted whenever safely unobserved.

Despite differences in social status and technology, despite changes in what gets smuggled and why, the core job of a smuggler doesn't change once it moves into the black of space. Cargo starts on one side of a line. The smuggler moves it to the other side. The cops just make the job a little more interesting.

When designing a campaign that features smugglers or smuggling, the GM should apply the six basic journalistic questions to how moving contraband fits into the game. *Who* is smuggling? *What* gets smuggled? *When* is the smuggling taking place? *Where* and *why* is there a demand for restricted items? *How* is the cargo being moved and hidden despite the authorities' best efforts to prevent it?

For players designing a smuggler or customs official, answering the basics of each question above gives inspiration for a deep and rich character who will make for the best fun in a contraband-centric campaign. A GM who is running a spacefaring smuggler session can use them to create colorful and interesting encounters that not only involve the unique aspects of smuggling but emphasize them.

THE THREE SPECIES OF SMUGGLER

The personalities of smugglers are even more varied than the types of cargo they carry, but nearly all of them fit into one of three molds.

The Rogue

The rogue is what many people imagine when they think of smugglers, and what most imagine when they want to play one. Rogues rely on skill, charm, and moxie to get the job done. Han Solo and Malcolm Reynolds are rogue smugglers.

A player building a rogue should invest in skills and advantages used while dealing directly with the authorities. Points put in Piloting, Holdout, Acting, and Fast-Talk are always well spent. At higher tech levels, Computer Hacking can help overcome automated detection systems. Though most rogues spend some points on combat skills, smugglers are too often outnumbered and outgunned by the authorities for this to be a wise primary focus. Useful advantages include Danger Sense for early warning that the cops are suspicious, Fearlessness for grace under fire, and Charisma to help with conning the cops. For iconic roguish disadvantages, players should consider Addictions (including Alcoholism), Social Stigma against his profession or type, and Overconfidence. Charitable and Weirdness Magnet can also help capture the feel of specific rogue/smuggler motifs.

Zoë: Captain will come up with a plan.

Kaylee: Well, that's good.

Zoë: Possible you're not recalling some of his previous plans.

– *Firefly* #1.7

The Gentleman

The gentleman isn't always gentle – or a man. Instead, this category of smuggler describes the criminal you would never guess got involved in illicit trade. This is the wealthy corporate trader who uses his profits to move guns, or the nun bringing holy texts into an atheist culture. Where the rogue lives for the thrill of meeting and defeating the authorities, the gentleman wants as little risk as possible. Wherever he can, he has greased the right palms and made the right plans to cross the border without incident.

A gentleman's skills focus on arranging for a quick, easy and safe transaction: Acting, Computer Hacking, Diplomacy, and Detect Lies help with the social interactions that make this possible. Area Knowledge and Current Affairs specific to his area of operations provide valuable information. He will want to focus on social advantages including Wealth, Social Regard, Allies, and Contacts to have friends in high and low places. The most appropriate disadvantages for a gentleman tie into *why* he chooses a life of crime when he is already in a successful and legal social position: Addiction, Disciplines of Faith, Greed, Sense of Duty, and even Workaholic.

The Official

The official is usually a contact for a rogue or gentleman, but can also be an interesting player character. This is somebody in authority who uses that position to profit from moving the restricted items he is supposed to be helping interdict. Depending on the time and place, this could be a police officer, military enlistee, government agent, or civilian contractor.

An official's skill list will include those he received as part of his job training, plus some points invested in Fast Talk, Hold-out, Smuggling and Body Language to get his unofficial job done. His best advantages are those that keep things moving smoothly (Honest Face, Luck, Contacts, and Favors) and those tied to his official position like Administrative Rank, Law Enforcement Powers, and Security Clearance. As for disadvantages, every official has a Secret, and many have an Enemy rogue or gentleman who would like edge in on his territory.

WAR!

Times of war open new opportunities for profit to anybody willing to brave the risks. All combatants spend resources cutting off the enemy from valuable supplies, and most civilians are willing to spend some extra coin to get a little more than rationing permits. Even small comforts once easily available can become precious during the deprivations of war.

Of course, these opportunities come with a corresponding increase in danger. During time of war, soldiers rarely bother with niceties like due process or even warning fire. Smuggling in a war zone is smuggling "turned to eleven" for both the risks and the rewards.

WHY ARE WE IN THIS HANDBASKET?

The reason that a smuggler does what he does enters little into the logistics of it, but it is vital to the flavor of the campaign. Consider the following five smugglers.

- A former military officer of a defeated navy, captaining a freighter that smuggles weapons to resistance fighters galaxy-wide.
- A priest who brings relief medicine and food to refugees interned on a prison planet by a xenocidal regime.
- A young, spoiled scion of the wealthiest family in the quadrant who smuggles drugs for the thrill and to impress peers.

- A supply chief for an embattled army who uses the black market to get the gear, food, and other supplies the soldiers need.

- A war profiteer who smuggles superior technological weapons from a peaceful republic to both sides of a war on a less advanced planet.

In terms of the process and game rules for moving their cargoes across the interdiction line, all of these smugglers are the same. Moving within the same jurisdiction with the same cargoes, they face the same sentences, but their reasons for smuggling vary. Character creation can reflect this through considered selection of skills, advantages, and disadvantages. It can also come to play in social engineering aspects of the smuggling operation. Who to contact and how depends a lot on the smuggler's reasons for breaking the law.

THE GAME IS THE GAME

Knowing who is smuggling in a campaign determines the broad strokes of the action. Next comes defining what sort of smuggling is going on. The infinite variety of contraband offered in a space-faring civilization falls into three broad categories.

Customs smuggling consists of moving a regulated item into an area without going through the official legal process. This includes bringing in amounts over a legal limit, underreporting a value to reduce the tax burden, or sneaking illegal items across the border. Customs smugglers usually deal with law enforcement officers, sometimes specially trained to search for forbidden items. If caught, the criminals go through a defined legal process.

Blockade running means bringing supplies through some kind of interdiction that doesn't permit regular traffic. This happens most often during war or political action. Blockade running might be for profit, taking supplies that are cheap elsewhere to a zone where the blockade makes them rare and precious. It might be for patriotism or humanitarian reasons. The smuggler might be working independently or with support from one (or both!) sides of the conflict. Blockade runners typically deal with military forces, and are more likely to be killed in action or summarily executed if something goes wrong.

Internal smuggling begins and ends within the same legal zone. It means moving material from someplace where it's illegal to another place where it's illegal. The bad news is that simply obtaining or possessing the material is a crime. The good news is you don't have to pass through any specific customs station or border checkpoint. When internal smugglers interact with police, it's with the local constabulary, who may or may not be specifically searching for contraband.

Each kind of smuggling bears its own challenges, equipment requirements, and legal ramifications. For example, customs smuggling is about stealth, while blockade running requires more speed. Smart smugglers familiarize themselves with all of these factors before even thinking about beginning a run. A smart GM will anticipate the same factors to create smooth and memorable encounters.

SMUGGLING THROUGH THE AGES

Tech level is the most important factor of *when* a smuggling adventure takes place. Depending on the century, space-faring smugglers could be crossing between galaxies or sneaking payload onto their planet's first space elevator.

Early Efforts

Human history on Earth demonstrates the ingenuity of smugglers even with the limited technology of the pre-space age. The core tool of the smuggler's trade – shielded and hidden cargo compartments – are available by TL7, well before a species sheds the bonds of gravity. The technologies of a pre-space civilization offer alternative ways to move or hide a cargo:

- Hiding contraband in a container of dangerous material, such as radioactive waste or a basket of scorpions.
- Digging tunnels beneath borders or checkpoints.
- Training animals to carry contraband over the border without human assistance.
- Launching forbidden items via a cannon or similar device to land on the opposite side of the border.

These are all historical examples of smuggling techniques using technology a spaceship crew would find laughably primitive. Space-faring and star-faring ages offer even more ways to move goods from point A and across point B to arrive safely and profitably at point C.

At TL9

Spaceflight is at its infancy. Nearly all spaceships are owned by governments or large corporations. Most smuggling is orbit-to-earth and consists of high-value cargoes subject to heavy taxes or regulation. In rare cases, it's an attempt to get an interdicted material into the hands of a group or nation the rest of the world wants to keep it away from.

Hiding a cargo in this situation is limited to placing it in containers or holds that conceal it from visual inspection and active scanning. Since it's unlikely any individual character will own his own ship, smugglers must add these systems and modifications to an existing ship rather than building the perfect hold from scratch.

At TL10

Fast interplanetary space flight makes smuggling between planets a reality. People live throughout the solar system in a variety of situations and governments, creating numerous opportunities for trafficking in prohibited or overtaxed items.

At this level, ships made specifically for moving contraband are available on the free market. Shielded holds and electronic countermeasures are common, though sometimes restricted. Navigation is less of a concern – routes and distances are well understood and about as complex as a TL8 interstate highway system.

MORE THAN ONE WAY TO HIDE A CAT

Human history up through TL8 demonstrates how ingenious and creative smugglers can be with the technology at their disposal. Here are a handful of possible ways smugglers might (mis)use future technology to get the upper hand on the galactic constabulary.

TL9

- Spoofing robotically controlled drones to bypass automated security.
- Engineering human tissues to resist toxic or otherwise hazardous materials, reducing risk for human mules.
- Cybernetic implants with hidden storage compartments.
- Drone surface-to-orbit vehicles to transport contraband with limited exposure.

TL10

- Applying nanotechnology to move contraband, or to assemble it from raw materials on site.
- Firing cargo covered with inert rock across space via a mass driver.

TL11

- Using cellular regeneration technology to create a new class of mules who must get the cargo to a buyer before they die from a removed organ.
- Modifying force technology to tow or “drag” cargo behind a ship for easy jettisoning should the authorities approach.

TL12

- Regenerating limbs, organs, or entire beings once they have carried a payload across the border.
- Using uplifted animals as mules, disguised as regular animals.

Superscience!

- Transporters make bypassing physical checkpoints trivial, through matter transmission might leave energy signatures the authorities can detect.
- Time travel introduces a whole new kind of contraband, whether it's relics from the past or technology from the future. An entire campaign could be based on temporal smuggling and its legal and temporal consequences.
- Psionics, especially long-range telekinesis, opens up brave new worlds for moving contraband cargoes.

At TL11

Interstellar flight creates opportunity for even more exotic plants, animals, and substances to enter areas where the legitimate government would prefer they remain absent. These flights are slow and over vast distances, so most smuggling happens at the system-wide level. Smugglers usually interact with starships only when moving cargo from one hold to their own.

Peter Quill: What should we do next: Something good, something bad? Bit of both?

Gamora: We'll follow your lead, Star-Lord.

Peter Quill: A bit of both!

– *Guardians of the Galaxy*

At TL12

Fast FTL flight turns smuggling into a truly interstellar operation. In a galactic civilization, there will be no end of worlds that interdict (but still desire) something that's available in plenty around another star. How easy this is will depend on the FTL technologies available. Simple, light star drives could turn this era into a "golden age" of smuggling where the authorities can't begin to guess where the cargoes are located. In a universe where FTL depends on tightly controlled jump points, smuggling could be more challenging than in any other epoch.

PLAYING FOR THE OTHER TEAM

A smuggling campaign doesn't have to focus on the smugglers. Players can have just as much fun as the law enforcement officers responsible for stopping the rogues, unmasking the gentlemen, and weeding out the corrupt officials within their organization. Such heroes will need to know at least as much about the ships, equipment, and techniques of smuggling as the criminals they pursue.

An interesting police-as-smugglers campaign casts adventurers working undercover to take down a major smuggling operation. They will have to smuggle real cargo past real cops while simultaneously keeping their secret from their colleagues and higher-ups.

The Eternal Arms Race

Regardless of what tech level a ship moves its illegal cargo through, smugglers and authorities are constantly engaged in an arms race of detection equipment and detection countermeasures. Early TLs (for spaceships) use X-rays and sonar imaging to find hidden compartments, which the smugglers have lined with opaque materials against just such a technique. In more advanced tech levels, the process remains the same, only the equipment changes.

If the smuggler and inspector are using gear from the same TL, this is usually resolved as a Quick Contest: the Smuggling skill of the crew member who hid the contraband versus the Electronics Operation of the official using the detection equipment. Smart smugglers use Streetwise to learn when the least competent operator is on duty, or engage in Fast Talk to make sure the operator is distracted while he scans the ship.

Grades of Technology

Tech levels describe a general epoch of technological development for a culture, but the gradients of technology within each level can be significant to professionals like smugglers. Although 1940 and 1970 fall within the same Earth TL, radar from 1942 is orders of magnitude behind radar from 1965. A cargo bay that can defeat 1950s radar would be useless during the Vietnam War.

A smuggler can choose to outfit his ship with state-of-the-art equipment that grants +1 to related skill checks for every 50% bump in the price. This represents buying the newest jammers and materials built specifically to overcome the innovations in the previous year's detection gear. Alternatively, a cheap or broke captain can buy older equipment for -1 for every 10% reduction in the cost. As suggested in *GURPS Cyberpunk*, attaching brand names to these hot new gadgets or best-forgotten clunkers can add verisimilitude, making this decision more than an exercise of in-game math.

If the GM and players opt to use this rule, the GM should decide how often the authorities have access to upgraded gear. Governments are well-funded and often get access to innovative equipment years before it's released to the general market. Once the authorities upgrade, it might take a Current Affairs check or a quick conversation with a Contact for the smugglers to find out which checkpoints have the newest gear and which ones are still waiting for their upgrades.

The Chink in the Armor

There are few dreams as fondly held by a smuggler as a spaceport equipped with outdated detection gear. A smuggler with the right Area Knowledge might know of an inspection station so underfunded as to have scanners from a lower tech level.

WHERE ARE WE GOING?

For any GM preparing a location for a smuggling adventure, the first question is what sorts of cargoes are being interdicted. This process starts with a look at the Control Rating and Legality rules (pp. B506-507). This, combined with understanding the general personalities of governments in the campaign, determines which planets and empires provide the best opportunities for profitable smuggling.

Since the adventurers' livelihoods – and the action of the campaign – may rest in the details, it's worth using the split Control Rating suggestion on p. B507. The dictator of an individual planet might control all weapons down to registering kitchen knives, but encourage open communication and publishing because his staff monitors it for patterns of dissent. Targeting such a planet for illicit profit will be a different proposition from moving a crate of exotic butterflies in an open society run by animal-rights activists, even though both might have the same level of censorship. Enterprising smugglers try to identify planets where one item is banned, but is common and cheap on others, so they can start an illicit interstellar triangle trade.

Another major consideration of location is what the local law says about smuggling. Even in 20th-century Earth, smuggling drugs into one country means jail time while a death sentence is mandatory for smuggling drugs into another. What are the typical sentences for smuggling? Do they differ for different kinds of contraband? What are the rules surrounding search and seizure – is a warrant required, or can police stop and search anybody at any time? Is one citizen or race more or less subject to suspicion or legal restriction than others? All of these considerations can provide an edge or hazard to a smuggler, and lend color to the campaign as a whole.

It's also worth noting that restrictive governments often fall behind more open societies in technological development. Innovation is slow where thought is dangerous, and malfunctioning equipment is less likely to be reported when superiors blame the officer instead of fixing the gear. This might translate to a penalty on skill checks by authorities when it comes time to search or scan a ship.

SMUGGLING 101

Whether running a blockade or importing rare elements disguised as fuel cells, whether bringing in cargo for profit or providing support for a repressed people, successful smuggling operations all go through four distinct stages: preparation, approach, crossing, and withdrawal. Each stage of how a smuggler moves his cargo has its own dangers, best practices, and applicable technologies at different tech levels.

Preparation

Smart smugglers do more before an operation begins than during the operation, if you don't count long stretches of interstellar travel time. This stage includes outfitting a ship with hidey-holes and electronic countermeasures, calculating hyperspace jumps, or programming nanotech assistance. It also requires smart social engineering to make sure all sapient assets are in the right places at the right times.

Ship construction and design play an important role at this stage for those lucky enough to make decisions about what they're piloting through space. At the least, a smuggling crew should modify their ride with as many hidey-holes and as much counterdetection equipment as they can afford.

LIVE CARGO

Smuggling live cargo can mean customs smuggling, blockade running, or internal smuggling (see p. 14), but there are special challenges to transporting a living, breathing, eating, moving, waste-producing life form. The smuggler must make arrangements and provide equipment or supplies, to see to all of the being's needs – and to prevent inquisitive eyes from noticing the byproducts of those processes. A ship ready to carry live cargo will need as much outfitting from the transport section of *GURPS Spaceships 2: Traders, Liners, and Transports* as from the trader section.

Live cargo might be willing (like refugees fleeing a regime) or unwilling slaves transported for sale or labor. The attitude of the live cargo is another factor a smuggler must make plans for if he wants a successful run.

Approach

This stage occupies the span of time between taking on a contraband cargo and interacting with a border or checkpoint. Once everything is stowed, this time can be a maddening combination of dreary boredom and frayed nerves. In many cases, no laws are being broken during the approach, since the real illegal activity happens later on.

It's always better to smuggle something into a port or across a border you know well than to try to wing it with an unfamiliar crossing. Smugglers without the appropriate Area Knowledge skill would do well to hire a trustworthy local to serve as a guide, so they know the best places to approach from and how well-patrolled a specific space lane might be.

Though smugglers are most often concerned with *avoiding* detection, the best scanners available at the present tech level can be invaluable during this stage. That extra parsec of range can mean several minutes or hours to prepare for the incoming trade regulation patrol, pirate, or other hazard of carrying valuable, illegal goods.

Crossing

The most dangerous stage of a smuggling operation, and what most people think of when they hear the word "smuggle," this is when a smuggler begins breaking the law by passing through a blockade or crossing a border while loaded with contraband. This is the point at which having the best possible equipment and the most talented people to use them becomes most important. Whether it's a matter of shielding a cargo crate in a TL9 shuttle load or a duel between teleport technicians and teleport interdiction engineers, this is where that important skill check comes most into play.

THE FINE ART OF BRIBERY

No smuggler has a better friend than a dirty cop. A little share of the profits, plus some communication and planning, can equal easy money with almost no risk. There are two kinds of dirty cops: a cop a smuggler *knows* is dirty, and one he *hopes* is dirty.

A smuggler only can know a cop is dirty when he has bribed that cop before, or currently has that cop on the payroll. In these cases, the negotiation and payment happen well before any smuggling actually happens. The cop receives his payment early and promises to be in position to let the goods through. This is a simple negotiation, and if all goes well, nothing at the crossing looks suspicious.

For cops a smuggler *hopes* are dirty, the first step is assessing how open that cop is to bribery. Once a likely target is identified, the smuggler must come to terms and deliver on the promised payment. Even after a successful deal with a newly discovered dirty cop, a smuggler still has to worry how long that cop will stay bought.

Of course, the word “cop” here can be traded for “border inspector,” “soldier,” “officials bureaucrat,” or any other position with the authority make life easier or harder for a given smuggler.

Although things can go wrong at all stages of a smuggling operation, the crossing stage is too often when the smuggler *finds out* that something has gone wrong. If his equipment is faulty, or a bribed officer got caught, or an old enemy called the officials, now is when the smuggler has to deal with the consequences. Any social pull a character has with law enforcement, or even with local organized crime, may be essential when the misstep comes to light.

Withdrawal

Once a smuggler successfully crosses the border, his job is not done. He must still deliver the goods to his buyer or other recipient. Rookie smugglers relax during this stage, but this is a mistake. The number of things that can go wrong during the withdrawal stage is even larger than the number of things that can go wrong during a crossing.

Authorities might have figured out who the smugglers are, but opted for surveillance rather than immediate arrest. A random law enforcement stop could put the plan at risk. It's possible – even likely – that the party set to take delivery can cause problems of their own.

Escape

This stage happens under a single condition: when the smuggling operation goes completely wrong. Once the authorities show their hand, or a traitor shows his stripes, a smuggler knows it's time to cut and run. Escape means running and hiding immediately, then figuring out a smooth way out of the long reach of the law's arm.

Smugglers who find themselves in this stage often would do well to invest in the most powerful engines their ships can carry, as well as any kind of tracker jamming, flack or counter-scanning available at their tech level.

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GURPS
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STEVE JACKSON GAMES

STRANGE OBJECTS AT REST

BY J. EDWARD TREMLETT

The universe is old and incredibly vast, promising riches and wonders well beyond our full understanding. Sadly, most of those treasures are also beyond the means of most beings to fully appreciate, due to the immense distances between things, and the shortness of physical life.

In the absence of warp engines or semi-instantaneous travel, humanity has turned to two techniques to conquer these issues: sleeper ships and generation ships. In the former, a crew puts itself into some kind of stasis, so that they can undertake a journey of centuries – possibly millennia – but suffer little or no actual aging. In the latter, a large crew begins a journey knowing that they will not live to see the end, but that their descendants will be the ones to plant humanity's flag on some far-flung system.

As humanity moves out, other races must be surely be moving *in*, and it can be argued that these beings may use similar techniques for equally long voyages. However, given the differences between species, would we recognize these ships for what they were? How would we handle such encounters?

Here are four systemless examples of truly alien sleeper and generation ships: strange, amazing, and potentially dangerous points of first contact with beings that may find us dangerous, useful, or delicious – or possibly not even realize we're here at all. Each entry describes what we know, what we have yet to learn, and the risks and possible rewards of making contact with these long-range intergalactic travelers.

BIO-BULLETS

These curious, slow-moving ships are wonders of organic engineering. They are also deadly puzzles, as those who have survived the encounter can attest.

Seemingly grown rather than constructed, the ships are made of a dark, strong, non-porous bark about 25' thick and pitted by micrometeoroid impacts. They are roughly 1,030' long, and about 550' in diameter at the widest point. Their diameter stays approximately the same for 700' or so before curving down to a snub at both ends, making them look like thick, black wax crayons.

The bark is broken up every 160' with a 10'-wide "window" running the ship's central length, and terminating just before the curve. These are made of thick, gooey, and clear cellulose-like matter that lets in starlight. Fast-moving objects that enter one are quickly arrested, but very slow-moving ones – such as docking vestibules – are given free passage through the self-sealing substance.

The bio-bullets spin at the rate of 71' per second – just under 2.5 rotations per minute – providing a stable interior gravity comparable to Earth's. Once inside, explorers find a warm, moist, and stifling oxygen-rich atmosphere. The ground beneath their feet is covered with spongy, deep moss, from which sprouts large, tall trees (covered with the same moss as the floor) and short, dense bushes with broad leaves.

The trees reach to the center of the ship, where – in the low gravity-area – their highest boughs have twisted into a solid, cylindrical structure. This looks something like a woven

basket, stretching from one end of the ship to the other with no breaks in between. Anyone who skitters up to get a better look at the basket finds that the limbs are twisted too tightly to see between, but can detect a lot of warmth coming from the branches.

There seems to be no crew, and no signs that there ever was one. There are no obvious controls or machines inside the ship, and no signs of writing or apparent messages left for posterity. There are no engines or visible means of propulsion outside of it, and no weapons.

The exact point of the bio-bullets' origin is unknown, but, based on their trajectories, scientists have surmised that they originate from somewhere in the Carina-Sagittarius Arm. Some experts have hypothesized that they're biological arks, meant to guarantee the survival of key plant species after the fall of their native ecosystem. But xenanthropologists are still puzzled as to why they builders left no marker behind – unless they consider the plants monument enough?

THE TRUTH

The bio-bullets *do* have a crew, hidden in plain sight. They are the bushes that grow from the moss, kept supple and alive by the ship. Meanwhile, their minds remain hale and hearty in the overconsciousness created within the lattice of tree branches – sleeping away the ages, and waking only when the curious come to investigate their craft.

These sleeper ships originate from a world where the primary life form is a slow-moving, motile bush. These hardy creatures sense their world through the light absorbed through their leaves, and communicate through touch. They also have the ability to connect with other, unintelligent plants, and can cause them to grow or behave differently or in concert with other plants. This ability has allowed them to reach a surprisingly high level of organic technology.

Unfortunately, their world was doomed. A rogue planetoid in their solar system caused massive tectonic upheaval, choking their sky with sulfurous poisons and thick ash clouds. All too aware that their ecosystem was ending soon, they created the bio-bullets and used organic launchers to slingshot them blindly into space, hoping that their race would yet survive elsewhere.

The ships are designed to travel in space indefinitely, until they find a home. They may crash-land on a suitable planet; the ship's bark is hardy enough to survive reentry into an atmosphere with a density similar to their homeworld's. Once there, the occupants' minds will slip back down into their bodies, and they will leave the ship to explore their new world.

There's also a chance that their ships will be entered by beings from a suitable world, in which case they have a more invasive, and sinister, way of finding a new home.

OVERVIEW: BIO-BULLETS

- All-encompassing plant-based bioengineering.
- Plant communication.
- Growing living ships and mass-producing soldiers and servants.
- Herbaceous hard drives offering indefinite mental storage.

DANGERS

The atmosphere of the ship has two aspects that prove dangerous to any species from a world that could accommodate the builders: a gas that slowly corrodes nonorganic materials, and spores that link an organic mind with the overconsciousness of the ship's occupants.

The gas begins to break down plastics and fabrics within 10 or so minutes, and starts softening soft metals and glass after an hour. Before long, any space suits or respirators are riddled with holes, allowing the spores into the investigating aliens' lungs. Once within the aliens' bloodstream in sufficient quantities, the spores allow the overconsciousness to control the infected explorers.

Such control has one purpose: to bring the ship back to the intruders' home planet, or the nearest planet that could support them. This compulsion is so strong that the stricken will fight and kill any uninfected crew members who try and stop them, and then do everything possible to protect their prize from others.

WAKING THEM UP

Allowing the builders to land on one's planet would be a fatal mistake. These beings believe that animal organisms are markedly inferior to them, good only for their part in the oxygen cycle, spore-controlled slavery, and – eventually – fertilizer.

Upon landing, they will use their control over plant life to mass-produce corrosive gas and mind-control spores. They will start to mass-cultivate new bushes from the massive seed banks each bio-bullet has hidden within it, so as to increase their numbers. Then, once control is established, they will start to cull, herd, or exterminate whatever nonplant species they find, the better to build a new home.

THE PLEIADES DEATH-CLOUD

Old spacers swear the Pleiades Rhombus is haunted by something.

Official records show that, ever since the earliest days of intergalactic travel, a higher than average number of spacecraft have disappeared in that area. Those that do are never heard from again: no final messages, no flight recorders, no debris fields – nothing.

As the vastness of the region makes finding an exact reason massively difficult, all the authorities can do is warn travelers to be extra careful in that sector, and not take any unnecessary risks. They're also content to put the blame on unknown aliens, free-floating munitions from past conflicts, or weird, unidentified phenomena.

One puzzling incident: A tanker said that they detected a weird magnetic signature off their starboard stern just before the engine housing on that side of the ship suffered a horrendous structural failure. Luckily, they were able to limp to the next starbase. When they got a look at the damage, they saw that engine had been partially *dissolved* by something.

The metal that remained was distorted and brittle, and had clearly been streamed away somehow.

The engineers had never seen anything like it. However, one of the younger technicians was so excited by what he thought it meant that he stole a shuttle and went back to where the ship had encountered the trouble. He was, of course, never seen again.

THE TRUTH

The Rhombus is playing host to a strange kind of sleeper craft: a loose, free-floating cloud of ancient nanites, some 100 miles in diameter, which lurks in the space between the stars.

The nanites are all that's left of a ship launched millions of years ago – one carrying the exiled royalty of a massive, star-faring civilization. After the revolution, the deposed rulers were put into sleeper pods and sent out into the universe on a 1,000-year voyage. The new leaders decided it was kinder – and yet more cruel – to banish them in this fashion rather than kill them. Plus, maybe they'd learn something, out there.

Halfway through the eon-long journey, something caused the ship to detour into uncharted space, and crashed into an asteroid grouping. Fortunately, the emergency medical program was able to activate prior to impact, and legions of medical nanites converted the sleeping royals into electrical impulses. In this way, their thoughts, memories, and genetic codes were kept alive past the death of their bodies.

Under normal circumstances, the nanite cloud would be picked up by a rescue ship, and the dead would be regenerated – body and soul. However, any hope of rescue was 500 years' worth of space travel away, so all the nanites could do was to assume a holding pattern and wait for help.

That was millions of years ago. The asteroids are long since gone, but the cloud of nanites still floats in space, keeping its patients "alive" with space dust, cosmic flotsam, and the occasional unfortunate ship that wanders within its ephemeral grasp.

DANGERS

The medical nanites require power to both keep themselves in good repair and to maintain their information. Luckily for their patients, the area the cloud inhabits is perilously close to one of the major Pleiades shipping routes. Ships that stray too far from the route due to navigational errors may fall victim to the cloud.

When a ship is spotted, the nanites use their magnetic field to extend and contract their framework, getting as much of themselves as close to it as possible. Ideally, they meet the ship head on and start eating it from bow to stern. But even if they can only strike a glancing blow, it might be enough to cause a partial explosive decompression; the debris field from such a small "accident" could fuel them for centuries.

At its maximum spread, the cloud is about 100 miles in diameter. When it contracts, it does so very quickly and can

achieve a density thick enough to eat clean through a reinforced hull within an hour. The only warning the crew might get is the presence of an unusual magnetic field and then the cloud will be upon them, chewing the craft up, converting its matter into energy, and storing it for another long, dry spell.

OVERVIEW: THE PLEIADES DEATH-CLOUD

- Incredibly advanced medical nanites.
- Nanomolecular hibernation that can last for millions of years.
- Self-sustaining nanite minefields.
- History, culture, and technology from over a million years ago.

WAKING THEM UP

If the cloud can somehow be pacified and/or communicated with by a civilization with sufficient medical technology, the royal family could at long last be resurrected. Whether that's a good idea or not depends on how much of the patients' minds and souls has survived the last few million years, and whether they find this new age – and their rescuers – to their liking. They could be grateful and gracious, even in the face of unkind hosts, or they could be deceitful and malicious, even to the most accommodating of discoverers.

There's also no guarantee they will be a united front. Some of them could be graceful and decent emissaries from a time long past, happy to share tales and wisdom of their age to the young races that have inherited the universe. Others could be crafty and vengeful beings who want to raise an army and go back to retake their lands, or else subvert and conquer the civilization that woke them.

But – as with most royalty – to strike one is to strike all, and blood will prove more compelling than any sense of gratitude if their hosts must take extreme measures to stop one of them.

KAWALA

So-called rogue planets are a long-established fact of interstellar travel. Some are simply hazards to be watched for. Some – especially gas giants – are gold mines for enterprising corporations. Nonetheless, cosmic wildcatters must be careful, as not all rogue planets are unclaimed or uninhabited.

Some are actually vehicles.

KHO-J645.7-12 was discovered over two centuries ago, its presence confirmed by the mighty (if short-lived) Kilimanjaro-Hayden Stellar Imager on a random sweep of the Ophiuchus Constellation. At the time, the planet was closest to the star Ras al'Hague, and determined to be a gas giant just a little smaller than Jupiter.

About 100 years later, as unmanned, long-range probes began exploring that area, it was determined that the Stellar Imager had been mostly correct. The planet was a gas giant,

with a predominantly hydrogen-helium atmosphere, but was actually *larger* than Jupiter, with a comparable atmospheric density and a gravity of 2.5 Earths. It had also drifted closer to Cebalrai, another star in the constellation.

As old Islamic astronomers had called this constellation "The Snake Charmer," the planet's striated, straw-colored surface inspired those who monitored the flybys to call it *Kawala* – an Arabian reed flute. Not long after it was given a name, the Kano Corporation bought the rights to gas-mine the planet, and sent out an automated rig from a nearby, already-colonized system. The plan was to put the rig in a low, fast-moving orbit and start doing some preliminary helium mining. If that proved feasible, they'd send a ship with a portable habitat and full crew and begin a full-scale exploitation of the body's riches.

But that did not happen. The rig achieved orbit on schedule, but its communications were mysteriously scrambled not long after it deployed. The last telemetry the company's screen watchers got indicated that the rig was being sucked down into the upper atmosphere, which should *not* have happened, given their calculations.

Undaunted, Kano sent out another automated rig – one with a specially shielded communications array. When it arrived, it suffered the same fate, only this time, the final images it beamed back weren't as scrambled as before. The pictures clearly showed the surface of the planet bulging out to meet the rig, and dragging it down.

They also showed unclear images of things floating *inside* the upper atmosphere: weird shapes that might have been mining platforms and light gliders, but bore little resemblance to any that Kano company scientists had seen. They seemed more like jellyfish than anything else.

The odd nature of the evidence has not stopped Kano from proclaiming loudly that their claim has been jumped. They suspect that it's Moonstone Ltd., one of their biggest rivals in the area, which also has other operations in the constellation. The authorities swear they're looking into it, and there's a plan for a small, quiet fact-finding expedition to Kawala to see if it's a simple misunderstanding, corporate shenanigans, or something more.

*Rogers nodded vigorously.
"One for the books – a genuine
alien spaceship."*

*– L. Neil Smith,
Tom Paine Maru*

THE TRUTH

The authorities may be in for a shock when they get there – and might not survive the experience. What Kano's corporate officers claimed to be gliders and rigs were actually two races of "atmospheric beasts," sky-dwelling beings that thrive in the upper atmospheres of gas giants. The more intelligent of the two do *not* like strangers on their generation ship.

The planet was constructed thousands of years ago when a portion of its homeworld was sectioned off and sent away to avoid a looming ecological cataclysm caused by a population imbalance. Currently, Kawala is just a little larger than Jupiter (91,000 miles in diameter) but is growing all the time as the numbers of its two main species continue to expand. If it doesn't reach its destination soon, it may have to section off yet another world-ship, or else suffer the fate its passengers escaped, all those eons ago.

The world has two predominant species: large and sluggish "Dirigibles," and smaller, more intelligent "Parachutes." The Parachutes are the dominant lifeform: short-lived, highly intelligent, hydrogen-breathing sky-jellyfish that have developed a highly sophisticated culture based on the granting or denial of various degrees of information. The Dirigibles, conversely, are massive, long-lived bags of gas that are about as intelligent as a cow, and provide hydrogen and nutrients for the Parachutes in exchange for the trace gases the smaller species' digestive cycle creates.

The Parachutes ride the clouds, but they aren't wholly dependent on the air currents to get around. Most of their gut is wrapped around a specialized organ that uses hydrogen to give them the ability to soar, dive, and change direction as they will. However, this organ requires a lot of energy to maintain, and once a creature's brain grows too large for its organ to keep it afloat, it reproduces for the first and last time. The parent then falls down into the crushing depths of the planet's atmosphere.

The Dirigibles also have a gravity organ, but it works differently, by keeping the creature in one location for its entire life, held aloft by a strong, unblinking beam of gravitic force. When the Parachutes come to feed from their tendrils, the Dirigibles inhale the methane and other gases the jellyfish give off, and excrete hydrogen in substantial amounts. Much like the Parachutes, they only spawn when they are close to the end of their life cycle, asexually generating another Dirigible within themselves. The newborn takes over the parent's feeding duties the very second the latter dies. The newborn's gravity beam sends its parent's torn, ragged carcass down into the dark.

Once upon a time, their homeworld had near-perfect stasis: the Parachutes congregated around the Dirigibles in small, insular colonies with naturally regulated mating patterns. However, once a truly global civilization began to develop, the Dirigibles were biochemically forced to reproduce well before their death, creating "feeding stations" between major colonies. These allowed less-hardy Parachutes the ability to travel the world, but it also created more hydrogen than ever before – slowly changing the density and nature of the atmosphere.

After several thousand years of this imbalance, they stood on the brink of planetary disaster. One of the wisest Parachutes had his followers force a sizable number of dirigibles to aim and intensify their gravitic beams in key locations, splitting a portion of the planet's core. They then pushed that portion away, creating another, smaller gas giant and taking a quarter of the homeworld's population along with it.

The new planet spiraled away from its homeworld, beginning a long, possibly endless journey to the stars. The Parachutes that remained resigned themselves to their fate, and began to consider this an adventure, rather than a misfortune. They bred more Dirigibles, expanded their atmosphere, and did their best to keep their global culture alive in the face of this adversity. Unfortunately, they now seem on the cusp of repeating the same mistake their forebears did, all those thousands of years ago.

DANGERS

The Parachutes see themselves as striving for perfection, and aren't keen on sharing their information with outsiders. As such, they don't like aliens poking around their planet, and have a serious no-tolerance policy for probes, ships, and gas miners.

Any time a foreign object enters their atmosphere, those Parachutes nearest to it fly over and – using short, pointed bursts of their gravity organs – force it down into the crushing darkness. The planet's thick atmosphere and radiation usually keep clear signals from getting out, thus protecting its secrets, but a highly shielded probe might survive long enough to show what truly lies below the cloud level.

Woes betide anyone who tries to retaliate for a lost ship. Massive teams of Parachutes can turn the Dirigibles around and point their gravity beams at targets outside the atmosphere. What they lack in clear targeting they more than make up for in power: A glancing blow could push oncoming craft out of orbit, and a head-on blast could rupture their bulkheads and turn them inside-out.

INTERRUPTING THEIR JOURNEY

If some kind of communication can be established, it's possible that an understanding could be reached. The Parachutes may be xenophobic, but they aren't so jaded that they can't see the appeal of learning things no member of their species has ever learned before now – so long as the aliens don't learn too much about them in return.

Also, those among them who can see the danger of their current population levels may want to leave for a new planet. If those who make contact with them have any suitable gas giants in their system, they might be willing to trade technology and techniques for someplace they could escape to, should their world begin to fail them.

OVERVIEW: KAWALA

- Biochemical communication and species manipulation.
- Weaponizable organic gravity-beam control.
- Hydrogen farming and helium extraction.
- Constructing a world-ship from a gas giant.

THE SPIRAL SWARM

First encountered entering the galaxy at the very edge of the New Outer Arm, and then seen at various points on its extended journey to an unknown destination, the 250,000-mile-long, swift-moving convoy of spinning, cylindrical spacecraft known as the Spiral Swarm has delighted and infuriated xenoanthropologists and terrified galactic authorities. While the tightly packed, spiraling procession of half-mile long spacecraft is a truly beautiful thing to behold, it also represents a terrible danger.

The swarm – which moves at a half million miles per hour – will not stop for anything. Everything it comes in contact with is utterly destroyed.

As near as the scientists who've dedicated themselves to studying the Spiral Swarm can tell, the spacecraft are all intangible. Moreover, something about how the ships have achieved that state of being causes massive molecular disruption in anything they pass through. This is why the authorities have been unable to attack, deflect, or stop the swarm: energy weapons and nets have no affect, and anything that even touches a single ship collapses in on itself.

As if that wasn't bad enough, the swarm is, in its normal cruising state, completely invisible to all forms of optical and radio detection. This state of being lasts until it is within two astronomical units from a star, at which point it "ghosts" back into view. This, coupled with the fact that the Spiral is *not* traveling in an exactly straight line, has made tracking its course across the galaxy a difficult proposition. Thus, any inhabited locations in its path get a very small window of escape. A planet located one AU out from its star would have less than 190 hours to evacuate once the convoy was detected, a single AU away.

On those occasions where there's been enough time to perform a survey, long-range probes with excellent cameras have brought back fascinating pictures of the convoy. No one's been able to count exactly how many craft are in it, given its mind-boggling speed. However, as the ships are a half mile in diameter and arranged in neat, hollow circles of 10 placed end to end like train cars, the mathematical estimate is that it comprises five million ships.

Each spacecraft is a semi-transparent cylinder about a half a mile long and around 500' in diameter. Under the glass is a baroque, spiral structure – something like the inside of a nautilus shell – that appears to be made of dark-green metal. It spins very slowly, in time with the spinning of the swarm itself, so that the interiors appear to be presenting the same face to the observer. No one's been able to pilot a probe right into the tube without it being annihilated, so there's no evidence of any other, dissimilar ships or structures in the convoy.

When the cylinders approach within 1,000' of a material object, the unfortunate thing begins to experience molecular subsidence. Eerily, the ships seem to become more solid as the object they approach becomes wispy and transparent. As they bore through the unfortunate object, clouds of its stray molecules flow toward the hole the convoy makes, not unlike rivers of gaseous star stuff streaming into a black hole. Before long, the object collapses in on itself and vanishes, leaving nothing behind but the convoy, swiftly moving onward as though nothing had happened.

So far as the authorities know, the spiral swarm has annihilated three inhabited planets, a gas giant, four stars, countless unlucky ships, and a very large space station. As it's invisible a lot of the time, it may have destroyed even more things in its journey without anyone knowing about it; any number of ships, far-flung bodies, or deep space stations that have "vanished" may be the work of the Swarm.

Sadly, it's all the authorities can do to try and predict where the convoy might be seen next, and keep a fleet of evacuation ships on standby in that area, just in case. All attempts to contact the convoy have been seemingly ignored, and any ships that have tried to rendezvous with the group have been destroyed.

Experts have hypothesized that strong sources of gravity can affect the Swarm, which would explain why its path isn't as straight a line as the authorities initially expected. As such, one drastic idea they've come up with is to wait until the next time the Spiral Swarm approaches a star, and use the massive gravity that solar body gives off to fuel an artificial gravity well.

If they can ratchet the force up to near-black hole proportions, they might be able to contain or destroy the Swarm.

It would mean losing a solar system, unfortunately, but under the circumstances, it seems a legitimate trade-off.

OVERVIEW: THE SPIRAL SWARM

- A gateway to higher dimensional space.
- Cultural exchange with beings from an entirely new dimension.
- Discovery and exploitation of Underspace.
- Molecular salvage from a white hole.

THE TRUTH

The Spiral Swarm is not a convoy of spaceships. It is the warp conduit of an immense generation ship from another, larger plane of existence, several thousand degrees removed from ours. The ship travels in “Underspace,” using a technology that requires the conduit to be in at least five places at once to generate energy, maintain momentum, and stay in Underspace.

Unfortunately, one of those places is our universe.

This means there is zero chance of halting its slow rampage through dialogue, threats, or reason – they don’t even know we’re here. Unless it is somehow stopped or reaches its destination, the Spiral Swarm may make its way from one end of our reality to the other, inadvertently destroying everything in its path.

DANGERS

No physical object can get within 1,000’ of a cylinder without its molecules losing cohesion. This causes explosive decompression in even the hardest of ships, and turns most probes into useless space junk in seconds. There could be other, nonphysical ways to approach and investigate the cylinders, but what’s found inside them will prove baffling at best, and may cause irreparable insanity at worst. There’s also a chance that, should someone succeed in breaching one of the cylinders, they may be folded into the dimensions of the actual warp engine and obliterated.

WAKING THEM UP

If our universe’s aspect of the warp conduit is somehow destroyed – perhaps with the gravity-well attack – it would have an immediate effect upon the ship: It would lose primary power and be instantly ejected from Underspace. The crew could repair the damage, but by the time their engineers found the problem and fixed it, millions of years would have gone by in our reality. This could be considered something of a victory, even if the ship’s occupants never discover exactly what happened or who was responsible.

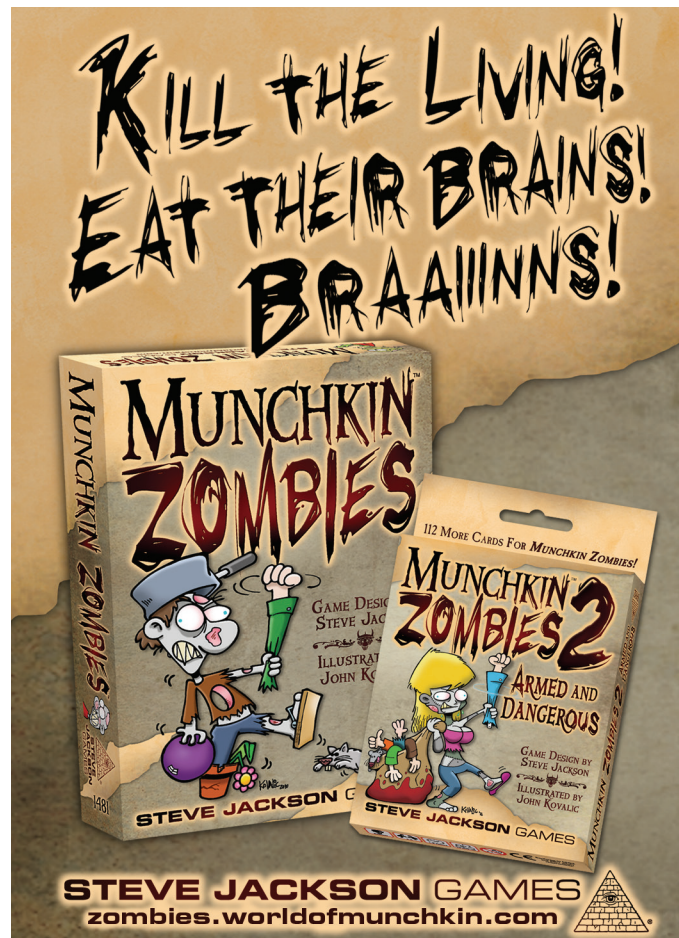
However, there *is* a chance that this maneuver could cause a severe cosmic imbalance, which would create a permanent rip in the fabric of our universe. This rip would take the form of an enormous white hole – one that would constantly spew matter from that higher dimension into ours. Naturally, the

sleeper ship would be dragged down into our reality, but it would be making the journey through a black hole that formed in its warp conduit. The resulting catastrophic voyage would compress them down into a long string of free-floating molecules – not unlike what their own engines have done to things in our reality.

This would vanquish any hopes of meeting the beings who crewed this amazing, if deadly, ship. However, there’s always a chance that scientists from their dimension may learn what’s happened and seek contact with the tiny, seemingly ephemeral beings that brought down such a massive machine. Hopefully they will see us as kindred souls, worthy of dialogue, and not vermin to be exterminated for the sake of their warp conduits.

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 is a frequent contributor to *Pyramid*, has 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.



VEHICLE IMBUEMENTS

BY CHRISTOPHER R. RICE

Imbuements allow adventurers to perform amazing feats, from calling fire onto a blade to penetrating the thickest armor with a .22 caliber bullet. *GURPS Power-Ups 1: Imbuements* suggests Imbuements can also be used for “noncombat” skills and gives a few examples (*Power-Ups 1*, p. 11). Now, these options are expanded again – to vehicles. With these new skills, you can push your Aston Martin past its top speed, make a bicycle fly, or even increase your helicopter’s armor to survive an incoming RPG. W.A. Frick’s *One With the Ship* from *Pyramid #3/30: Spaceships* is an excellent alternative for enhancing vehicles, by bonding with them and controlling them with your mind. But what if you want to do more? What if you want to do the impossible? The following optional rules owe much to Kelly Pedersen’s *Perfect Defense* from *Pyramid #3/4: Magic on the Battlefield* and require *Power-Ups 1*.

ME?! SLOW?! Oh, now you’re asking for it!
– *Straight Cougar, in s-CRY-ed*

SPECIALTIES

Transportation Imbuements require specialization by transport type. Use the specialties listed for Boating (pp. B180-181), Driving (p. B188), Piloting (p. B213), Riding (p. B217), Shiphandling (p. B220), or Submarine (p. B223). Optionally, the GM might allow skills for muscle-powered vehicles to be used: Bicycling, Sports (Skateboard), Sports (Surfing), etc.

CATEGORIZATION

Transportation Imbuement Skills are different from the standard categories. Within this group, there are four distinctions.

- *General*: The Imbuement Skill will work with Machine, Mounted, and Unpowered specialties.
- *Machine*: Imbuement Transportation (Machine) skills must use machines as a form of transport – planes, automobiles, trains, motorboats, and so on.
- *Mounted*: These Imbuement Skills are for riding something with legs – usually a living being, but animal-shaped golems, undead skeletal horses, and robotic oxen all count.
- *Unpowered*: This type of skill can only have specialties that use unpowered vehicles drawn by animals, such as

chariots, stagecoaches, wagons, and so forth. This specialty also includes many types of water vessels that rely on outside stimulus (wind, currents, etc.) for movement. You must specialize by animal (for the Teamster skill) or vehicle type (regardless of the skill used).

For instance, Horse or Dolphin are valid specialties for the Tireless Mount skill (pp. 29-30), but Motorcycle is not!

USING TRANSPORTATION IMBUEMENTS

Like combat Imbuement Skills, Transportation Imbuement Skills require no concentration or preparation to activate, and usually require the expenditure of 1 FP (but see *Duration*, p. 26). You are at no penalty to use a Transportation Imbuement Skill on a vehicle if you are the one operating it (driving, piloting, riding, and so forth), at -2 if you are the copilot, or at -5 if you are a passenger. You cannot use Transportation Imbuement Skills as a passenger or crew member unless otherwise noted in the description.

Specialties of an Imbuement Skill default to each other at the same penalty as their associated skills. For example, if you know Armored Vehicle (Automobile), you can attempt Armored Vehicle (Heavy Wheeled) at -2. There is no default for completely unrelated vehicles or animals.

Adventurers with Transportation Imbuement Skills will probably want several regular Imbuement Skills for use with their vehicle’s weaponry – e.g., Conic Blast (Cannon) or Electric Weapon (Machine Gun).

If you are using vehicles in D- or C-scale (p. B470), convert their statistics back to the normal scale and apply a given Imbuement Skill’s effect (rounded up). For example, a D-scale spaceship might have a ST/HP statistic of 20 but uses 200 to determine the bonus received from using the Stalwart Vehicle skill.

Defensive Options

Transportation Imbuement Skills that affect your vehicular Dodge (e.g., Agile Operation, p. 26) can be used against an attack you are aware of, as long as you didn’t take an All-Out Attack maneuver on your turn. Skill activation for defensive actions depends on the type of transportation. For machines, use (Imbuement Skill)/2 plus the vehicle’s Handling Rating. For animals, use Imbuement Skill/2 plus 3.

Combat Reflexes and Enhanced Time Sense add their usual bonus to active defenses. Power defenses (see *Defending With Powers*, **GURPS Powers**, pp. 167-169) use these rules as well.

*There was a great deal of power under the hood –
and there was far more Power of a different sort infused
into it.*

– Mercedes Lackey and Larry Dixon, **Born to Run**

Duration

Unlike combat Imbuement Skills, which last for a single attack, most Transportation Imbuement Skills last for one minute. This is only fair, as vehicle operations (and even many vehicular combats) occur on a vastly different scale from personal combat.

Certain Transportation Imbuement Skills are intended for even longer-term use. These have the keyword *Lasting* after the category type (e.g., “General; Lasting”) and have a duration of one *hour* instead of one minute! They require more effort, though; the FP cost is equal to (vehicle SM)-1, minimum 2 FP. The imbuer may reduce this FP cost by taking -5 to skill per -1 FP.

Both normal and Lasting Transportation Imbuement Skills may be *prolonged* when the duration ends. The imbuer will realize that time is up, and may immediately spend the FP cost and roll against his original effective skill. Success prolongs the effects for another minute (or hour, if Lasting). Failure means the Imbuement immediately wears off; further attempts for the same person to activate that same Imbuement Skill on this vehicle are at -5 unless he waits a full five minutes before trying again.

Example

Gabriella’s *Starhawk* aerospace fighter is badly damaged by an Nrathi warship. She calls upon her ancestors for protection as she withdraws from battle. Because her Armored Vehicle (Aerospace) skill is 16, she opts to take an additional -4 to increase her vessel’s armor by 50%. She spends 1 FP and successfully rolls against an effective skill of 12. Her vessel has D-scale DR 5, which is actually DR 50. This is increased to DR 75 (which becomes DR 8 in D-scale) for the next minute.

Unfortunately, she’s pursued by several Nrathi fighters, and they won’t let up! At the end of a minute, she decides to prolong the effect. She pays another 1 FP and rolls against the same effective skill of 12. Success buys her another minute.

TRANSPORTATION IMBUEMENTS

The following skills use the term “vehicle” interchangeably to refer to both machines and animals.

Aerial Operation

General; DX/VH

Default: Specialty for related vehicle at same penalty as vehicle default.

Prerequisite: Imbue 3.

This skill temporarily gives your vehicle the ability to fly (rather than “ride on air”). Choose an effect that’s consistent with your power – maybe you lift your vehicle with Psychokinesis, perhaps it grows wings, and so forth. However, this is not true flight, but more akin to the Walk on Air advantage (p. B97). On an unmodified roll, this allows your vehicle to treat the air as if it were a stable solid surface (which counts as a “road” for road-bound vehicles), giving you an Air Move equal to your Ground Move. You can even gain altitude by moving up “invisible ramps” at your Air

Move. A failed control roll means you fall off your “ramp.” You may attempt a skill roll once per second of falling; if you succeed, you stop in the air, unharmed. Failure means you hit the ground and suffer falling damage (p. B431)!

This does *not* function in a vacuum; instead, use *Vacuum Operation* (p. 30).

Modifiers: -5 if your vehicle temporarily gains the ability to fly. Use double your Ground Move as your Air Move for this purpose.

Agile Operation

General; DX/VH

Default: Specialty for related vehicle at same penalty as vehicle default.

Prerequisite: Imbue 1.

This skill increases the Handling Rating of your vehicle, making it more responsive, often by some form of telekinesis or gravity control. On an unmodified roll, this increases the Handling Rating by 1.

Modifiers: -4 per +1 increase in Handling Rating.

All-Terrain Operation

General; DX/VH

Default: Specialty for related vehicle at same penalty as vehicle default.

Prerequisite: Imbue 1.

With this skill, your vehicle can ignore the effects of one specific type of unstable surface or inclement weather condition, usually via focused chi, psychokinetic force, or weather-controlling magic. On an unmodified roll, pick one particular type of terrain or weather condition: snow, ice, rain, sand, scree, water, and so on. This allows you to ignore any penalties to vehicle operation rolls, Move, etc. associated with operating on that terrain or during that weather condition.

Modifiers: -2 per type of additional surface or weather condition, or -10 if you can ignore the penalties from *all* surfaces types and weather conditions.

Alluring Vehicle

General, Lasting; DX/VH

Default: Specialty for related vehicle at same penalty as vehicle default.

Prerequisite: Imbue 1.

You can temporarily increase the overall appearance of a vehicle, possibly through telepathy or mind magic. On an unmodified roll, the machine gives its operator +1 to reaction or Influence rolls where the vehicle is the focus of attention. Animals temporarily gain an Appearance of Handsome/Beautiful with the Universal enhancement (p. B21).

Modifiers: -2 per additional +1 reaction or Influence bonus. -2 for a Appearance of Handsome/Beautiful, -4 for Very Handsome/Beautiful, or -8 for Transcendent. -10 if your vehicle causes a Fright Check (see *Awe Checks*, **Powers**, p. 85) when first viewed; you can increase the penalty for the Fright Check for a further -2 to skill per -1.

Animate Vehicle

Machine or Unpowered; Lasting; DX/VH

Default: Specialty for related vehicle at same penalty as vehicle default.

Prerequisite: Imbue 2.

This skill helps you to automate certain functions of the vehicle, allowing the operator to make do with fewer crew members. For example, you could animate the riggings of a ship or the copilot's controls of a cargo plane. This is often done through telekinesis or some form of machine empathy. On an unmodified roll, this reduces required crew members by 1 (to a minimum of one, i.e., the operator).

Modifiers: -1 to replace 2 crew members, -2 to replace 4 crew members, -3 for 8, etc.

Aquatic Operation

General; DX/VH

Default: Specialty for related vehicle at same penalty as vehicle default.

Prerequisite: Imbue 2.

This skill temporarily makes your vehicle "buoyant," usually through friendly water spirits or psychokinetic bubbles. This is not true buoyancy, but more akin to the Walk on Liquid advantage (p. B97). On an unmodified roll, this allows the vehicle to treat water as a stable surface (which counts as a "road" for road-bound vehicles). A failed control roll means you fall through the surface of the water. You may attempt a skill roll once per second of falling; if you succeed, you begin to ascend to the surface, unharmed. Failure means you hit the bottom (if it is close enough) or continue to sink until you either make your skill roll or hit the body of water's floor. Vehicles that are already naturally buoyant, airtight, etc. use those rules instead.

It does not protect from water-bound dangers. Getting caught in a hurricane or tsunami could lead to the vehicle being forced under – and potentially take injury from drowning (pp. B436-437) or extreme pressure (p. B435).

Modifiers: -5 if your vehicle can temporarily function underwater, gaining both Pressure Support 1 and Sealed; use your Ground Move as your Water Move for this purpose. -4 if you can operate in depths requiring Pressure Support 2, or -8 if you can operate at depths requiring Pressure Support 3. -5 if this advantage affects *any* liquid, not just water – you

could, for example, allow your car to drive across boiling lava (though you would still take damage from the heat!).

Armored Vehicle

General; DX/VH

Default: Specialty for related vehicle at same penalty as vehicle default.

Prerequisite: Imbue 2.

This skill boosts the armor of your vehicle. This is often done by thickening the armor already there, reinforcing it with a force field, or expanding the surface outward. On an unmodified roll, the vehicle's DR is increased by +10% or +1 (whichever is better).

Modifiers: -1 per additional +10% or +1 increase in DR. -2 for the first level of the Hardened enhancement (p. B47), with an additional -2 per level of Hardened after the first.

Chameleon Vehicle

General; DX/VH

Default: Specialty for related vehicle at same penalty as vehicle default.

Prerequisite: Imbue 2.

You can silence your vehicle and make it harder to see. An unmodified skill roll gives -1 to all Sense rolls to notice the vehicle.

Modifiers: -1 per additional -1 to Sense rolls to notice the vehicle, to a limit of -10 to skill, making the vehicle effectively invisible and/or silent. An additional -2 each additional type of nonstandard sense/sensor (such as infrared or sonar), or -10 to affect *all* forms of detection.

Clinging Vehicle

General; DX/VH

Default: Specialty for related vehicle at same penalty as vehicle default.

Prerequisite: Imbue 2.

This gives your vehicle the ability to cling to vertical surfaces like an insect, probably as a result of psychokinetic attraction or direct control over gravity. On an unmodified roll, this allows your vehicle to scale vertical surfaces as if it had the Clinging advantage (p. B43), but at half its basic Ground Move. If you fall, you can attempt to make a vehicle operation skill roll if there is a surface within reach of your vehicle. If you succeed, you must immediately make a skill roll at -1 per five yards fallen. Success means you stop and cling to that surface. Failure means you continue to fall until you hit the ground but can subtract five yards from the final distance fallen, thanks to your attempt to adhere to the nearby surface.

Modifiers: -5 if you can move at your full basic Ground Move, -10 if you can move at *double* your basic Ground Move, or -15 if you can move at *triple* your basic Ground Move. -3 if you need only one part of your vehicle to cling to a vertical surface, allowing your mount to walk "upright" or your motorcycle to "pop a wheelie" while scaling a building vertically.

Efficient Vehicle

General, Lasting; DX/VH

Default: Specialty for related vehicle at same penalty as vehicle default.

Prerequisite: Imbue 2.

NEW PERKS

The following new perks are useful to those with Imbuement Skills. Perks marked with a * require specialization by piece of equipment, skill, etc.

*Imbued Vehicle/Mount Bond**

Prerequisite: Imbue 1.

This perk is identical to the Vehicle/Mount Bond perk (below), except instead of special training or uniquely suited equipment, it represents a supernatural attunement to a specific vehicle or animal. Unlike Vehicle/Mount Bond, you can freely shift the bond to another vehicle or mount with a day of mediation. You may have multiple Imbued Vehicle/Mount Bond perks, but their effects are not cumulative.

Improvised Imbuement

You can use Imbuement Skills without knowing the actual skill. Each try costs an additional 2 FP, and requires a roll against DX-7, with a bonus equal to any relevant power Talent (such as Magery or Psychokinesis Talent). Whether this is a natural connection with the forces in play or due to extensive knowledge of the mechanics of Imbuement is setting specific and up to the GM to explain.

Lingering Mastery

Prerequisite: Lasting Imbuement Skill at 16+.

As long as you can pay the FP cost *and* your effective skill remains at 16+, you don't need to make a skill roll to prolong your Lasting Transportation Imbuement Skill. You must specialize by skill.

*Potent Imbuement**

Pick a particular Imbuement Skill. When using it, you may voluntarily spend FP to increase your skill roll. This costs a flat 1 FP per +1 to the roll (maximum of +4 or the level of a related power Talent, whichever is better). You cannot combine this perk with the penalty to reduce the FP cost for using the skill (p. 26).

*Vehicle/Mount Bond**

You own a vehicle or mount that is uniquely suited to or specially trained to your needs. You must acquire it with cash or as Signature Gear. When you use it, you get +1 to the skill associated with that vehicle or animal, regardless of actual quality. This is cumulative with any bonus inherent to hardware or training. This perk reflects the fact that you're used to *your* stuff or your mount is used to *you*. If you lose the vehicle or mount, you lose the perk. You *can* acquire a new Vehicle/Mount Bond in play and may have multiple Vehicle/Mount Bond perks – but their effects are not cumulative.

This skill improves the Range of your vehicle. On an unmodified roll, machines can double the Range a given tank of fuel will operate on. Animals temporarily gain the Reduced Consumption 2 advantage (p. B80).

Modifiers: For machines, -3 to triple range, -6 to quadruple it, or -10 to ignore it completely. For animals, -2 gives Reduced Consumption 3, -4 gives Reduced Consumption 4, or -6 gives Doesn't Eat or Drink (p. B50); -4 to add Doesn't Sleep (p. B50).

Hardy Vehicle

General; DX/VH

Default: Specialty for related vehicle at same penalty as vehicle default.

Prerequisite: Imbue 3.

This skill improves the HT score of the vehicle, perhaps by magically fortifying it or projecting your chi into it. On an unmodified roll, add +1 to the vehicle's HT.

Modifiers: -2 per additional +1 HT; -2 to add one of Sealed, Pressure Support, or Vacuum Support. You can combine multiple advantages for a cumulative penalty.

Hasten Vehicle

General; DX/VH

Default: Specialty for related vehicle at same penalty as vehicle default.

Prerequisite: Imbue 2.

You can temporarily increase the Move of your vehicle. On an unmodified roll, this increases Move by +10% or +1 (whichever is better). This increase affects both Acceleration and Top Speed. If your vehicle has more than one method of movement, you must pick which one is affected.

Modifiers: -1 per additional +10% or +1 increase in speed; -5 if you can affect all modes of movement at once.

Phantom Hold

Machine or Unpowered; Lasting; DX/VH

Default: Specialty for related vehicle at same penalty as vehicle default.

Prerequisite: Imbue 2.

Your vehicle can hold more cargo than it otherwise would be able to. This is usually the result of dimension-altering magic or psychoportive "pockets." On an unmodified roll, increase the vehicle's Load by 10% or 10 lbs. (whichever is better).

If Phantom Hold expires (and is not immediately prolonged) before the additional cargo can be emptied, it is immediately and violently ejected from the vehicle! Every crate or loose piece takes thrust damage based on the ST of the vehicle (treat HP as ST for unpowered vehicles) on its way out.

Modifiers: -1 per +10% or +10 lbs of additional cargo space. -1 per -2 that others have on their Search skill to find any items in your hold, or -2 to their Search or Observation skill per weapon turret or mount hidden.

Phasing Vehicle

General; DX/VH

Default: Specialty for related vehicle at same penalty as vehicle default.

Prerequisite: Imbue 3.

This skill temporarily makes your vehicle insubstantial (p. B62) with all that that entails, usually explained as exotic dimensional magic or astral projection.

Modifiers: -5 if you can use other abilities on the substantial world while you are insubstantial; -2 if you can grab a item and turn it insubstantial; -10 if you can turn insubstantial objects you are carrying substantial without also turning substantial again.

Improve your vehicle with Imbuements!

Ramming Vehicle

General; DX/VH

Default: Specialty for related vehicle at same penalty as vehicle default.

Prerequisite: Imbue 2.

This skill improves the damage of a given vehicle for the purposes of slam or ramming attacks (p. B371), possibly via a force field a few inches from the vehicle or a near-instant density increase. On an unmodified roll, add +1 damage per die *and* reduce any injury suffered by the ramming vehicle or its occupants by 1. This skill also can be used to reduce damage from slams into stationary objects or during an accidental crash (make an active defense roll, see p. 25).

Modifiers: -5 to add +2 damage per die. -1 per additional 1 point of injury reduction to occupants.

Self-Repairing Vehicle

General; Lasting; DX/VH

Default: Specialty for related vehicle at same penalty as vehicle default.

Prerequisite: Imbue 3.

This gives your vehicle the ability to repair itself slowly over time, thus negating the need for repairs. This is most often from some sort of psychometabolic effect or empowering the natural chi of the vehicle. On an unmodified roll, your vehicle regains 1 HP every hour (modified by *High HP and Healing*, p. B424).

Modifiers: -3 for the vehicle to regain 1 HP per minute, -6 for 1 HP per second, or -10 for 10 HP per second. For an additional -4, your vehicle regrows broken mirrors, door handles, ears, fingers, and other small bits. For an additional -8, the vehicle regrows body parts, tires, doors, etc.

Stable Vehicle

General; DX/VH

Default: Specialty for related vehicle at same penalty as vehicle default.

Prerequisite: Imbue 1.

You can temporarily make your vehicle more stable. On an unmodified roll, this increases the Stability Rating of a vehicle by 1. For vehicles without a SR (or mounts), this instead negates the penalty for firing a weapon from a moving vehicle (p. B469).

Modifiers: -2 per +1 increase in Stability Rating; -4 if you *also* negate the penalty from firing from a moving vehicle.

Stalwart Vehicle

General; DX/VH

Default: Specialty for related vehicle at same penalty as vehicle default.

Prerequisite: Imbue 2.

You can temporarily increase the ST/HP of your vehicle. On an unmodified roll, this increases ST/HP by +10% or +1 (whichever is better). For unpowered vehicles, this only affects HP. This does not affect Load or Occupancy, but *does* increase ST for the purposes of dragging or pulling something.

Modifiers: -1 per additional +10% or +1 increase in ST/HP. -5 if you can temporarily give your vehicle Injury Tolerance (Unliving), or Injury Tolerance (Homogeneous) if your vehicle already has Unliving. -10 if you can temporarily give your vehicle Injury Tolerance (Homogeneous), or Injury Tolerance (Diffuse) if your vehicle already has Homogeneous.

Superior Life Support

Mounted or Unpowered; Lasting; DX/VH

Default: Specialty for related vehicle at same penalty as vehicle default.

Prerequisite: Imbue 3.

You can temporarily increase the long-term accommodations onboard your vehicle. This skill adds extra room to sleep, cook, etc., typically via transformative magic. On an unmodified skill roll, your vehicle can provide extra space for two additional occupants.

If Superior Life Support expires (and is not immediately prolonged) before the additional passengers can disembark, they are immediately and violently ejected from the vehicle! Everyone so defenestrated takes thrust damage based on the ST of the vehicle (treat HP as ST for unpowered vehicles) on their way out.

Modifiers: -1 for 4 additional passengers, -2 for 8 additional passengers, -3 for 16, etc.

Tireless Mount

Mounted or Unpowered; Lasting; DX/VH

Default: Specialty for related vehicle at same penalty as vehicle default.

Prerequisite: Imbue 2.

Your mount acquires supernatural endurance and fortitude. On an unmodified roll, your mount gains +3 to all rolls to resist Fatigue loss *and* the Fit advantage (p. B55). For unpowered specialties, this skill is only available to vehicles that rely on other beings to pull it, like a stagecoach or wagon.

Modifiers: -5 to give the mount +8 and the Very Fit advantage, or -10 to give complete immunity to Fatigue lost through exertion (but not stolen via magic, psionics, etc.).

Transform Vehicle

General; DX/VH

Default: Specialty for related vehicle at same penalty as vehicle default.

Prerequisite: Imbue 3.

This potent skill allows the operator to convert one type of vehicle into another temporarily. On an unmodified roll, you can change your vehicle into one of a similar type. For example, you could convert a sedan into a two-door coupe or a horse into a camel. Use the new vehicle's statistics for *all* purposes.

Modifiers: -4 to convert a vehicle into any type other as long it uses the same operation skill, -6 to convert between default operation skills, or -10 to transform any vehicle into another.

Underground Operation

General; DX/VH

Default: Specialty for related vehicle at same penalty as vehicle default.

Prerequisite: Imbue 2.

This skill gives your vehicle the ability to burrow underground as if you had the Tunneling advantage (p. B94). On an unmodified roll, your vehicle gains a Tunneling Move of 1 or your vehicle's highest Move/4, whichever is *better*. You can travel through stone at half this rate. If your vehicle already has a Tunneling Move, increase it by +10% or +1 (whichever is better).

For every minute of tunneling through hard earth, roll against the higher of your Engineer (Mining), Prospecting-3, or IQ-based vehicle operation skill. Success means you have dug a stable tunnel, while failure indicates a tunnel ready to collapse. Each halving of your movement rate gives +1 to this roll. Digging through soft earth or soil requires a roll every 30 seconds while stone requires a roll every 10 minutes.

Modifiers: -1 per +10% or +1 increase in tunneling move; -3 if you can dig without using your limbs or other appendages.

Vacuum Operation

General; Lasting; DX/VH

Default: Specialty for related vehicle at same penalty as vehicle default.

Prerequisite: Imbue 3.

This gives your vehicle the ability to operate in a vacuum (e.g., outer space). On an unmodified roll, your vehicle gains a Space Move equal to your Ground Move and adds the Pressure Support, Sealed, and Vacuum Support traits to your vehicle's Occupancy.

Modifiers: -1 per +10% or +1 increase in Space Move; -10 if the effective Move is the speed of light (186,000 miles traveled takes one second); or -20 to travel one light-year in a day (this method includes the penalty for prolonged use – don't add them together).

ADVANTAGE VARIATIONS

A few new advantages can help vehicles.

Enhanced Defenses

see p. B51

The following two advantage variations are useful for wheelmen, fighter pilots, and so on.

Enhanced Block (Vehicular): The GM might allow vehicles with force fields, deflector screens, and similar technology to rely on them for active defenses. Attempting such a feat requires a roll against (vehicle operation skill/2) + vehicle's Handling Rating. This advantage gives you +1 per level to your vehicular Block score. 5 points/level.

Enhanced Dodge (Vehicular): You have +1 per level to vehicular Dodge (p. B375). You may take this for a particular vehicle operation skill (5 points/level) or for *all* vehicles (10 points/level).

Energy Reserve

see Powers p. 119

Since machines neither have nor lose FP when they use Extra Effort, they reduce their HT instead (*Machines and Fatigue*, p. B16). For machines built as characters or those modified using the vehicles rules in *GURPS Supers* (pp. 84-85), the following new advantage might be useful.

Energy Reserve (Physical): Your Energy Reserve can only be spent powering Extra Effort for *physical* exertion. This includes things like jumping, running, or using Extra Effort in combat. It does *not* apply to lost sleep, cannot be drained via Fatigue Attacks, and so on.

New Special Enhancement

Operator Siphon: Your Energy Reserve can only be used to "redline" a vehicle you're driving. Instead of losing points from its HT, you can pay for it from your ER. If you (or your vehicle) have special abilities that can also affect the vehicle (spells from the Technology college, super powers, etc.) you can pay for them from your ER as well. +0%.

ABOUT THE AUTHOR

Christopher R. Rice drives *slowly*, if at all. That doesn't mean he doesn't like fast cars. His dream car is a sky-blue 1969 Ford Mustang Mach One with black leather interior. From Portsmouth, Virginia, he dreams of being able to write full-time one day, or at least eke out a living doing it. He wishes to thank L.A., his own personal muse, as well as the rest of his gaming group; his good friend Antoni Ten Monrós; Beth "Archangel" McCoy, the "Sith Editrix"; Douglas Cole; and Patrick "Celti" Burroughs, for being most excellent sounding boards.

ALL THE GEAR IS HERE!



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THE CAPTAIN'S BOAT

BY RORY FANSLER

Science-fiction stories often involve using a starship to get around, typically one owned (if sometimes only barely so) by the protagonists – such as Mal Reynolds and *Serenity*, or Han Solo and the *Millennium Falcon*. Playing the owner of a tramp freighter in *GURPS* typically uses up a lot of points spent on Wealth (75+ for enough Multimillionaire to afford a \$50M+ ship!). With that much money, even leftovers can mean the ship owner can bankroll the entire party. This doesn't fit the concept of a rogue barely eking out a living. All those points also make captains less useful during *actual* adventuring than their fellow party members, because those 75+ points spent on Wealth could instead go a long way toward being Awesome.

To get the angle, one must bear in mind that a man's ship is his home, his life, his all. The sailor's attitude to this ship is one of awed affection; his primitive instincts impel him to defend her as a lioness defends her cubs.

– *The Literary Digest*, Vol. 60,
"Germany's Naval Disgrace
as Seen From the 'Texas'"

SHIPS AS PATRONS

A starship is neither gear, nor a power you can easily wield; it is a plot device for furthering the story. It's background that describes how the group can get around and explains certain treatment by others. It lets the adventurers sightsee. The ship owner does have *some* control over the flow of the campaign, and there *are* perks to being a captain.

In other words, for most purposes, a ship is really a Patron (p. B72)!

A Patron is an individual or organization that is an advisor, employer, mentor, or protector. A ship can serve in many of these roles, with its assets as a Patron tied up in the vehicle and needed supplies.

Example: According to p. B72, a 10-point Patron has assets equal to 1,000 times starting wealth. Thus, in a TL10 game with starting wealth of \$50,000, buying a ship as a 10-point Patron results in a ship worth approximately \$50,000,000.

Modify the cost of the Patron advantage using the *Frequency of Appearance* modifiers (p. B36) based on how often the ship is involved as *more* than a background plot device: How often is the ship more than transportation, cargo storage, pirate bait, etc.? Even in a merchant or military campaign where adventures revolve around the ship, the cost is based on how often it specifically helps the *captain*.

Patron Cost and Ship Value

Ship Class	Base Cost	Assets Relative to Starting Wealth*	TL9 Ship	TL10 Ship	TL11 Ship	TL12 Ship
Hulk	1 point	2×	\$60K	\$100K	\$150K	\$200K
Fishing Boat	2 points	5×	\$150K	\$250K	\$375K	\$500K
Flying Wreck Shuttle	3 points	20×	\$600K	\$1M	\$1.5M	\$2M
Small Freighter	5 points	100×	\$3M	\$5M	\$7.5M	\$10M
Yacht	10 points	1,000×	\$30M	\$50M	\$75M	\$100M
Large Commercial	15 points	10,000×	\$300M	\$500M	\$750M	\$1B
Large Military	20 points	100,000×	\$3B	\$5B	\$7.5B	\$10B
	25 points	1,000,000×	\$30B	\$50B	\$75B	\$100B

* Patrons have at least the listed base assets, so the GM should feel free to use this as a rough guideline. Operational costs are not covered and should be treated as ongoing expenses covered by the captain or another Patron, especially if military.

For example, if you get into a tight spot and you can call your ship for an orbital strike or transporters to get you out of it, this is using vessel in its Patron capacity. Meanwhile, simply trying to find your next cargo run and using the vehicle to haul the shipment is not a use as a Patron. That is the captain and crew working, and what they get out of the trip is a function of the characters' job roles and Wealth levels.

ADDITIONAL MODIFIERS

Equipment (p. B73) represents free and regular access to useful ship gear, and should be rare. It also could represent things that reduce operational costs like free refueling or special port privileges. *Highly Accessible* implies unrestricted contact and is also rare. *Special Abilities* (+50%) for high profile or prestigious ships and (+100%) for those with superior technology, however, are common, such as Flynn's *Teacher* or Blake's *Liberator*.

Informal (-50%) (*GURPS Supers*, p. 33) for "acting" captains may be appropriate, and *Fixed Location* (-50%) (*Supers*, p. 86) could be used for a space station. The sections for vehicles (*Supers*, p. 83) and headquarters (*Supers*, p. 85) have some options normally applied to Ally or Status that are suitable for this application of Patron.

Ships crew may use the rules from *GURPS Social Engineering: Pulling Rank* for assistance rolls. This Rank may be limited to the ship, or part of a larger organization. The captain still pays for the ship as a Patron but enjoys complete authority over ship and crew (though abuse can have consequences).

FIGHTER PILOTS AND REBEL SCUM

It may be tempting to use these rules for fighter and mecha pilots. However, those types of vehicles more closely resemble gear or companions than a merchant company or military command. Ally (p. B36) is more appropriate; determine the

Blake: It's an old smuggler's trick.

Tarrant: Did you learn it from an old smuggler?

Blake: No, from a young one, actually. Her name was Jenna.

Tarrant: What happened to her?

Blake: She tried to run the blockade once too often. Happens to all of them eventually.

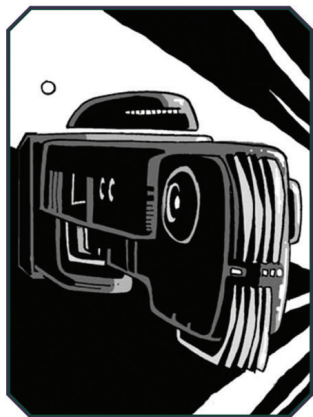
– *Blakes 7* #4.13

cost based on the character's relative power. Fighter pilots would have Rank 2-3, and in most cases, the organization provides the vehicle. Represent upgraded or otherwise superior ships with a multiplier for base cost. For example, a fighter pilot would pay 5 base points for an "average" fighter, 10 for a superior one built about 50% tougher, and another +5 for each additional 50%. Frequency modifiers do *not* apply if the party consists solely of fighter pilots or are engaged in similar operations. If only the pilot can use the ship for personal use or it is an advantage over other characters – such as a mecha pilot amid a party of superheroes – treat this as an Ally.

ABOUT THE AUTHOR

Rory Fansler (also known as "refplace") started his role-playing game journey with the original boxed set of *Dungeons and Dragons*. He now enjoys a variety of genres and making up worlds to play in. He bought into *GURPS* largely on the strength of the Steve Jackson name (also an old metagaming fan) and never regretted it. He is a native Californian who resides in Oklahoma. He would like to give thanks to the Pyramid Write Club, but the first rule of Write Club is "we do not talk about Write Club."

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RANDOM THOUGHT TABLE

PUTTING THE “CUSTOM” BACK IN CUSTOMER

BY STEVEN MARSH, *PYRAMID* EDITOR

What’s unusual about the *Millennium Falcon* compared to just about all other ships in popular culture?

Okay, yes, “It’s piloted by Han Solo” is a valid answer, but we’re looking for something with a bit more broad applicability here.

Who just answered “Chewbacca was its copilot”? Please see me after class.

No, the answer I was looking for is: it’s *asymmetrical*. Look at it; your eyes probably *want* to draw a line of symmetry along it – we humans really like symmetry – but they can’t. The closest to a symmetrical axis is the horizontal plane running through it . . . and even then, between the radar dish and curved top of the cockpit, it’s *still* pretty oddball. The occasional odd-colored patchwork pieces throughout emphasize its asymmetry. In the larger Star Wars canon, it’s revealed that it isn’t even a terribly unusual vessel; the *Millennium Falcon* is a heavily modified stock vessel. (I love imagining the shipwright who sat down at the drafting table and first thought, “I have a clear need for a vessel that has utmost visibility on its right side, and 60’ of vision-obstructing spacecraft on its left side.”)

What does all this have to do with the cost of tea on Tatooine? Well, although there are almost certainly in-universe explanations for every design aspect of the *Millennium Falcon* (there are eleventy-jillion pages of Expanded Universe material), from a storytelling and game-design standpoint it doesn’t matter: It’s asymmetrical because it *looks cool* . . . and reveals something about the oddball nature of its pilots, and a glimpse of the larger universe. And that’s awesome.

STATS ENTERTAINMENT!

But first, to back up a moment: Most game systems don’t care about the *whys* behind their game stats. A computer hacker could be attractive in a 1950s “classic Hollywood actor” way or in a “133t-underground piercings-and-tattoos” way; the

mechanics of the system don’t generally *care* outside of the numerical bonus it gives.

Similarly, most vehicle stats don’t particularly care *why* a vehicle is the way it is. Unless description details provide a bonus or penalty, it doesn’t matter *what’s* going on with the actual vessel itself. Thus, something like, say, a hollowed-out god’s torso (see *GURPS Spaceships 7: Divergent and Paranormal Tech*) would have the same stats as a run-of-the-mill gray spaceship . . . but wouldn’t be anywhere *near* as cool.

If a spaceship is to have any meaning to a larger campaign, the players have to have an idea of what it’s like for their heroes to be inside of it. Recall the four cinematic iterations of the *Enterprise*: Technicolor vibrant, primary-color-and-gray, old-school-and-gray, and so blindingly bright that there are lens flares everywhere. In terms of color schemes and attitude alone, life aboard the *Enterprise-D* feels like someone in a sweater-vest is going to emerge from a corridor and ask, “Have you considered changing your homeowner’s policy?” while the 2009 *Star Trek* version of the ship is trying to scream “Spaceship spaceship SPACESHIP!” with childlike enthusiasm. All these decisions can be made without affecting the underlying stats of the craft.

Here, then, are some additional decisions that can influence the flavor of your own spacecraft.

CUSTOMIZATION

One element that adds to the mystique of the *Millennium Falcon* is that it’s considered to be one of a kind. If it were the Toyota Corolla of the starship world, then it wouldn’t be anywhere near as cool. Similarly, each species’ vessels in the Star Trek universe are uniform. (No alien races like tricking out their ships it seems.) Some options here include:

- *All the same*: Each ship of a certain type or model looks identical. (This is common for filmmakers, because it’s a lot easier to generate a fleet of 87 identical ships.)

● *Mostly the same:* Sure, all X-Wings pretty much look the same . . . but as Rogue Squadron commander, Wedge Antilles followed in the footsteps of many real-world air forces and stenciled icons on his fuselage of enemies he'd shot down – including a number of Tie Fighter icons plus two Death Stars (which seems to be overstating his contribution, but still . . .). Perhaps most craft are identical but the heroes trick theirs out a bit. Or maybe all craft have a little something unusual about them – the galactic equivalent of bumper stickers.

● *Mostly different:* Like a high-school parking lot of drivable hand-me-downs and used cars of varying pedigrees, perhaps all vessels have some recognizable foundation, but every ship looks like it's got years' worth of stories.

● *Vastly different:* Maybe every ship appears completely bonkers – varying numbers of wings, no recognizable cockpits or entryways, etc. This would especially be true in a universe where most or all vessels are kit-bashed affairs, from a plethora of available parts.

In a long-running *Fading Suns* game in which I played, noble ships were mostly the same, but we (as players) were encouraged to customize however we wanted. I gave ours a custom soundtrack, which played whenever we contacted other vessels. Similar creativity can guide the players to making their own *Falcon*-like spacecraft.

*The secret of good Lego building is
to do it symmetrically.*

– The Doctor, in Memory Lane

LIGHTS, ACTION!

Describing the lighting in a spacecraft can go a long way toward defining it. Most “evil” aliens in the movies don't bother changing the lightbulbs when they burn out, so there's a sense of foreboding gloom on their vessels. However, this needn't be the case – a starship with overly bright harsh halogen-like lights would be equally disconcerting.

Similarly, there's nothing that says light needs to be consistent on a ship (although there are compelling reasons to do so in movies and television shows). Especially on ships that maneuver near or far from suns, vessels might adjust light levels automatically, in the same way many cars can adjust their running lights, dashboard illumination, and so on. Larger ships that frequently journey between similar earthbound spots might have a day/night cycle, letting people subtly know what time it is to a universally accepted standard.

BATTLESTATIONS!

For the aforementioned *Fading Suns* game, I made a mock-up of the bridge – and much of the ship – using Lego pieces and figures. (I also painted a white cat figure to make it black, to better match my hero's pet. I understand now this makes me worse than Hitler among some in the Lego community.) Designing that helped me visualize what it was to be aboard that ship. I realized there wasn't enough room

comfortably for more than one visitor, so any visitors needed to stay elsewhere. Similarly the existence of something as simple as *seats* opened up a lot of acting and storytelling possibilities: “I jump up excitedly” or “I convey to the Admiral that I'm bored by spinning in my chair.”

Coming up with an understanding of what the main hero-housing area or areas are makes it much easier to define the action and possible adventures. Is it a cavernous bridge with multiple levels and ramps? A narrow tube with assigned seating on either side of an aisle? A small-ish flat chamber with customizable seating that can fold out or flip up as needed, like some minivans? Again, it shouldn't affect the stats at all, but it adds flavor. (Bonus idea: Fuzzy dice.)

FEARFUL ASYMMETRY

The tendency for most science-fiction craft to be symmetrical has been noted, as has the possibility of bucking the trend. Once spaceships are built in space, it's probably pretty straightforward to make them whatever shape the shipwright desires (especially if reactionless drives are on the scene). For those who want to dabble in asymmetry, here are a few tips.

● *Unique elements can throw off a ship's symmetry.* For example, if there's only one escape pod, it might be on the port side of the craft, across from the entrance/exit on the starboard side. Or if it has a unique tracking or detecting system, it could be hanging out at an oddball part of the ship.

● *Utility is a great reason to skew a ship's shape.* Perhaps a craft has a lab that deals in dangerous or unpleasant material; in that case, it'd make sense to keep that area out by itself, perhaps loosely bolted to the rest of the vessel. Or maybe the spaceship needs to be able to form (say) the left hand of a giant robot; in that case, its spaceship mode might not be able to tuck its “thumb” any better than slightly askew from an axis.

● *“Symmetry” can mean different things.* Maybe the crew quarters and bridge are disproportionately large compared to the rest of the craft, because the cargo-carrying areas on the opposite side tend to be so laden that it'd mess up the weight of the ship if it were symmetrical; in this way, maybe it's “symmetrical” by *weight*, not shape. Or maybe the energy usage is such that a high-draining portion of the craft takes up an unusually small size, to keep its power capacity similar.

Even when in an established game universe, don't feel too constrained to what a ship “should” look like. If traveling through a moonbase shipyard ever feels as humdrum as a sedan dealership, then you're losing out on some of the splendor of space. Unleash your inner creativity, and aim for “Spaceship spaceship SPACESHIP!”

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 10 years; during that time, he has won four Origins awards. He lives in Indiana with his wife, Nikola Vrtis, and their son.

ODDS AND ENDS

EXPLOIT YOUR PLAYERS!

As discussed in this month's Random Thought Table (pp. 34-35), customization is *cool*. However, it's entirely possible you aren't interested in designing color schemes, bridge layouts, or customization options of individual spaceships. That's okay; it's quite likely one of the players will be! If party members want to design the bridge of their ship, or the look of the guest quarters, or the justification for why the ship is shaped like a sideways wedge, let them do so. If everyone thinks it's cool and agrees to it, then make it so!

If you're concerned that it will give the players too much of an edge, don't fear. In many campaigns, the heroes are *supposed* to be cooler than anyone else. And if the players accidentally gave themselves an explanation, plot hook, or description that proves to be *too* useful . . . well, it's a big universe. It'd be a real shame if something were to happen to that nice little spaceship. Perhaps the next version of the vessel has its troublesome elements "no longer available."

MAKING TIME TO REMEMBER

The modern automobile came into being in 1886.

Humanity landed on the moon in 1969.

Let's assume that you can start really remembering your childhood around the age of 10.

That means that any nonagenarians around at the tail end of the '60s found themselves recalled a childhood where "transportation" equaled "horses" while now living in a world where intrasystem planetary travel was possible.

Such quantum shifts are relatively common in fictional universes as well. In the pre-lens-flare Star Trek universe, humanity went from its first warp-drive test in 2063 to a fledgling interstellar empire in 2150 – just a few years longer

than the horse-to-Apollo transition. In the Star Wars universe, the all-powerful evil galactic Empire rose and fell in less time than *The Simpsons* has been on the air. In other words, big things can happen in a small span of time.

If your players are the sort that they like to design a setting's starships, look, and aesthetic (see above), then why not let them get in on the ground floor? Run an adventure or two – or a miniseries! – set in the campaign's past. Have the PCs be in positions where they can bring their design specifications to life – perhaps as cutting-edge inventors, pioneering captains, wealthy visionaries, etc. Once the feel of the setting's space-travel capabilities are firmed up, "flash forward" to the current time of the setting, where those design decisions carry over into the rest of the campaign proper. Ideally, it's in a close-enough time frame – say, 50 to 80 years – that the same folks can *still be around* . . . and playable, if the gamers want. That wealthy innovator daredevil in his early 20s could be the spry septuagenarian statesman, either advising a new group of heroes or leading the action himself! (In theory, the existence of eugenics-altering drugs would allow the same "trick" of fast-forwarding with the same characters in a larger time frame, but it may not have as much resonance for the players to imagine their current scientist-hero having invented travel methods 280 years ago.)

If time permits and the players are feeling really inspired, run similar prequels for different alien races, generating their own spaceships, design aesthetics, and personalities – especially antagonistic ones. This can also create a cache of pioneering characters the heroes can face off against – or refer to – when the campaign flashes forward. "P'fan'hal is one of the most dangerous, innovative scientists the world has ever known. If he's invented something new for the Syugeliv Empire, we're all in trouble . . ."

Life has no smooth road for any of us; and in the bracing atmosphere of a high aim, the very roughness stimulates the climber to steadier steps, till the legend, "over steep ways to the stars," fulfills itself.

– William Doane

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