Eclipse Phase
The Roleplaying Game of Transhuman Conspiracy and Horror

Your mind is software. Program it.
Your body is a shell. Change it.
Death is a disease. Cure it.
Extinction is approaching. Fight it.

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**Musical Inspiration:** Geomatic (Blue Beam), Memmaker (How to Enlist in a Robot Uprising), Monstrum Sepsis (Movement)

**Dedication:** This book is dedicated first and foremost to the people who made Eclipse Phase happen, from everyone who contributed time, sweat, ideas, and money into it to everyone who picks it up, reads it, and plays it. This game is by you and for you. Secondly it's dedicated to my grandmother and to Andrea, both important people in my life who died while I was working on this book and its themes of defeating death. I sincerely hope that one day such tragic losses are avoided. Third, this book is dedicated to my son Echo, my entertaining working companion on this project. Finally this book is dedicated to those visionaries, especially the anarchists and transhumanists, who are working to bring about a fantastic future, starting now. —Rob Boyle

**Our Resources:**

- `http://eclipsephase.com`Eclipse Phase website and blog
- `http://del.icio.us/infomorph`Eclipse Phase-related news and links
- `http://posthumanstudios.com`Posthuman Studios website
- `http://catalystgamelabs.com`Catalyst Game Labs website
- `http://eclipsephase.com/store`Online Ordering and PDFs

**Outside Resources:**

- `http://www.humanityplus.org`Humanity Plus

First Printing by Catalyst Game Labs, an imprint of InMediaRes Productions, LLC PMB 202 - 303 - 91st Ave. NE, G-701 Lake Stevens, WA 98258. Printed in China

# Contents

# Chapter 1

# Lack

"What's the number?"

The word dig their claws into my new vocal cords and yank themselves up and out of my parched throat. My diction is predictably poor, as it always is during the first few minutes following a resleeve. The pitch of the voice is apparent despite the mumbled, sandpaper slur of the words. Definitely a biomorph and my latest sex is female. This much I know in the first few seconds. The model eludes me right now, but I'll know for certain soon enough, once motion is mine again. Another fury morph is my first guess.

The slab is hard. Nothing more than frigid metal with crisp white synth-slick wrapped around it. Typical accommodations for a corp dollhouse. The chill seeps through my skin and wraps around my bones.

A cortical cruncher looms over me, waving his welcome-back beam side to side, occasionally catching my pupils. His smug, bored face speaks: "Consciousness confirmed." The beam clicks off. My question should have made it obvious that I am back, but the guy is a slave to procedure. They all are. Corporate body banks like their employees paralyzed by obedience, unable to think for themselves. I mumble the question again. "What's the number?"

"March 11."

"How many after the Fall?"

"Are you for real?"

> I am paranoid. Yes. I need to know the year every time I return upon a body bank slab. Paranoia is just one of the plagues transhumanity faces these days.

I try to snag the data from my new sleeve's mesh inserts before opening my mouth again. No luck. Asking a sleeve tech for the year is always humiliating. Makes me feel like an amateur, but the circumstances are definitely extenuating, so I press him. Hard.

"Answer the fucking question."

The corp sloth gives me the lunatic eye before he answers.

"Uh ... 10 AF. You haven't been gone that long. Your last backup ... "

He scans his entoptics for the info.

" ... 14 days, 7 hours ago."

It takes a second to sink in, but when it does, it stings. It never ceases to shock when time slips away from me. Two weeks. Gone. Completely wiped from my existence. Two weeks ago, there was another me, sleeved in another morph. There was a mission and it led to my death. That is all I know. Either Firewall failed to retrieve the cortical stack off the corpse so I could retain those two weeks, or the fuckers deliberately chose to swipe that time from me. Honestly, though, both possibilities are preferable to having another self bouncing around out there, doing who knows what-the-fuck. Some t-humies get off on having multiple selves traipsing all over, but my ego is in check. One Sava is enough misery to unleash on the 'verse.

Shit. My brain is wandering off into morose territory; always does during the first moments following a resleeve. I need a physical context. Something tangible to focus my attention on. I bring my hands in front of my eyes, arms feeling like two-ton sacks of rocks. The fingers are thin and long; the knuckles callused,

scarred and misshapen. Obviously the work of many thrown punches, fists connecting with jaws, metal, flesh. Yep. A well-worn fury morph. You get what you pay for, I suppose; or what Firewall is willing to pay for. Why do I do it? As far as the org is concerned, I'm nothing more than a cheap precision instrument, tossed into the recycling bin when I snap in half. There will always be more of me, until the horrors prove too intense, until the files get too corrupt, until I know too much and Firewall decides to wipe me, then some other sap will step in to preserve transhumanity. Preserve transhumanity. Fantastic. Now I'm babbling like a Firewall propaganda tweet! My arms weaken and flop back to my sides. The strength just isn't there yet. A few more minutes with nothing but my thoughts.

On his way out of the recovery bay, the cort cruncher laughs at my feeble attempt at motion. "What's your hurry?" he says. "Just relax, willya? You collapse onto the floor, you're gonna stay there until you get yourself up. They don't pay me enough to babysit newbies." His flippancy doesn't help my mood and the melancholy returns.

What experiences are no longer a part of my consciousness? Perhaps the thrill of a lifetime. Did I discover true beauty? Fall in love? Have an epiphany? Save a life? I'll never know. Those memories, that life, that version of me, is gone. The new me, lying on this slab, was never shaped by those experiences. My chest hollows out from the weight of the loss.

I gotta shift the thought process.

Fuck it. Maybe there was no joy, no revelations. It was a shit two weeks. I'm certain of it. I was bored out of my mind. Better yet, broken and suffering from an epic heartache. My demise was meaningless. I OD'd on kick, flopping on the floor in a pathetic speed-addled frenzy till my heart exploded. I was gutted by some low-life scumborn in a back station corridor over some lo-rez black market XP. I'm glad the time was wiped. Ecstatic, in fact. Fuck it. Fuck them. I don't need those two weeks.

But these thoughts are lies. I need those two weeks. I don't feel whole without them. Hell, I feel incomplete if even an hour is sacrificed. I have to know.

Someone knows what occurred. No doubt. Probably a Firewall proxy, Jesper most likely. He was my connect this go round. I remember that much. The wipe would have been his call. And proxies have a quick trigger finger when it comes to wiping us sentinels. Even a hard-earned rep score can't save my memories when Firewall deems the results of a mission too sensitive for an outer circle thug like myself to possess. As long as the fucking job gets done. As long as transhumanity perseveres.

What a shit deal.

How did my life, my lives, come to this? Always in the hands of another.

Again, the dread, the paranoia. I gotta shake this off. I have to give the org the benefit of the doubt. I've been a sentinel for decades. I like to think I've saved millions of lives, but I'm just not sure.

Do I trust the org? No. But there is an understanding, a degree of respect. Though as the years continue to race by, and the gaps grow longer and more frequent, I'm beginning to doubt Firewall's commitment to my preservation.

Suddenly, my muse stirs, breaking my dark reverie. Several entoptic displays appear in my field of vision, cycling through diagnostic routines as my mesh inserts finally come online. Careza's familiar feminine voice enters my mind.

[Welcome back, Sava.]

The sound is soothing; like being cradled by my mother, or embraced by a lover. The harmonic upgrade was a worthwhile investment. Careza has learned to use it well. I rarely think of my muse as an AI. It is my only true friend these days. I wonder if it shares the sentiment. I've never shot the thought its way. I keep it to myself. I'm afraid of what the response might be.

Hey Careza. Glad to be back.

[You could use a drink, I suspect.]

You know me too well, Car. Better than I know myself.

[Hospitality now has the request. Wait time, approximately ten minutes.]

Thanks. Careza enjoys our conversations when my brain has a slight buzz. It is always trying to get me drunk.

[You're welcome, Sava. Before you ask, it's been two weeks. I don't have any information on what happened following our last resleeve. Currently, we are in lunar orbit aboard Selardi IV. We are outfitted

in a CoreCorp-brand fury morph with minor enhancements. They will be online shortly. I am pleased to report the Titanians were victorious and won the Cup.]

Damnit. Would have made a killing on that one. What did the odds go off at? But before Careza can dig up the info, I shut down the operation. Wait. No. I don't want to know. It'll only irritate me more. A nervous energy starts to itch my entire system and a thick familiar taste begins to coat my tongue. I need a cigarette.

[Yes. I know. The previous occupant of this morph was a heavy smoker. The habit might be difficult to shake this time.]

This resleeve just keeps getting better by the minute. I hate smoking. Booze, fine. I can handle my alcohol, but smoking always makes me feel like shit. Every time I get sleeved in a morph with the addiction, I struggle to kick it. Careza continues with her report as I try to retain my sanity in the face of an intense nicotine craving.

[@-rep remains intact.]

Finally some good news. At least I didn't piss off any allies in the past 2 weeks.

[Indeed. Are you in the right frame of mind for an update on Rati?]

Rati is my passion. The lover I hold above all others. She disappeared on me two years ago. No explanation. The sting still lingers.

Let's skip the update for now, Careza.

[Understood.]

Run a newsfeed scan. Check for any major incidents in the past 2 weeks. Maybe there's a clue as to what we may have been up to.

As Careza runs the scan and continues her standard sitrep, I shift my attention to the new sleeve. The strength to stand is finally there. I push the morph up and swing the feet onto the floor. Spasms shoot through every muscle. New morphs always take a bit of time in which to acclimate. Luckily, I'm familiar with the CoreCorp fury, sleeved it a few times in the past. This one feels like an old pair of shoes, bit worn and abused, but able to pound the pavement if need be. The left ankle is a bit tender. I hold it up a bit to get a look. Bit swollen. Definitely not new sleeve dysmorphia. Probably a nagging injury. Again, a pain in the ass, but you get what you pay for, I suppose. The nanotat encircling the right bicep is rude and obnoxious, even by scum standards—an entire slitheroid entering the genitals of a female pleasure pod, fully animated. Class act, whoever opted to etch that upon the morph. I hate identifying marks, but again, if you can't afford a clean morph, you take what you can get.

I slide off the table, managing not to fall over in the process, and gingerly test the ankle. Sore, but it isn't going to snap off.

Put in a request for a patch, left ankle. Bute should be fine.

[Phenylbutazone. On it's way. And the cocktail will be here in approximately 30 seconds. Nothing unusual on the newsfeed scan.]

Figures.

> I plod over to the full-length mirror, standard issue in resleeve waking chambers, and drop the sheet to take a look at the new me. I spy the cortical cruncher lingering in the doorway, my cocktail in his hand, giving my body an appreciative look. I don't recognize myself.

"Hand me my drink please." I reach out my hand in his direction without even acknowledging his presence. He steps into the room, too close to me, and slips the drink into my hand. His breath smells like some sort of sour sausage.

"Not too bad under the sheet, are you?" he says. "I took a peek earlier, but I must say, the slab didn't do you justice. On your feet, the curves really pop. Your face isn't much to look at, but that rack is ... "

I cut him off before I vomit bile into my mouth. "It's exquisite. I know. Now shut up and back off before I rip the skin off your face and slap you silly with it." He gets the message and slinks from the room.

It is a nice rack.

[If nice is defined by proportion, then I would say yes.]

AIs, always so formal.

[You're approximately 4 centimeters taller than your usual proprieception allows for, so watch your head.]

Thanks for the heads up.

[That was awful.]

Yeah. Yeah. I know. A smile finds its way onto my face as the banter with my muse lightens my mood. Looking in the mirror, I try to broaden the smile, to get a better sense of my new face. I show some teeth. Nicotine stains all over them. I take a long sip from my cocktail, swish the alcohol around a bit. I can feel my blood respond instantly to the sauce. I close my eyes and let out a sigh. Just a few moments of peace is all I ask.

[We have a guest, Sava.] Damnit. No such luck.

Who?

[Our last Firewall proxy, Jesper, has sent a beta-level fork of himself. It is rather impatient to speak with you.]

Connect him.

They just cannot leave me alone, can they? Officially, Firewall doesn't even exist. It's because of Rati that they got their tentacles wrapped all around me, through me. The whole mess on Mars. That's where it all started. The last time I saw Rati. All that knowledge they allowed me to retain. But why? Until that day, I had never realized just how scary the universe truly was. No, not scary. Horrific. No other word for something so vast, so uncaring. Transhumanity could be wiped out completely and it would all just continue on as before. Horrific. No other way to explain the feeling you have when you come face to face with things truly beyond comprehension. Hell, no other term could encapsulate transhumanity's actions towards each other—much less what other beings lurking in the void have in store for us. Perhaps that was why. To teach me a lesson. To make certain I would never forget, so I would never cease assisting the org, because even the briefest glimpse of what is actually out there is enough.

Jesper's fork materializes in my field of vision.

[Welcome back, Sava.]

Fuck off, Jesper. You know I hate waking up with lack.

[Sorry. Nothing I could do.] His expression is serious and concerned, but his kinesics indicate he is as calm as can be. What an act! Fucking proxies never panic. They hold all the cards and it's never their minds that are on the line.

Yeah. Right. Get to the point. You don't have me sleeved in a combat morph to get some downtime, so you must have something serious lined up. Are Berk, Pivo, and Sarlo here?

[Yes, they have been resleeved in the same facility.]

At least my team is with me. People I could count on. To a certain degree.

All right. What are the details?

***

Pivo gripped the smooth outer surface of the station with all eight arms. Nano-magnetics at the tips of his vacsuit arms were the only difference between a secure hold and an endless drift into the depths of space. He peered up through his faceplate at the dark orb above him.

Earth.

His eyes locked on an expanse of dead black ocean through the ominous clouds. Pivo longed to swim in those ancient depths. Born and bred for space, he had never once immersed himself in the former ecological niche of his kind. Odds were against his ever taking a plunge into the salty waters of an Earth ocean. The planet was now a plagued death trap. A wasteland of skeletal forms.

He imagined a time before the Fall, when his ancestors thrust through blue waters and slipped effortlessly through mazes of coral, or gently floated along with the current, not bothered by the burden of sapience. Perhaps octopi still survived beneath the black waters of the present, eking out a brief existence, biding their time, keeping the species true and alive until the Earth could be reclaimed, and Pivo would join them on that glorious day, abandoning knowledge altogether, and returning to the ways of instinct.

Vacsuit sensors interrupted Pivo's fantasy, detecting a laser light that bathed his form—contact from Sava by line-of-sight laser link. It was the preferred method of communication when a mission required discretion. Pivo's muse processed the message, and Sava's voice entered his head.

[Something wrong? Why'd you stop moving?]

[Just enjoying the view,] Pivo beamed back.

[Enjoy it on the way down, for hours if you want. Get inside the station before one of the sentry bots finds us.]

Pivo didn't bother to respond. There was no arguing with Sava. No use in defending your actions. Pivo began crawling along the shell of the station again. The station itself was tethered to the end of a long, black, carbon nanotube cable that stretched all the way down to the planet's surface—the sole surviving space elevator.

Pivo located the breach, a thin scar in the station's metallic hull, the result of an internal explosion responsible for the station's demise during the Fall. The breach was exactly where Sava said it would be and the description of its size was dead-on: a gap barely large enough for a human infant to slip through. According to Sava, years ago, the self-repairing nanosystems operating in the hull's metal had malfunctioned before the breach had been fully repaired. The level of mission details Sava managed to extract from Firewall was scary sometimes. Paranoia bloomed for a moment, but he quickly dismissed his suspicion, compressed his cephalopod form, and squeezed his body through the breach.

In blackness, Pivo activated his infrared emitter, casting the room in a light outside the normal visual spectrum. The interior of the lifeless station became visible to his enhanced eyes in the eerie altered colors of infrared. Pivo almost preferred the dark. Ice crystals glittered from every surface, the reult of flash frozen moisture in the long-absent atmosphere. Frigid clumps of human remains floated alongside chunks of hull metal in a macabre zero-gravity ballet. Pivo floated through the wreckage and the gore, lightly tapping aside metal or flesh to clear a path deeper into the room. A female head drifted slowly by, the face frozen in a gaping silent scream. An intact cortical stack dangled from the severed neck. For a second, Pivo considered snatching the stack, but he was not here to retrieve lost souls. Instead, he placed two of his arms upon the top of the head and pushed it beneath him, towards the floor. Like so many others lost during the Fall, this person would remain forgotten here.

Pivo made it to the airlock without incident, but he knew his luck would run dry eventually. A run-in with hypercorp guardians on a derelict station was unavoidable. Sensors may have already detected his presence. It was only a matter of time before bots converged on his position. He just hoped that when it occurred (and it most certainly would), it would happen after he had opened up the airlock and the rest of the team was inside the station.

The airlock had been welded shut from the inside. Pivo was prepared for this eventuality, but it made his detection by guardian bots a certainty. He composed himself for a few seconds, focused on the task at hand, then fired up the plasma torch built into one of his vacsuit arms. A sizzling hiss and a harsh hot blue glare filled the room. Seconds were now his most precious possession.

He was almost through the inner door when his muse pinged him with a warning from the passive teraherz sensor. An object was moving towards Pivo's position rapidly, now only twenty meters away. A sentry bot would be upon him in soon.

[Almost through the first door,] Pivo transmitted calmly, even though it took every ounce of his will to keep the torch steady. [I have company. Be ready.]

[Copy that,] Sava replied.

Finally, Pivo cut through the seal. The octomorph slithered four arms through the still smoldering sliced metal, and with a strained yank, pulled the door from the frame. The door slowly floated away into the chamber, the edges rapidly cooling. The interior airlock door was not welded shut. With a vocal sigh of relief, all eight of Pivo's arms began a frenzied assault upon the airlock door's manual controls.

[Few more seconds. Just a few more seconds.] But the seconds had expired.

In his 360-degree field of vision, Pivo could see the security bot thrust into view behind him. The bot unloaded its weapons immediately, the shots ricocheting off the floating airlock door. The bot advanced on the door, and with a furious swat knocked the obstruction aside. It clanged upon the crystalline surface of the wall. Just as Pivo pulled the last lever to release the airlock door, blazing plasma fire engulfed him.

***

Sava had instructed Careza to surge the neurochem the instant the airlock portal was open. The muse did not fail to deliver. In what seemed like an eternal slow-mo to Sava's charged brain, the airlock door swung open into the station, aided by a thudding steel leg kick courtesy of Berk, the team's muscle. With a flash of thought, Sava's targeting radar snapped up an entoptic display and locked on two targets: Pivo and a sentry bot. The robotic guard dog was already leveling its weapons, but Sava was faster. Retinal-searing plasma fire erupted from Sava's weapon, singeing one of Pivo's arms and slamming the sentry back. A second shot punched through the bot's armored carapace, melting critical components within, rendering the bot a useless pile of fused scrap metal.

Sava moved quickly past the cursing octomorph and unloaded two more shots into the smoking bot.

[We're clear,] Sava transmitted. [One down, but there is always more. Count on it. Pivo, you shiny?]

[You scorched my breeding arm, puta.] Pivo shot back with clear agitation rumbling in the harmonics.

[You rather I leave you to the bot next time?] Sava turned to Sarlo. [Sarlo, get in here and find the console you need. Berk, we're going to need to set up defensive positions, to give hacker boy here time to crunch his bits.]

Pivo cut through his vacsuit and detached his damaged arm, cursing Sava under his breath as the vacsuit rapidly repaired itself and sealed the gap.

[Hey. Don't worry, Pivo. You've got seven more. And besides, you don't really strike me as the breeding type anyway.] Sava relished giving Pivo a hard time. It was one of the true joys in life.

Pushing off from one wall to the next, Sarlo moved along the chamber with ease and grace. His neotenic morph was slighter and even more diminutive than the average human child sleeve, completely augmented and customized to match his "preferences." He had paid a fortune for it. The others never understood Sarlo's penchant for juvenile human sleeves, so much so that he always kicked in his own credits to ensure an augmented neotenic resleeve, even when Firewall was footing the bill. They also didn't know where his seemingly endless supply of personal funds came from, nor did they want to. As long as he got the job done.

Two minidrones followed after Sarlo, lighting the area in infrared and actively scanning on other wavelengths. [This way,] he said, transmitting an entoptic map to each team member's overlay. [It's not far, a hundred meters or so.] A highlighted route appeared on the map.

Sava and Pivo followed closely behind Sarlo, while Berk struggled to keep pace in her armored gynoid shell.

[Keep up, flatlander. We'll be down the gravity well soon enough,] Sava beamed to Berk.

[Not soon enough for me,] Berk replied.

The abandoned station was eerily quiet. Signs of long-forgotten violence and desperation lingered everywhere. Floating debris. Ruptured and frozen bodies. Scorch marks and twisted metal. Death owned this place.

When the team reached the control station, Sava and Berk took up defensive positions in the corridor while Sarlo and Pivo went to work on the station's dormant systems.

[I'll be damned! The mission spec was actually right. The station systems are active but dormant. Whomever's guarding this place didn't wreck the systems, they left open the possibility that the space elevator could be activated again.] Sarlo gleefully began his procedures to hack the system.

[Who the fuck would want to risk going down to that ball of ash?] Berk piped in.

Pivo waved one of his arms in agitation. [Need I remind you that some of us happen to think that reclaiming our home planet is a good idea?]

[Reactionary thinking, if you ask me.] Berk replied. [Shrugging off all of our old nation-state loyalties is one of the best steps transhumanity has ever made. Leave reveling in the glories of the past to the bio-cons. I'll take a future where we step boldly outward into space, thank you much.]

[Let's cut the politics.] Sava pointed at Berk. [You're an anarchist, I get it.] Then Sava pointed at Pivo. [And you're on a reclamation kick. Fine.] But Sava's rant was interrupted by half a dozen fast moving dots upon the team's entoptic radars. [Incoming pings. Sarlo, you in yet?]

[Working on it. Fuck. Fuck. Shit.] Sarlo's childish voice sounded petulant.

[Work faster. If these bots have heavy ordnance, we're screwed.] Sava and Berk both unloaded suppression fire down their respective stretches of corridor before the bots even made it to the corners. The bots halted

their approach momentarily, taking cover just around the bend. More bots began to appear on the radar, moving towards the position of the first responders.

[We're running out of time, Sar! More bots gathering!] Sava unloaded another round of suppression at the bend. Berk kept her weapon quiet, waiting for a bot to make a move into the corridor before lighting it up, but the bots remained put. More gathered, and even more appeared on radar, moving to the same position.

[They're gonna be all over us any second now!]

[Consider this a gift, ladies and gents ... ] And with a final operation, Sarlo seized control of the station's entire security system.

Suddenly, one of the bots turned on the others. Another soon joined it. In a matter of seconds, fumes and debris came drifting down the corridor as all-out warfare broke out between the bots. Sava and Berk lowered their weapons and admired the sounds of Sarlo's handiwork.

[Damn, Sar! I guess that is why you are one of the best hackers in the system!]

[Applause, applause, ya waify freak!]

[When you've got cutting edge-exploits courtesy of the leet coding AGIs on Extropia, there's not a whole lot you can't do.] Sarlo delivered the line with a calm harmonic, but Sava was watching his kinesics, and they were off the charts. The neotenic's little heart was beating like a drum roll. Sava opted not to bust his furless balls about it, and instead let Sarlo have his moment in the sun. This had been a "close one," and another close one might not end up in their favor.

Sava allowed a few seconds of relieved silence before getting the team back to business. [Sarlo. How soon till the elevator is active?]

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Pivo stuck to the portal, watching as they descended below the soot-filled layer of clouds and the Earth below came into view. They were in the atmosphere now, descending on a taut beanstalk stretched between the Earth and station above, a massive feat of engineering built from carbon nanotubes. The shuttle car crawled down the elevator cable, bringing them closer and closer to the ruined planet.

Earth's atmosphere was now choked with a thick dust, the color of rust. The winds whipped over the planet's surface with breakneck velocity, swirling dangerously in certain pockets. The world's weather systems had been irretrievably ravaged by the Fall, when transhumanity had seemingly gone to war with a group of rogue AIs known as the TITANs. Bombs, raging fires, chemical attacks, biowar plagues, voracious nanoswarms—even nukes—had taken their toll. It was now an inhospitable place, gripped by nuclear winter. Some of the clouds were formed into unusual shapes, defying the high winds, even seeming to writhe as they moved—the thriving descendents of self-replicating airborne nanoswarms, Pivo suspected. Who knew what other monstrosities waited for them below, evolved from the remnants of AI war machines?

The Earth was off-limits now. Abandoned to the enemy. Though the TITANs were presumed to be long gone, escaping the solar system via secretly-constructed wormholes gates, taking millions of forcibly uploaded transhuman minds with them—they had left many of their tools and weapons behind. Likewise, some of the weapons transhumanity had unleashed on the AIs—and, quite often, themselves—had taken on a life of their own. So Earth had been abandoned and interdicted, with hypercorp killsats laced into orbit to shoot down anything that attempted to leave or land on the planet's surface.

As a reclaimer, Pivo was part of a small but vocal faction that advocated a return to Earth. There was still hope for the planet, they believed. It had always perservered, and this was no time to give up on it. Earth needed to be cleansed and terraformed, resuscitating transhumanity's home. But the reclamers were a minority. To most survivors of the Fall, the Earth held too many horrible memories. Lives ruined. Loved ones lost. Their own deaths. It was a monument to transhumanity's arrogance and mistakes, a grim reminder that they were not above destroying themselves despite all of their advances and technology, or perhaps because of them.

This didn't prevent some from trying, of course. Scavengers still raided the planet's ruins, retrieving long-lost treasures, cultural artifacts, or even the preserved mind-states of those who failed to escape. Some reclaimers had initiated their own secret missions, intending to establish a basecamp from which they would begin operating their own reclamation projects. Most were never heard from again.

The team of four rested and prepared equipment in the shuttle's large open lounge, Sava and Sarlo in a cramped inflatable survival bubble so the biomorphs could escape the confines of their vacsuits for a while. Pivo elected to remain outside the bubble and in the vacsuit. Close confines with Sava during the descent did not sound pleasant to him. The walls of the lounge were smeared with decadesold blood, now frozen into a crystalline brown in the depressurized cabin. Whoever the last passengers were to ride this shuttle, fleeing the doomed Earth, must have set violently upon each other, fueled by madness or despair.

[I wonder what it was like.] Sarlo tossed the thought out to the group.

[What?] Pivo replied.

Sava quickly jumped in and put an end to the discussion Sarlo was yearning to start. [Quit with the philosophizing and the dramatizing. You know I cannot stand that shit.] Sava tried desperately to maintain order and an air of gruff detachment. It was too easy to let the brain wander off into the past and the fate of the millions who perished during the Fall. To counter this, Sava always resorted to the diatribe. [Listen. We all know the mission specs. We're locating someone. A courier. Most likely a corpse. Last known position while alive was the base station we will drop into when this ride stops. Mount Kilimanjaro. Which, according to quite reliable sources, was once overrun by killbots, which are most likely still in the vicinity.] Sava paused for dramatic effect before continuing. [We retrieve something from the courier. What, we don't fucking know. Only that it is quite valuable to the org. We stick to what we know. I don't want to hear any more bullshit "what ifs" and "I wonders." If your thoughts are anywhere other than the mission, keep them to yourself. I don't want to hear them.] And with that declaration, the rest of the journey to the Kilimanjaro station was in silence, each confined to their own thoughts, not a single ping between them.

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The shuttle rattled to a stop inside the dark cavernous hangar. At one time, the Kilimanjaro hangar was the busiest Earth-to-space station port in the world, servicing millions of customers annually. Now, as Pivo clung to a shuttle window and stared out into the black emptiness of the hangar, it seemed as if the place was a soulless vacuum.

[Ready when you are.] Sarlo pinged Sava, poised to hack open the shuttle door and allow the stale dust-choked air of Earth to waft over the team. Sava nodded to Sarlo and the shuttle door slid open with a rush of decompression. A blinding red-gray dust blasted into the shuttle from the hangar and coated the shuttle interior almost immediately.

Sava's first step into the Kilimanjaro hangar landed firmly onto the brittle ribcage of a child's skeleton. The bones snapped into splinters and powder with a crunch. The floor surrounding the shuttle airlock was carpeted with skeletons entangled in a mass of tattered clothing. There was no way to avoid stepping upon them. One by one, the others stepped from the airlock.

[This place is a tomb,] Berk beamed to the group.

[This whole planet is a tomb,] Sava replied, with an extra echo harmonic allowing the word tomb to continue on well after the phrase was transmitted, added specifically to annoy Pivo, who immediately shut down the echo in his head with a countermeasure from his muse.

Sava took a few more crunching steps forward, then stopped. The rest of the team followed suit.

[Something is not right here.] Sava kicked at one of the skeletons. The bones rattled and cracked. [I don't see any skulls.]

[Forced uploading,] Sarlo transmitted. [TITAN machines harvested the heads of the dead for scanning.] He shrugged. [That's my guess, anyway.]

[Shut up!] Sava signaled the team to silence. [Who else hears that?]

A low mechanical whir reverberated nearby. [I'm picking it up.] Pivo replied. [Up a bit to the north. About 30 meters.] As if in response to Pivo's observation, another whir began, this one behind the team, from the south end of the hangar. Another whir from the east joined in the chorus. The sounds were coming closer, becoming more distinct, more aggressive.

[No visual, yet. This fucking place is so deep and thick with this dust shit, seems to act like chaff too. Infrared is giving me only about twenty feet!] Sava motioned for the team to move to the right. [Stay close, we move slow and keep the triggers itchy. The passenger lounges are just east of us. We start the search there.] The whirs were now all around them, hovering just outside visual range.

[What the fuck is that?] A flying insectoid bot with six articulated arms ending in small buzzsaws lunged from the dusty darkness at Berk, who dropped to the floor and unleashed plasma fire into it. The bot slammed into a pile of bones and rags and set it alight. The fire spread quickly, leaping from dry cloth to dry cloth. The blazing hangar floor now illuminated the area in the hot orange glow of flame. At least a dozen insectoid bots hovered in a perimeter around the team, awaiting an opportunity to strike. Another bot dove at Berk, its buzzsaw arms slashing wildly. Berk fired, but missed. The bot slammed into Berk's head and the buzzsaws ground into her neck. Sparks flew in all directions as metal met metal. She dropped her rifle and pushed against the body of the bot till the saws were off her neck. [Fucking run you idiots! I've got this!]

Sava fired and dropped a bot, then dashed east, leaping over spreading waist-high flames. [Make for the lounge!]

Pivo elevated onto two arms and ran behind Sava, his five remaining arms flopping wildly above his head. [Out of the way, ya poke!] Sarlo outpaced the slower octomorph, running through the flames towards the lounge.

Berk flung the frenzied bot into a flaming pile of bones, scrambled to her feet, and followed after the group, covered in bone bits and dust, the bot swarm in whirring pursuit.

Sava reached the lounge first and the portal was open. Turning with rifle raised, Sava took cover against the door frame. Sarlo and Pivo were past the flames and Berk was closing the gap, as were the bots. Sava unloaded cover fire that sizzled over Sarlo's head, knocking another bot out, but the rest of the swarm remained unphased. They just kept coming. Suddenly, more bots appeared out of the shrinking darkness near the lounge.

[There's more! They're flanking!] Sava blasted at the new bots to try and slow down their gambit. Sarlo was only thirty feet from the portal when he tripped on a tangle of bones. His boyish body collapsed face first into the dust and human remains. Pivo made an awkward leap over him, skidded across the floor, and squished into the outer lounge wall right near the door. Sava reached out, snagged the octomorph by a arm, and dragged him into the safety of the lounge. Berk tried to stop and help Sarlo up, but her momentum was too much and her footing upon the dusty floor too unstable. She tumbled forward in a roll of dust cloud, chipped bone, and tattered rags, finally slamming into Sava in the doorway.

The three team members within the lounge gathered themselves just in time to witness a bot latch onto Sarlo's head from above as he stood up. The machine stretched two arms out to the side, then plunged their spinning blades into Sarlo's neck. Sarlo's eyes went wide and his body tensed as the saw blades ground through flesh and bone, working through his neck in seconds. The instant his head was severed from the torso, the bot swooped around and zipped off over the flames, into the dark oblivion of the far end of the hangar.

Sarlo's headless body wavered for a second, then collapsed, spurting blood in long, lazy arcs.

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Pivo, Sava, and Berk sat in silence. They had managed to seal the portal into the lounge, locking out the horrors of the hangar. The headhunter bots could still be heard hovering outside the portal, occasionally clanging and grinding their blades against the sealed door.

Berk finally broke the silence. [I'm trying very hard not to think about what they're going to do with him.]

[Try harder. Sarlo knew the odds of survival were slim when he signed on. We all did.] Sava stood up.

[Should we tell him? When he resleeves?] Pivo knew this was going to set Sava off, but he blurted it anyway.

[Would that be kindness or cruelty, Pivo? And besides, there is no guarantee that any of us will survive. So who gives a shit? Whenever your last backup was, I sure hope you're not gonna miss anything since. Let's get moving.]

***

With Sarlo gone, Pivo took over the navigation duties. They were nearing the corporate VIP lounge, the last known location of the courier.

The team moved through dark corridors filled with headless skeletons and mummified remains. Years ago, the corporate forces defending the structure had been overrun by AI war machines, which mercilessly slaughtered everyone inside. The walls were scarred from battle, covered in dried blood. Destroyed remnants of the AI war machines littered the halls as well, haunting monuments to the few victories humanity had in their losing battle. Even as piles of scrap, the machines had a menacing presence.

[Too bad this isn't a salvage op,] Berk commented. [The autonomists could use a look at this tech. At the very least, figure out what the hypercorps might try to do with it.]

As they entered a long concourse, the remains and debris abruptly disappeared, as if cleared out.

[I'm getting some strange thermal readings here. Patterns that don't make sense,] transmitted Pivo.

[What is that supposed to mean?] Sava beamed back.

Before Pivo could give thought to "I don't know," his muse issued a chilling warning: [My nanosensors register the presence of unknown nanobots in large numbers of a highly sophisticated design, suggesting a TITAN manufacture. Countermeasures have been initiated.]

[Nanoswarm. Move! Move!] Pivo broadcasted in a panic as he launched into a full two-armed sprint. Sava and Berk followed Pivo's lead without question. They all knew the dangers of a TITAN nanoswarm. Unlike the nanobots Pivo often made, which were manufactured with particular purposes in mind, and which were neither self-sustaining or intelligent, this particular nanoswarm was autonomous, self-replicating, adaptive, and capable of making almost anything it needed. Even as they fled, individual nanosensors were measuring up the three agents, transmitting details on their morphs and gear to the rest of the swarm.

A junction came into view ahead, the pathway narrowing into a smaller tunnel. Suddenly, Pivo stopped, just a meter before the tunnel. [Do not move forward!] The others crashed to a halt.

[What the fuck Pivo!?] Sava looked back down the hall. [Fucking swarm could be finishing us as we speak!]

[My muse picked up a burst of thermal energy here. The swarm is up to something,] Pivo warned.

[But there's nothing here,] Berk replied, as she waved her hand across the tunnel entrance. Her metal hand suddenly clanged to the floor, separated from her wrist.

[Monomolecular wire.] Even though the situation grew more dire by the minute, Pivo was impressed and fascinated with the inventiveness of the alien nanotech. [It laced the door with it. Cuts through anything. Weak tensile strength though—you probably snapped it.]

[We're fucked. Let's face it.] Berk picked her severed hand off the floor. Down the hall, the nanoswarm began to take a visible shape as the nanobots accreted. The swarm was congealing into a fog, creeping closer. Berk continued, [The entirety of this port is probably filled with this shit. I'm useless at this point. These things are already all over my systems, my diagnostics are going crazy.]

[So what are you saying, Berk? You done?] Sava transmitted.

[Yeah. I'm done.] Berk shook her head in disgust. [Who knows what these little bastards have infected me with. I don't want to risk it. I'd rather resort to a clean back up. Forget this shit ever happened. You keep running if you want. I'll try to buy you some time.] Berk turned and ran directly into the fog. The nanoswarm sucked in around her immediately and the disassembly began. Berk's metal frame began to dissolve as she ran further and further away from Pivo and Sava, leaving a wispy trail of nanoswarm behind her.

[Get fucking moving fools! This isn't for my amusement! I'll see ya the next time around.] A few minutes later, Berk's signal went dead.

***

Sava and Pivo entered the VIP lounge. When the spaceport was overrun so many years ago, this was the site of the humans' last stand. Piles of security personnel skeletons littered the floor just inside the doorway. The charred remnants of a hopeless barricade were scattered beside the mounds of bone. Skeletons draped in torn singed civilian garb were clustered around the walls and corners, sometimes three or four deep, as if they had all scrambled as far as possible from some avatar of death in the middle of the room.

Pivo started an operation to locate the RFID tag the courier was supposedly chipped with in his left shoulder blade. The code triggered a ping within three meters. Pivo pointed a lengthy arm at a small bone pile. [He's in there somewhere.]

Sava stepped over to the pile of three skeletons and began rummaging through the bones, yanking out or snapping off all the femurs. [Goddamnit I want a cigarette. This morph has me so tweaked. Haven't I made it clear I don't smoke? Yet, every time, they sleeve me in a morph nailed with the habit.] Sava handed the bundle of bones to Pivo.

[Must be a fury thing. Should just take a few minutes to scan these for the nanoscale etching.] Pivo got to work. [Enough time for a smoke, if you want.]

[Yeah. Real funny. How about I grind you up into dust and smoke you?] Sava sat down on the floor as Pivo sent out a chuckle.

The deceased courier, whomever he was, had been entrusted with information too sensitive to transmit. No one knew the true capabilities of the TITANs to intercept and decode, so the courier had been injected with nanobots that etched a nanoscopic encoded message directly onto one of his femur bones. However, he had never made it off the planet. His message had never been delivered.

Pivo and Sava had no idea what the information was, but someone at Firewall obviously deemed it worthy of capture. Information on the TITANs perhaps. Or some CEO's secret family recipe for pasta sauce.

[This is the one.] Pivo held out the femur to Sava and tossed the others to the floor.

[What does it say?]

[I don't know. Not sure I want to know.] Pivo continued to hold out the femur.

[Enough with the drama Pivo. Just get your nanos to read it. We need a copy of the data. If you don't want to carry, I will.]

[I'd prefer that. Thank you.] Pivo set his nanobots to work on deciphering the inscription. When they were done, the intel was transmitted directly to Sava. Pivo wanted no part of it.

[So, now what? How do we get out of here? The only way out is the way we came in, and that's suicide.] Pivo's complexion changed from a milky green to an almost royal blue. It always happened when helplessness began to settle in.

Sava did not hesitate to answer, choosing to speak as opposed to transmit. "We're not gonna leave, Pivo. Not even gonna try." Sava raised the plasma rifle and aimed it directly at Pivo's oblong head. "See you next time, calamari." Sava pulled the trigger, and a fiery bolt of plasma reduced Pivo to a twitching mass of bloody scorched cartilage atop writhing arms. The arms continued to flop on the floor in a growing pool of blood as Sava sat down next to a pile of bones and leaned against the wall.

Sava pulled out a cigarette and lit it. The first inhale was virtually orgasmic. Sava loved to smoke.

Upon exhale, Careza pinged. [Shall I contact Project Ozma?]

Yeah. Get our lady on the line.

A woman's voice, cold and harsh, entered Sava's head, so different from the soothe of Careza. [Are you prepared to deliver, Agent Sava?]

[That depends.] Sava took another drag.

[Perhaps I did not make myself clear during our initial negotiations, Agent Sava. Your options are rather limited. You are unlikely to make it off the planet alive, and we cannot afford to lose this information, nor can we afford to have it fall into the hands of your organization. You are going to have to follow through, and trust that we will do the same.]

[Either you give me her location right now, or I take your precious info with me.] There was a long pause before the woman transmitted again. [You realize there will be consequences, Agent Sava. For you and for Rati.]

[Yeah. I suppose so.] The cigarette burned to the filter and Sava flicked it into a bone pile. [So what's it gonna be?]

[We do not bargain, Agent Sava, after a deal has been struck. Do as you will, and we will react accordingly.] The connection with the woman terminated. Sava stood up and walked over to where the courier's femur lay and picked it up. Pivo's gore coated the bone. Sava wiped it off and held it up to take a close look.

Sorry, Careza. Info payload only. Leave the ego behind.

[Understood.]

With the flash of a thought, Sava instructed Careza to activate the cortical stack's emergency farcaster—a one-shot neutrino transmitter, powered by the tiniest amount of antimatter. Sava's head exploded all over the room, taking the courier's femur with it. The information contained on the femur, however, found its way almost instantly through the blackest depths of space, landing safely onto a dedicated Firewall receiver elsewhere in the solar system.

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"What's the number?"

The words dig their claws into my new vocal cords and yank themselves up and out of my parched throat. My diction is predictably poor, as it always is during the first few minutes following a resleeve. The pitch of the voice is apparent despite the mumbled, sandpaper slur of the words. Definitely a biomorph and my latest sex is female. This much I know in the first few seconds.

# Chapter 2

# Enter the singularity

We humans have a special way of pulling ourselves up and kicking ourselves down at the same time. We'd achieved more progress than ever before, at the cost of wrecking our planet and destabilizing our own governments. But things were starting to look up.

With exponentially accelerating technologies, we reached out into the solar system, terraforming worlds and seeding new life. We re-forged our bodies and minds, casting off sickness and death. We achieved immortality through the digitization of our minds, resleeving from one biological or synthetic body to the next at will. We uplifted animals and AIs to be our equals. We acquired the means to build anything we desired from the molecular level up, so that no one need want again.

Yet our race toward extinction was not slowed, and in fact received a machine-assist over the precipice. Billions died as our technologies rapidly bloomed into something beyond control ... further transforming humanity into something else, scattering us throughout the solar system, and reigniting vicious conflicts. Nuclear strikes, biowarfare plagues, nanoswarms, mass uploads ... a thousand horrors nearly wiped humanity from existence.

We still survive, divided into a patchwork of restrictive inner system hypercorp-backed oligarchies and libertarian outer system collectivist habitats, tribal networks, and new experimental societal models. We have spread to the outer reaches of the solar system and even gained footholds in the galaxy beyond. But we are no longer solely "human" ... we have evolved into something simultaneously more and different—something transhuman.

## 2.1 Starting out

Eclipse Phase is a post-apocalyptic roleplaying game of transhuman conspiracy and horror. Humans are enhanced and improved, but humanity is battered and bitterly divided. Technology allows the re-shaping of bodies and minds and liberates us from material needs, but also creates opportunities for oppression and puts the capability for mass destruction in the hands of everyone. Many threats lurk in the devastated habitats of the Fall, dangers both familiar and alien.

### 2.1.1 What is a roleplaying game?

Have you ever read a book or seen a movie or a television show where a character does something really stupid, like heading into a basement at night when the character knows the serial killer is around? The whole time, you're thinking: "I wouldn't walk down those creepy stairs to the dark basement, especially without a flashlight. I'd do X, Y, or Z instead!" Since you're in the passenger's seat for the plot you're reading or watching, however, you simply have to sit back and let it unfold.

What if you could take hold of the driver's seat? What if you could take the plot in the direction you'd choose? That is the essence of a roleplaying game.

A roleplaying game (or RPG, for short) is part improvisational theater, part storytelling, and part game. A single person (the gamemaster) runs the game for a group of players that pretend to be characters in a fictitious world. The world could be a mystery game set in the 1920s that takes you adventuring around the globe, a fantasy realm inhabited by dragons and trolls and sword-wielding barbarians, or a science fiction setting with aliens and spaceship and world-crushing weaponry. The players pick a setting that they find cool and want to play in. The players then craft their own characters, providing a detailed history and personality to bring each to life. These characters have a set of statistics (numerical values) that represent skills, attributes, and other abilities. The gamemaster then explains the situation in which the characters find themselves. The players, through their characters, interact with the storyline and each others' characters, acting out the plot. As the players roleplay through some scenarios, the gamemaster will probably ask a given player to roll some dice and the resulting numbers will determine the success or failure of a character's attempted action. The gamemaster uses the rules of the game to interpret the dice rolls and the outcome of the character's actions.

As a group exercise, the players control the storyline (the adventure), which evolves much like any movie or book but within the flexible plot created by the gamemaster. This gamemaster plot provides a framework and ideas for potential courses of action and outcomes, but it is simply an outline of what might happen—it is not concrete until the players become involved. If you don't want to walk down those stairs, you don't. If you think you can talk yourself out of a situation in place of pulling a gun, then try and make it happen. The script of any roleplaying session is written by the players, and the story, based upon the character's actions and their responses to the events of the plot, will constantly change and evolve.

The best part is that there is no "right" or "wrong" way to play an RPG. Some games may involve more combat and dice rolling-related situations, where other games may involve more storytelling and improvised dialogue to resolve a situation. Each group of players decides for themselves the type and style of game they enjoy playing!

### 2.1.2 What is transhumanism?

Transhumanism is a term used synonymously to mean "human enhancement." It is an international cultural and intellectual movement that endorses the use of science and technology to enhance the human condition, both mentally and physically. In support of this, transhumanism also embraces using emerging technologies to eliminate the undesirable elements of the human condition such as aging, disabilities, diseases, and involuntary death. Many transhumanists believe these technologies will be arriving in our near future at an exponentially accelerated pace and work to promote universal access to and democratic control of such technologies. In the long scheme of things, transhumanism can also be considered the transitional period between the current human condition and an entity so far advanced in capabilities (both physical and mental faculties) as to merit the label "posthuman."

As a theme, transhumanism embraces heady questions. What defines human? What does it mean to defeat death? If minds are software, where do you draw the line with programming them? If machines and animals can also be raised to sentience, what are our responsibilities to them? If you can copy yourself, where does "you" end and someone new begin? What are the potentials of these technologies in terms of both oppressive control and liberation? How will these technologies change our society, our cultures, and our lives?

### 2.1.3 Post-apocalyptic, conspiracy and horror themes

Several themes pervade Eclipse Phase, some of which the reader may not be intimately familiar with. The following helps define these themes so that as play ers read further into this rulebook, they gain a solid understanding of how Eclipse Phase builds on such themes to create its unique setting.

Post-apocalyptic is a term used to describe fiction set after a cataclysmic event has ended human civili zation as we know it (usually accompanied by loss of human life on an almost unthinkable scale). The exact mechanism of the disaster is usually unimportant nuclear war, plague, asteroid strike, and so on. The importance of the theme is the human condition. If the world we know is torn away from us and humans

suffer horrors beyond imagining in this transforma tion to a post-apocalyptic setting, how does human ity cope? Do we survive and thrive and overcome? Or do we lose our own humanity in the process, o ultimately fall to extinction? Those are the questions that drive this genre.

To conspire means "to join in a secret agreement to do an unlawful or wrongful act or to use such means to accomplish a lawful end." As such, a con spiracy theory attributes the ultimate cause of an event or a chain of events (whether political, societa or historical) to a secret group of individuals with immense power (including political, wealth and so on) who hide their activities from public view while manipulating events to achieve their goals, regard less of consequences. Many conspiracy theories contend that a host of the greatest events of history were initiated and ultimately controlled by such secret organizations. Of equal importance is the silent struggle between clandestine groups, waging a secret war behind the scenes to determine who influences the future.

Horror takes many forms, but in Eclipse Phase it is more psychological than gore. It is the uncertainty of survival, the suspense of finding malevolent things among the stars, the fear of the unknown, the dread of facing Things That Should Not Be, the revulsion when encountering alien things, and the sickening realization of the wrong and ghastly things that transhumans are capable of doing to themselves and each other. Horror also arises both from the comprehension that there are scary things beyond our understanding nhabiting our universe and that transhumanity may be its own worst enemy. Despite all of the technological tools and advances available to future transhumans, they still face terrors like losing control of their own dentities, their perceptions, and their mental faculties—not to mention their future as a species.

Eclipse Phase takes all of these themes and weaves them together in a transhuman setting. The postapocalyptic angle covers the understanding of all that transhumanity has lost, the fight against extinction, and how much of that is a struggle against our own nature. The conspiracy side delves into the nature of the secret organizations that play key roles n determining transhumanity's future and how the actions of determined individuals can change the ives of many. The horror perspective explores the results of humanity's self-inflicted transformations and how some of these changes effectively make us non-human. Tying it all together is an awareness of the massive indifference and the terrible alien-ness that pervades the universe and how transhumanity is insignificant against such a backdrop.

Offsetting these themes, however, Eclipse Phase also asserts that there is still hope, that there is still something worth fighting for, and that transhumanity can pave its own path toward the future.

### 2.1.4 But how do you actually play?

To play a game of Eclipse Phase, you need the following:

- A group of players and a place to meet (real life or online!)
- One player to act as the gamemaster
- The contents of this book
- Something for everyone to take notes with (note pads, laptops, whatever!)
- Two 10-sided dice per player (or a digital equivalent)
- Imagination

#### A group of players and a place to meet

While roleplaying games are flexible enough to allow any number of people, most gaming groups number around four to eight players. That number of people brings a good mix of personalities to the table and ensures great cooperative play.

Once a group of players have determined to play Eclipse Phase, they'll need to designate someone as the gamemaster (see below). Then they'll need to determine a time and place to meet.

Most roleplaying groups meet once a week at a regularly scheduled time and place: 7:00 PM, Thursday night, Rob's house, for example. However, each group determines where, how they'll play, and how often.

One group may decide they can only get together once a month, while another group is so excited to dive into the story potential of Eclipse Phase that they want to meet twice a week (they decide to rotate between their houses, though, so as not to overload a particular player). If a group is lucky enough to have a favorite local gaming store that supports instore play, the group might meet there. Other gaming groups meet in libraries, common rooms at their school, bookstores that have generously-sized "reading rooms," quiet restaurants, and so on. Whatever fits for your gaming group, make it work!

When getting together for a game, most RPGs use the phrase "gaming session." The length of each gaming session is completely dependent upon the consensus of the playing group, as well as the limitations of the locale where they're playing. The particular story that unfolds in a given session can also impact a session's length. If playing in a game store, the group may only have a four-hour slot and the gamemaster and group may have determined—through several sessions of play—that this is a perfect time frame to enjoy the story they're participating in each week. Another group, however, may want an even shorter length of time. Yet another group may decide that while they'll usually do four-hour sessions, once a month they'll set aside an entire Saturday for a great all-day gaming session. Players will need to dive in and start playing and be flexible to decide what will provide the ultimate enjoyment for their gaming group.

While the camaraderie of a shared experience of playing face-to-face with a group of friends remains the strength of roleplaying games, groups need not confine themselves to a single mode of play. There are myriad options that can be used. Email, instant messages, message boards, video chats, phone/voip calls, text messages, wikis, (micro-)blogs: any and all of these can be utilized to play the game without having warm bodies in seats directly across the table from one another.

Finally, when playing groups meet for the first time, they should generate their characters (as opposed to generating characters by themselves). While a gaming group can decide to generate characters individually, often it is far easier once the players are together. This allows those more experienced in roleplaying games to help those new to RPGs. Even more important, it enables the entire group to tailor the characters so there is not too much overlap in capabilities and style. After all, with the wealth of character opportunities available, you don't want to show up at the table with an almost identical character to the player next to you.

### The gamemaster

Once a group has been organized, someone needs to step up and take the reins of the gamemaster. Some groups have a single gamemaster that runs all their gaming sessions month after month. Other groups rotate a gamemaster, with a single gamemaster running a given portion of the unfolding story for several sessions before handing the work off to another player. Once again, the participants should be flexible. Some groups may have the perfect person who loves the work involved and is more than willing to run session after session, while other groups may decide that they all want to take turns both as the gamemaster and as players.

The gamemaster controls the story. They keep track of what is supposed to happen when, describes events as they occur so that the players (as characters) can react to them, keep track of other characters in the game (referred to as non-player characters, or NPCs), and resolve attempts to take action using the game system. The game system comes into play when characters seek to use their skills or otherwise do something that requires a test to see whether or not they succeed. Specific rules are presented for situations that involve rolling dice to determine the outcome (see Game Mechanics, p. 112).

The gamemaster describes the world as the characters see it, functioning as their eyes, ears, and other senses. Gamemastering is not easy, but the thrill of creating an adventure that engages the other players' imaginations, testing their gaming skills and their characters' skills in the game world, makes it worthwhile. Posthuman Studios and Catalyst Game Labs will follow the publication of Eclipse Phase with supporting supplements and adventures to help this process along, but experienced gamemasters can always adapt the game universe to suit their own styles. In fact, since Eclipse Phase is published under a Creative Commons License (see p. 5), players are encouraged to tailor the universe to their style of play and also to share that with other players. You never know when a specific choice you've made in the running of a campaign is exactly what another gamemaster and his group is looking for.

### The contents of this book

Whether you have purchased the print or electronic version, this book is specifically organized to present the information you need to know to start telling your stories in the Eclipse Phase universe. Below you'll find a summary of each chapter of the book.

**A Time of Eclipse:** A comprehensive history and setting fully describes the Eclipse Phase universe and how humanity transitioned from here to there. See p. 30.

**Game Mechanics:** The player's desired actions become reality within the universe through quick and easy-to-use game mechanics. See p. 112.

**Character Creation and Advancement:** Creating a unique character can be one of the most enjoyable experiences of roleplaying. Even more rewarding is watching that character evolve and grow across numerous gaming sessions, far beyond anything your imagination first envisioned. See p. 128.

**Skills:** Beyond a character's innate abilities, their skills are what set them apart. This is what your character knows and what they know how to do. See p. 170.

**Action and Combat:** What is a dramatic story without action and violence? When words fail, weapons will blaze. See p. 186.

**Mind Hacks:** The unusual possibilities offered by psi abilities and mental reprogramming. See p. 216.

**The Mesh:** The all-pervasive nature of the mesh ensures that it is a key element to any story telling. See p. 234.

**Accelerated Future:** The wonders of advanced technologies and how they work. See p. 266.

**Gear:** Personal enhancements, weapons, robots, and everything else in between. See p. 294.

**Game Information:** The quintessential set of insider secrets for gamemasters. See p. 350.

### Taking notes

Whether a gamemaster or player, you'll need a way to track information. Players will be generating characters and making changes to those characters from session to session. Meanwhile, the gamemaster will have a host of information to track: notes on how the story is unfolding due to player character interaction that you'll need to fold into next week's session; changes to NPCs; changes to player characters that the players are not yet aware off (such as a character has been mind hacked but doesn't yet know it); and so on.

Additionally, some groups enjoy a synopsis of each session that can be compiled and read at a later time in order to enjoy and share their exploits, just as you might fileshare clips from your favorite video game to show off your skill in taking the bad guy down (traditionally this has been called "bluebooking"). This can be particularly useful if a player was unable to attend a given session, providing a quick re-cap that they can read before attending the next gaming session and thus avoiding a bog-down up-front as that player tries to catch up on current events in the game. The session scribe can be a shared responsibility or assigned, all based upon what a given playing group finds works best for them. Likewise, some gaming groups audiorecord their entire game session, both for later reference and for "actual play" podcasts.

The old standard of a pencil and paper still works wonders. A host of additional technologies, however, provide many new options for players. From a text file on a laptop to a shared wiki, the ability to track large amounts of information in a quick and useful fashion—while simultaneously making appropriate information

available to each player from session to session—significantly decreases how much time everyone needs to spend tracking information. That time can now be redirected into the enjoyment of participating in a great story.

#### Dice

As described in the Game Mechanics section (p. 112), two ten-sided dice are required to play Eclipse Phase. While most players enjoy the feel of tossing dice onto a table, there are many other mechanisms for rolling two ten-sided dice to achieve a 00 to 99 result. Players who make heavy use of any online technologies for game play—such as using online chatting or video blogging—should find it easy to track down and implement a quick dice-rolling program.

#### Imagination

All too often, it's easy for someone looking at an RPG to be intimidated. So many concepts to grasp, so many ideas that seem overwhelming. Just as described under What is a Roleplaying Game?, however, how often have you read a book or watched that movie and decided that you would have done it better? That's your imagination at work. Just dive in and you'll be amazed at how quickly you can immerse yourself in the Eclipse Phase universe. Soon you'll be spinning stories with the best of them.

Also, don't forget to tap your resources. Your gaming group is your best resource. What's going on, ideas for how to handle a situation, or how to take on a bad guy: these are just some of the things that can and should be discussed by the gaming group in between sessions, and each is an opportunity to strengthen your imagination.

Another resource is simply watching TV or reading a good book. Pay attention to how the story is put together, how the characters are built, and how the plot unfolds. Push your imagination and soon you'll be figuring out subplots and who the bad guy is long before it's revealed. Knowing how a story is put together enables you to put together your own stories during each gaming session.

Finally, eclipsephase.com is the offi cial site for Eclipse Phase. If you have questions about the game or want to see how another group of players handles a given situation, post on the forums. The online community can be just as helpful and enjoyable as a local gaming group.

### 2.1.5 What do players do?

The players can take on a variety of roles in Eclipse Phase. Due to advances in digital mind emulation technology, uploading, and downloading into new morphs (physical bodies, biological or synthetic), it is possible to literally be a new person from session to session. With bodies taking on the role of gear, players can customize their forms for the task at hand.

#### The default campaign

In the default story (also known as "campaign setting"), every player character is a "sentinel," an agent-on-call (or potential recruit) for a shadowy network known as "Firewall." Firewall is dedicated to counteracting "existential risks"—threats to the existence of transhumanity. These risks can and do include biowar plagues, nanotech swarm outbreaks, nuclear proliferation, terrorists with WMDs, netbreaking computer attacks, rogue AIs, alien encounters, and so on. Firewall isn't content to simply counteract these threats as they arise, of course, so characters may also be sent on information- gathering missions or to put in place pre-emptive or failsafe measures. Characters may be tasked to investigate seemingly innocuous people and places (who turn out not to be), make deals with shady criminal networks (who turn out not to be trustworthy), or travel through a Pandora's Gate wormhole to analyze the relics of some alien ruin (and see if the threat that killed them is still real). Sentinels are recruited from every faction of transhumanity; those who aren't ideologically loyal to the cause are hired as mercenaries. These campaigns tend to mix a bit of mystery and investigation with fierce bouts of action and combat, also stirring in a nice dose of awe and horror.

**Alternate campaigns**

When they're not saving the solar system, sentinels are free to pursue their own endeavors. The gamemaster and players can use this rulebook to generate any type of story they wish to tell. However, the following examples provide a brief look at the most obvious opportunities for adventure in Eclipse Phase.

After each campaign variant below, a list of "archetypes" for Eclipse Phase are provided in parenthesis. Archetypes are the names applied to the most common character types featured in those scenarios. For example, in a traditional detective story, the archetypes would be the Detective, the Damsel In Distress, the Hard-bitten Cop, and so on. In a cowboy movie, the archetypes would be the Gunfighter, the Bartender, the Marshal, the Indian Brave, and so on. Players will note that some archetypes fit into multiple story settings. The character creation system (p. 128) allows players to create any of the suggested archetypes. Just as roleplaying games are designed for players to build their own stories, however, these archetypes are just suggestions and players can mix and match how they will.

**Salvage and Rescue/Retrieval Ops:** The Fall left two worlds and numerous habitats in ruins—but these devastated cities and stations contain untold riches for those who are brave and foolhardy enough. Potential hauls include: weapon systems; physical resources; lost databanks; left-behind uploads of friends, family, or important people; new technologies developed and lost in the brief singularity takeoff; valued heirlooms of immortal oligarchs; and much more. Outside of these once-inhabited realms, space itself is a big place and lots of people and things get lost out there. Some need to be saved and some are beyond saving. This option lets players explore the unknown or seek out specific targets on contract. (Archeologist/Scavenger/Pirate/Free Trader/ Smuggler/Black Marketeer)

**Exploration:** There are plenty of opportunities to be had as an explorer, colonist, or long-range scout—perhaps even as one of the few lucky or suicidal individuals who explore through an untested Pandora's Gate. Even the Kuiper Belt, on the fringe of our solar system, is still sparsely explored; there may be riches and mysteries still to be found. Many dangers also lurk in odd corners of the system, from isolationist posthuman factions to secretive criminal cartels, as well as pirates, aliens, and others wishing to remain out of sight. (Explorer/Archeologist/ Scavenger/Singularity Seeker/Techie/Medic)

**Trade:** While the majority of inner system trade is controlled by sleek hypercorporations, many of the smaller or more independent stations rely on small traders. In the post-scarcity outer system, trade takes on a different form, with information, favors, and creativity serving as currency among those who no longer want for anything due to the availability of cornucopia machines. (Free Trader/Smuggler/Black Marketeer/Pirate)

**Crime:** The patchwork of city-state habitats and widely varying laws throughout the system create ample opportunity for those who would make a living from this situation. Black market commodities and activities include infomorph-slave trading, pleasure pod sex industries, data brokerage and theft, extracting/smuggling advanced technologies and scientists, political/economic espionage, assassination, drug and XP dealing, soul-trading, and much more. Whether as an independent or part of an organized criminal element, there are always opportunities for those with a thirst for adventure or profit and questionable morals. (Criminal/Smuggler/ Pirate/Fixer/Black Marketeer/Genehacker/Hacker/ Covert Ops)

**Mercenaries:** The constant maneuvering of ideologically-driven factions, the squabbling over contested resources, and the rush to colonize new exoplanets beyond the Pandora Gates all spark new conflicts on a regular basis. Some of these simmer and seeth as low-intensity conflicts for years, occasionally flaring into raids and clashes. Others break out into all-out warfare. Women and men willing to bear arms for credits are always in demand for good wages. Players can engage in commando and military campaigns in habitats, between the stars, or in hostile planetary environments. (Merc/Security Specialist/Fixer/Bounty Hunter/Ex-Cop/Medic)

**Socio-Political Intrigue:** The corporations and political factions that span the solar system do not always play nice with each other, but neither is it wise for them to openly confront each other except under extreme circumstances. Many battles are fought with diplomacy and political maneuvering, using words and ideas more potent than weapons. Even within factions, social cliques can compete ruthlessly, or heated class conflicts can come to a boil, tearing a society apart from within. In this campaign, the players can start as pawns of some entity who rise through the ranks as they become more enmeshed in the intrigues of their sponsor, play a group of ambassadors and spies stationed in the opposition's capital, or can play a group of activists and radicals fighting for social change. (Politico/ Socialite/Covert Ops/Hacker/Security Specialist/ Journalist/Memeticist)

### 2.1.6 Where does it take place?

While Eclipse Phase is set in the not-too-distant future, the changes that have taken place due to the advancements of technology have transformed the Earth and its inhabitants almost beyond recognition. As players dive into the universe, they'll generally encounter one of the following settings.

#### Humanity's habitats

The Earth has been left an ecologically-devastated ruin, but humanity has taken to the stars. When Earth was abandoned, so too were the last of the great nation-states; transhumanity now lacks a single unifying governing body and is instead subject to the laws and regulations of whomever controls a given habitat.

The majority of transhumanity is confined to orbital habitats or satellite stations scattered throughout the Sol system. Some of these were constructed from scratch in the orbit or Lagrange points of planetary bodies, others have been hewn out of solid satellites and large asteroids. These stations have myriad purposes from trade to warfare, espionage to research.

Mars continues to be one of transhumanity's largest settlements, though it too, suffered heavily during the Fall. Numerous cities and settlements remain, however, though the planet is only partially terraformed. Venus, Luna, and Titan are also home to significant populations. Additionally, there are a small number of colonies that have been established on exoplanets (on the other side of the Pandora Gates) with environments that are not too hostile towards humanity.

Some transhumans prefer to live on large colony ships or linked swarms of smaller spacecraft, moving nomadically. Some of these rovers intentionally exile themselves to the far limits of the solar system, far from everyone else, while others actively trade from habitat to habitat, station to station, serving as mobile black markets.

#### The great unknown

The areas of the galaxy that have felt the touch of humanity are few and far between. Lying betwixt these occasional outposts of questionable civilization are mysteries both dangerous and wonderful. Ever since the discovery of the Pandora Gates, there has been no shortage of adventurers brave or foolhardy enough to strike out on their own into the unknown regions of space in hopes of finding more alien artifacts, or even establishing contact with one of the other sentient races in the universe.

#### The mesh

While not a "setting" in the traditional sense, as the sections describe above, the computer networks known as the "mesh" are all-pervasive. This ubiquitous computing environment is made possible thanks to advanced computer technologies and nanofabrication that allow unlimited data storage and near-instantaneous transmission capacities. With micro-scale, cheap-to-produce wireless transceivers so abundant, literally everything is wirelessly connected and online. Via implants or small personal computers, characters have access to archives of information that dwarf the entire 21st-century internet and sensor systems that pervade every public place. People's entire lives are recorded and lifelogged, shared with others on one of numerous social networks that link everyone together in a web of contacts, favors, and reputation systems.

### 2.1.7 Ego vs. Morph

The distinction between ego (your mind and personality, including memories, knowledge, and skills) and morph (your physical body and its capabilities) is one of the defi ning characteristics of Eclipse Phase. A good understanding of the concept right up front will allow players a glimpse at all the story possibilities out of the gate.

Your body is disposable. If it gets old, sick, or too heavily damaged, you can digitize your consciousness and download it into a new one. The process isn't cheap or easy, but it does guarantee you effective immortality—as long as you remember to back yourself up and don't go insane. The term morph is used to describe any type of form your mind inhabits, whether a vat-grown clone sleeve, a synthetic robotic shell, a part-bio/part-synthetic "pod," or even the purely electronic software state of an infomorph.

A character's morph may die, but the character's ego may live on, assuming appropriate backup measures have been taken. Morphs are expendable, but your character's ego represents the ongoing, continuous life path of your character's mind and personality. This continuity may be interrupted by an unexpected death (depending on how recently the backup was made), but it represents the totality of the character's mental state and experiences.

Some aspects of your character—particularly skills, along with some stats and traits—belong to your character's ego and so stay with them throughout the character's development. Some stats and traits, however, are determined by morph, as noted, and so will change if your character leaves one body and takes on another. Morphs may also affect other skills and stats, as detailed in the morph description.

### 2.1.8 Where to go from here?

Now that you know what this game is about, we suggest that you next read the Time of Eclipse chapter (p. 30), to get a feel for the game's default setting (which you are, of course, free to change to suit your whims). Then read the Game Mechanics chapter (p. 112) to get a grasp of the rules. After that, you can move on to Character Creation and Advancement (p. 128) and create your first character!

### 2.1.9 Terminology

Eclipse Phase uses a host of jargon to simply convey the numerous concepts covered within the pages of this book. While not all-inclusive, this list of terminology will allow players to quickly acclimate themselves for their journey into Eclipse Phase. If you read something and are confused, don't worry. These concepts are fully explained in later sections of this book.

Note that several of the words on this list are standard scientific terms, often used in astronomy. As Eclipse Phase attempts to remain as close to "hard science" as possible—while allowing players to interact with the great stories waiting to unfold—such terms are used liberally.

- Aerostat: A habitat designed to float like a balloon in a planet's upper atmosphere.
- AF: After the Fall (used for reference dating).
- AGI: Artificial General Intelligence. An AI that has cogni tive faculties comparable to that of a human or higher. Also known as "strong AI" (differentiating from more specialized "weak AI"). See also "seed AI."
- AI: Artificial Intelligence. Generally used to refer to weak AIs; i.e., AIs that do not encompass (or in some cases, are completely outside of) the full range of human cognitive abilities. AIs differ from AGIs in that they are usually specialized and/or intentionally crippled/limited.
- Anarchist: Someone who believes government is unnecessary, that power corrupts, and that people should control their own lives through self-organized individual and collective action.
- Arachnoid: A spider-like robotic synthmorph.

- Argonauts: A faction of techno-progressive scientists that promote responsible and ethical use of technology.
- AR: Augmented Reality. Information from the mesh (universal data network) that is overlaid on your real-world senses. AR data is usually entoptic (visual), but can also be audio, tactile, olfactory, kinesthetic (body awareness), emotional, or other types of input.
- Async: A person with psi abilities.
- AU: Astronomical unit. The distance between the Earth and the Sun, equal to 8.3 light minutes, or about 150 million kilometers.
- Autonomists: The alliance of anarchists, Barsoomians, Extropians, scum, and Titanians.
- Barsoomian: A rural Martian, typically resentful of hypercorp control.
- Basilisk Hack: An image or other sensory input that affects the brain's visual cortex and pattern recognition abilities in such a way as to cause a glitch and possibly exploit it and rewrite neural code.
- Beehive: A microgravity habitat made from a tunneledout asteroid or moon.
- BF: Before the Fall (used for reference dating).
- Bioconservative: An anti-technology movement that argues for strict regulation of nanofabrication, AI, uploading, forking, cognitive enhancements, and other disruptive technologies.
- Biomorph: A biological body, whether a flat, splicer, genetically engineered transhuman, or pod.
- Body Bank: A service for leasing, selling, acquiring, or storing a morph. Aka dollhouse, morgue.
- Bots: Robots. AI-piloted synthetic shells.
- Bracewell Probe: A type of autonomous monitoring deep- space probe meant to make contact with alien civilizations.
- Brinkers: Exiles who live on the fringes of the system, as well as other isolated and well-hidden nooks and crannies. Also called isolates, fringers, drifters.
- Case: A cheap, common, mass-produced synthetic shell.
- Chimeric: Transgenic, containing genetic traits from other species.
- Circumjovian: Orbiting Jupiter.
- Circumlunar: Orbiting the Moon.
- Circumsolar: Orbiting the Sun.
- Cislunar: Between the Earth and the Moon.
- Clade: A species or group of organisms with common features. Used to refer to transhuman subspecies and morph types.
- Cole Bubble: A habitat made from a hollowed-out asteroid or moon, spun for gravity.
- Cornucopia Machine: A general-purpose nanofabricator.
- Cortical Stack: An implanted memory cell used for ego backup. Located where the spine meets the skull; can be cut out.
- Cyberbrain: An artificial brain, housing an ego. Used in both synthmorphs and pods.

- Darkcast: Illegal and black market farcasting and egocasting services.
- Domain Rules: The rules that govern the reality of a virtual reality simulspace.
- Drone: A robot controlled through teleoperation (rather than directly via onboard AI).
- Ecto: Personal mesh devices that are flexible, stretchable, self-cleaning, translucent, and solar-powered. From ecto-link (external link).
- Ego: The part of you that switches from body to body. Also known as ghost, soul, essence, spirit, persona.
- Egocasting: Term for sending egos via farcasting.
- Entoptics: Augmented-reality images that you "see" in your head. ("Entoptic" means "within the eye.")
- ETI: Extraterrestial intelligence. The term Firewall uses to refer to the god-like post-singularity alien intelligence theorized to be responsible for the Exsurgent virus.
- Exalts: Genetically-enhanced humans (between genefixed and transhumans). Aka genefreaks, the ascended, the elevated.
- Exoplanet: A planet in another solar system.
- Exsurgent: Someone infected by the Exsurgent virus.
- Exsurgent Virus: The multi-vector virus created by an unknown ETI and seeded throughout the galaxy in Bracewell probes. The Exsurgent virus is self-morphing and can infect both computer systems and biological creatures.
- Extrasolar: Outside the solar system.
- Factors: The alien ambassadorial race that deals with transhumanity. Also called Brokers.
- The Fall: The apocalypse; the singularity and wars that nearly brought about the downfall of transhumanity.
- Farcasting: Intrasolar communication utilizing classical communication technologies (radio, laser, etc.) and quantum teleportation.
- Farhauler: Long distance space shipper.
- Firewall: The secret cross-faction conspiracy that works to protect transhumanity from "existential threats" (risks to transhumanity's continued existence).
- Flatlander: Someone born or used to living on a planet or moon with gravity.
- Flats: Baseline humans (not genetically modified). Also called norms.
- Flexbot: A shape-changing synthmorph also capable of joining together with other flexbots in a modular fashion to create larger shapes.
- Forking: Copying an ego. Not all forks are full copies. AKA backups.
- FTL: Faster-Than-Light.
- Fury: A transhuman combat morph.
- Gatecrashers: Explorers who take their chances using a Pandora gate to go somewhere previously unexplored.

- Genehacker: Someone who manipulates genetic code to create genetic modifications or even new life.
- Ghost: A transhuman combat morph optimized for stealth and infiltration.
- Ghost-riding: The act of carrying an infomorph in a special implant module inside your head.
- Greeks: Trojan asteroids or moons that share the same orbit as a larger planet or moon, but are 60 degrees ahead in the orbit at the L4 Lagrange point. The term Greeks normally refers to the asteroids orbiting around Jupiter's L4 point. See also "Trojans."
- Habtech: A habitat technician.
- Heliopause: The point where pressure from the solar wind balances with the interstellar medium (about 100 AU out).
- Hibernoid: A transhuman modified for hibernation, for extensive travel in space.
- Iceteroid: An asteroid made from mostly ice rather than rock or metals.
- Iktomi: The name given to the mysterious alien race whose relics have been found beyond the Pandora Gates.
- Indentures: Indentured servants who have contracted their labor to a hypercorp or other authority, usually in exchange for a morph.
- Infolife: Artificial general intelligences and seed AIs.
- Infomorph: A digitized ego; a virtual body. Also known as datamorphs, uploads, backups.
- Infugee: "Infomorph refugee," or someone who left everything behind on Earth during the Fall—even their own body.
- Isolates: Those who live in isolated communities far outside the system (in the Kuiper Belt and Oort Cloud); aka outsters, fringers.
- Jamming: The act of "becoming" a teleoperated drone thanks to XP technology. Also sometimes applied to accesing the real-time XP feed from lifeloggers and others.
- Kuiper Belt: A region of space extending from Neptune's orbit out to about 55 AU, lightly populated with asteroids, comets, and dwarf planets.
- Lagrange Point: One of five areas in respect to a small planetary body orbiting a larger one in which the gravitational forces of those two bodies are neutralized. Lagrange points are considered stable and ideal locations for habitats.
- Lifelog: A recording of one's entire life experience, made possible due to near unlimited computer memory.
- Lost Generation: In an effort to repopulate post-Fall, a generation of children were reared using forced-growth methods. The results were disastrous: many died or went insane, and the rest were stigmatized.
- Main Belt: The main asteroid belt, a torus ring orbiting between Mars and Jupiter.
- Meme: A viral idea.
- Mentons: Transhumans optimized for mental and cognitive ability.
- Mercurials: The non-human sentient elements of the transhuman "family," including AGIs and uplifted animals.

- Mesh: The omnipresent wireless mesh data network. Also used as a verb (to mesh) and adjective (meshed or unmeshed).
- Mesh ID: The unique signature attached to one's mesh activity.
- Microgravity: Zero-g or near weightless environments.
- Mist: The clouds of AR data that sometimes fog up your perception/displays.
- Morph: A physical body. Aka suit, jacket, sleeve, shell, form.
- Muse: Personal AI helper programs.
- Nanobot: A nano-scale machine.
- Nano-ecology: Pro-tech ecological movement.
- Nanoswarm: A mass of tiny nanobots unleashed into an environment.
- Neo-Avians: Uplifted ravens and gray parrots.
- Neogenesis: The creation of new life forms via genetic manipulation and biotechnology.
- Neo-Hominids: Uplifted chimpanzees, gorillas, and orangutans.
- Neotenics: Transhumans modified to retain a child-like form.
- Novacrab: A pod created from genetically-engineered spider crab stock.
- Olympian: A transhuman biomorph modified for athleticism and endurance.
- O'Neill Cylinder: A soda-can shaped habitat, spun for gravity.
- Oort Cloud: The spherical "cloud" of comets that surrounds the solar system out to about one light-year from the sun.
- PAN: Personal area network. The network created when you slave all of your minor personal electronics to your ecto or mesh inserts.
- Pandora Gates: The wormhole gateways left behind by the TITANs.
- Pods: Mixed biological-synthetic morphs. Pod clones are force-grown and feature computer brains. Also known as bio-bots, skinjobs, replicants. From "pod people."
- Posthuman: A human or transhuman individual or species that has been genetically or cognitively modified so extensively as to no longer be human (a step beyond transhuman). Aka parahuman.
- Prometheans: A group of transhuman-friendly seed AIs that were created by the Lifeboat Project (precursors to the argonauts) years before the TITANs became self- aware and that (mostly) avoided Exsurgent infection. The Prometheans secretly back Firewall and work to defeat existential threats.
- Proxies: Members of the Firewall internal structure.
- Psi: Parapsychological powers acquired due to infection by the Watts-MacLeod strain of Exsurgent virus.
- Reaper: A warbot synthmorph.
- Reclaimers: A transhuman faction that seeks to lift the interdiction and reclaim Earth.
- Redneck: A rural Martian. See Barsoomian. Aka Reds.

- Reinstantiated: Refugees from Earth who escaped only as bodiless infomorphs, but who have since been resleeved.
- Resleeving: Changing bodies, or being downloaded into a new one. Also called remorphing, reincarnation, shifting, rebirthing.
- Rusters: Biomorphs optimized for life on Mars.
- Scorching: Hostile programs that can damage or affect cyberbrains.
- Scum: The nomadic faction of space punks/gypsies that travel from station to station in heavily-modified barges or swarms of ships. Notorious for being a roving black market.
- Seed AI: An AGI that is capable of recursive self-improvement, allowing it to reach god-like levels of intelligence.
- Sentinels: Agents of Firewall.
- Shell: A synthetic physical morph. Aka synthmorph.
- Simulmorph: The avatar you use in VR simulspace programs.
- Simulspace: Full-immersion virtual reality environments.
- Singularity: A point of rapid, exponential, and recursive technological progress, beyond which the future becomes impossible to predict. Often used to refer to the ascension of seed AI to god-like levels of intelligence.
- Singularity Seeker: People who pursue relics and evidence of the TITANs or other possible avenues to super-intelligence, either to learn more about it or to become part of a super-intelligence themselves.
- Skin: A biological physical morph. Aka meat, flesh.
- Skinning: Changing your perceived environment via augmented reality programming.
- Sleight: A psi power.
- Slitheroid: A snake-like robotic synthmorph.
- Smart Animals: Partially-uplifted animal species (including dogs, cats, rats, and pigs). Some other large smart animals (whales, elephants) are nearly extinct.
- Spime: Meshed, self-aware, location-aware devices.
- Splicers: Humans that are genetically modified to eliminate genetic diseases and some other traits. Also known as genefixed, cleangenes, tweaks.
- Swarmanoid: A synthetic morph composed from a swarm of tiny insect-sized robots.
- Sylphs: Transhuman biomorphs with exotic good looks.
- Synthmorph: Synthetic morphs. Robotic shells possessed by transhuman egos.
- Synths: A specific type of synthmorph. Synths are standard androids/gynoids; robots that are designed to look humanoid, though they are usually noticeably not human.
- Teleoperation: Remote control.
- Titanian: Someone from Titan, a moon of Saturn.

- TITANs: The human-created, recursively-improving, military seed AIs that underwent a hard-takeoff singularity and prompted the Fall. Original military designation was TITAN: Total Information Tactical Awareness Network.
- Torus: A donut-shaped habitat, spun for gravity.
- Transgenic: Containing genetic traits from other species.
- Transhuman: An extensively modified human.
- Trojans: Asteroids or moons that share the same orbit as a larger planet or moon, but follow about 60 degrees ahead or behind at the L4 and L5 Lagrange points. The term Trojans normally refers to the asteroids orbiting at Jupiter's Lagrange points, but Mars, Saturn, Neptune, and other bodies also have Trojans. See also "Greeks."
- Uplifting: Genetically transforming an animal species to sapience.
- Vacworker: Space laborer.
- Vapor: A failed mind emulation or crippled fork/infomorph (from vaporware).
- VPNs: Virtual private networks. Networks that operate within the mesh, usually encrypted for privacy/security.
- VR: Virtual Reality. Imposing an artificially-constructed hyper-real reality over one's physical senses.
- X-Caster: Someone who transmits/sells XP recordings of their experiences.
- Xenomorph: Alien life form.
- Xer: As in "X-er"—someone who is addicted or obsessed with XP. Sometime used to refer to people making XP as well.
- XP: Experience Playback. Experiencing someone else's sensory input (in real-time or recorded). Also called experia, sim, simsense, playback.
- X-Risk: Existential risk. Something that threatens the very existence of transhumanity.
- Zeroes: People without wireless mesh access. Common with some indentures.

**Welcome to Firewall**

[Incoming Message Received. Source: Unknown]
[Quantum Analysis: No Interception Detected]
[Decryption Complete]
Greetings,

Your references and background have been triple-checked and confirmed, and you are now vetted as a sentinel operative. Welcome to Firewall, friend.

For those new to our private network, Firewall is an organization dedicated to protecting transhumanity from threats—both internal and external—to our continued existence as a species. The Fall may have reminded us that our ability to survive and prosper is not guaranteed, but our kind has a remarkably short attention span. Despite our achievement of functional near-immortality, we continue to face numerous dangers that may contribute to our extinction. Some of these risks come from our own factionalism and divisiveness, combined with universally available technology that could cause widespread destruction and untold deaths in the wrong hands. Some stem from our short-sightedness, failing to see the dangers in which we place ourselves and our environments through careless actions. Some arise from our own creations turned against us, as the TITANs proved. Other risks may come from alien intelligences whose motivations we cannot

yet fathom, and of whom we may not even be aware. Still others may threaten us by sheer chance and the mindless but deadly cause-and-effect of a universe in which we are but an insignificant speck.

Firewall exists to identify, analyze, and counter these risks. We are all volunteers. We are all placing our own lives at risk in order to ensure the survival of transhumanity.

Firewall has existed, under other names and guises, since before the Fall. Numerous agencies with a similar agenda banded together in the wake of those cataclysmic events to assess our situation and prepare for the worst. Now we operate under a single umbrella.

We are a private network for two reasons. First, our existence and operational abilities are protected by our secrecy. The less our opposition knows about us, the more effectively we can counter them. Similarly, certain authorities might be hostile to an organization such as ours operating in their claimed territory. Though some may be aware of our existence, we bypass numerous legal and jurisdictional hurdles that might otherwise hamper our actions and goals. Second, our mission sometimes brings to light information that is not only dangerous in the wrong hands, but might even trigger widespread panic if made public. In some cases, the very existence of such knowledge could be problematic. By retaining secrecy and operating on a need-to-know basis, we automatically counter certain risks.

Firewall is a decentralized, peer- to-peer network. We have minimal hierarchy and we answer to no one but ourselves. Our node structure enables us to share resources and talents without sacrificing the privacy and security of our operatives. You have been recruited because of your knowledge, assets or skills, and/or because you have come into contact with certain restricted data. You have proven your willingness to support our goals. Our lives and existence—and the future of transhumanity—may rest in your hands.

So here's to the future—may we all live to see it.

[End Message]

[This Message Has Self-Erased]

**What you really need to know**

[Incoming Message Received. Source: Unknown]

[Quantum Analysis: No Interception Detected]

[Decryption Complete]

Sit down, and grab yourself a fucking drink.

Forget all of that AI-generated intro crap you just read. Here's the real deal.

You're probably dying to know what you've been dragged into. Maybe you've been told the party line already: that we're all that stands between transhumanity and extinction. Or maybe someone whispered to you that we're a rogue operation that meddles in heavy shit that we have no authority to get involved in, and that we sometimes get people killed as a result. You must be curious. Maybe you've got a vigilante streak, and you're looking to spill blood for a good cause. Would it matter to you if the cause was a deluded one? Maybe you're a conspiracy wingnut and you're dying to know what secrets Firewall is clutching to its collective chest. What if those secrets shattered the carefully constructed lies that we all tell to ourselves to keep our sanity intact?

Everything you've heard, good or bad, about Firewall very well may be true. We're not angels. We lost the sheen on our ideals when the TITANs forcibly uploaded their first human mind. Right now, you should be asking yourself what the fuck you just signed up for. I did.

Truth is, Firewall is lots of things. Most of it is good, but a lot of it so fucking horrible you'll be thinking about planting a bullet in your stack and resorting to an earlier backup, just so you can forget it all. If you have any romantic visions about being a hero, though, drop them now. You won't feel like a hero when you airlock some kid because he's carrying an infectious nanovirus. You won't feel brave when you run across some alien thing and crap your pants. And you won't even feel human anymore when you make a call that will cost dozens, hundreds, or even thousands of people their lives, even if you are saving millions more.

So why would anyone be crazy enough to be part of this thing? Because it needs to be done. Our survival depends on it. To some people, it's altruism, defending transhumanity. But really, it's about saving your own fucking neck too. Sure, you could abstain from taking responsibility and let some self- described authority take care of it. But if the anarchists have anything right, it's that people in power can't be trusted. As often as not, they're part of the problem. So Firewall does things the collective way. We're underground, but we're an open source operation. We share information and resources towards a common goal. We organize in networked ad-hoc cells, smart-mob style. We don't let anyone accrue too much power or control. Everyone involved in an op has an equal say. We police ourselves. We come from all sorts of backgrounds and factions, but we face a common enemy—and we fight to win. There is no alternative.

Maybe you've heard of the Fermi Paradox? That question asked why, with a galaxy so huge, there were so few signs of other life? Even though we've met the Factors and seen evidence of other aliens, our galactic neighborhood should be crawling with intelligence—but it's not.

I'll tell you why. The universe is not fucking fair. If transhumanity were wiped out, the galaxy wouldn't even notice. Just look at the Earth. That planet still exists, still supports life, even though we're far gone. Reality is an uncaring asshole. Forget all that utopian crap about living forever. We'll be lucky to survive another year. We've developed technologies that put weapons of mass destruction in the hands of everyone, but we're still an adolescent species that has trouble overcoming petty tribal bullshit. If you're really looking forward to exploring the universe as a postmortal, you're going to have to work hard at it. Survival isn't a right, it's a privilege.

When you sign up with Firewall, you put yourself on call. Anytime some shit goes down in your neck of the woods or that you might be particularly helpful in dealing with, you'll get a call. You'll be expected to drop whatever you're doing and put everything else on hold as if your life depended on it—it probably does. When you're in the field, on an op— "going to the doctor," as we call it—your cell is empowered to act as it sees fit ... just keep in mind that you'll be answering to the rest of us later. You'll also have the Firewall network to back you up—though resources are often limited, so don't expect us to always save your ass. Other sentinels can be called on to pull strings, but every time we do so, it threatens to unveil an agent, create a trail that we need to clean up, and otherwise complicates matters. Self-reliance is key.

One last thing: don't ever, ever forget that we have enemies. I'm not just talking about the nutjob who wants to nuke a habitat to make a political statement or the neo-luddites who think biowar plagues will teach us all a lesson, I'm talking about the agencies that know Firewall exists and consider it a threat. If they tag you as a sentinel, your days are numbered. Maybe your backups too. So watch yer friggin' back.

So that's the real deal, as honest as I can give it. Welcome to our secret clubhouse, comrade. Remember: death is just another day on the job.

[End Message]

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# Chapter 3

# A time of eclipse

This chapter provides a complete overview of the Eclipse Phase universe. It starts with a history, goes into detail on the setting, covers factions, and then wraps up with a system gazetteer.

## 3.1 A people's history of an unfortunate universe

> The following is a transcript of a recovered au- diofile recovered after the catastrophic decompression event on Walther-Pembroke Station. The audiofile is believed to have been created by Donovan Astrides and to be a summation of his unpublished work A People's History of an Unfortunate Universe.

[Sounds of scratching on the microphone, creaking of furniture, the noise of a woman clearing her throat]

What?

[Indistinct murmuring]

Fuck you. I do this how the fuck I want, though it was nice of you to put me in this nice young woman's body.

[Sounds of hands running along fabric]

Does my vulgarity shock you, corporate lackey? No matter, I'm sure you can edit it out for your proles. Now—you asked about my book? Is it a history book you ask? No. It is an anti-history book. I shall tell you about the future.

[Mumbling, questioning tone]

What does it hold? The future, you mean?

[Indistinct "Yes."]

No. I don't think you care about the future. What you really want to know is: will you get the future you want? And that is an easy question to answer. No. No, you will not get the future you want. Because you are stupid enough to ask this stupid question about the future.

[Silent pause]

I remember reading a scan of an old real print comic once. The character in it was railing against the imaginary people of his imaginary world, taking them to task about their dissatisfaction with the future they lived in. But it was really aimed at the stupid people who wanted their stupid little futures and who were too stupid to see that the future is now. It's always now. Except it isn't anymore. The TITANs changed that. The future is now yesterday, and last week, and ten years ago. Especially ten years ago. But the future is also back on poor old Earth—it's a legacy of where we've been and what has come before.

Do they teach you history on Venus, in your sealed compounds and resort aerostats? No, don't open your mouth, I could really care less what they teach you. For it is most certainly lies. I've lived in the inner system. I know the rules and the deceits told in the name of civil order and "national security."

Nations! Ha! Even at the onset of the 21st century, nations were starting to go into decline. It just took everyone a while to realize they were obsolete.

Do you remember the great nations of the world? Are you old enough to remember how they sat around and debated whether the major climate shifts they were creating were even real? Even when many of them agreed that something needed to be done, none of them stood up to do it. The leaders of the world carried on with business as usual, secure in their privilege, as droughts ravaged Africa and Central Asia, Europe froze, and severe weather wreaked havoc everywhere. People across the globe were feeling the pinch of starvation or rampant epidemics, but the leading nations were more concerned about the refugees pouring over their borders and polluting their lily white paradises with their customs and languages and willingness to work for a pittance just to survive.

The wars over oil and energy were only worsened by wars over the weather and water that followed. Unstable regimes rose and fell or were pushed over the edge, all in pursuit of precious liquids. The great nation states transformed into fortresses, steeled against the twin threats of the barbarians threatening them on the outside and the masses of their poor and dispossessed internally, all of them wanting to come in only for a little drink.

You know, I've actually heard some conservatives refer to that period as a golden age, a peak time for the corporations and the rich. It's certainly true that it was a golden age for repression—and profits. If you were in that lucky fraction of a percent of the population who could afford it, it was certainly a good time, but for the majority of humanity it was a time of horrors. Global inequality was larger than ever before. Robots were taking jobs away from human hands.

This was a time of radicalization for many. Failing governments no longer supplied people's basic needs. The globalized poor turned to local tribes, fundamentalist groups, political radicals, and criminal networks for the means to survive. Insurgent groups flourished, but they depended on the black market to survive, and soon their leaders were more concerned with making money than making change.

The nation states, as always, resorted to repression. Civil liberties were restricted and surveillance increased. Automated weapons systems were deployed first against guerrillas and terror cells, and then against agitators and demonstrators. I remember the first time I saw those police drones, at a demonstration in support of a worker's strike in Long Beach. The drones ordered us to disperse once, only once, before they opened fire with their "nonlethal" weapons. Nonlethal my ass. Three people died that day and dozens were injured. The mainstream media ignored it even if the bloggers didn't.

Meanwhile, the privileged elites continued to prosper. Longevity treatments expanded lifespans—for those who could afford it. Major crackdowns swept up off-brand pharma and bootleg procedures by pioneering biochemists, even while worldwide life expectancies dropped for the first time in decades. Why extend the lives of so many poor people, when expert systems as smart as any human could be built in a fraction of the time it would take to educate an actual person, and robotics and drone technologies allowed menial jobs to be turned over to uncomplaining and unpaid labor. And the rich had their high-pricetag designer chimeric pets to keep them company anyway.

Not all of the upper classes were wallowing in opulence while the planet around them starved and drowned. A few were looking ahead at the changes on the horizon, scheming how to stake their claim. Some of these worked to expand their dominion, building a space elevator in sub-Saharan Africa and sending robotic probes out to map the solar system in detail. They even founded the first stations on Mars and Luna then, more than fifty years before the Fall.

The ecopocalypse wasn't going away, however, no matter how much those in power tried to ignore it. Severe winters and draughts continued to pound at us. Rising ocean levels devastated coastlines worldwide with massive flooding. A few last-ditch efforts to undertake mega-scale geoengineering projects created as many problems as they fixed. These were viewed with cynicism anyway, as some were thinly-disguised test runs for terraforming techniques being prepared for off-world deployment.

It often seemed as though the eyes of the fortunate were no longer focused on the world around them, but rather on the heavens above them. The completion of the first space elevator and the first mass driver on our moon kicked off a new space race and the competition was on to stake claims around the solar system. All this new expansion was powered by the first mass-produced efficient fusion power plants and the establishment of Helium-3 mining enterprises.

Back on Earth, though, the hammer finally fell. Insurgents adopted fifth generation warfare techniques, sharing open source methods of resistance, utilizing swarming attacks on critical systempunkts. People

crushed under years of oppression rose up in these opportunities and smashed at the state and corporate apparatus that had held them down. Nation after nation fell to insurgencies manned by those who had fought in thousands of little wars over fuel, ponds, and bread crusts.

Most states fought back by becoming more totalitarian and repressive, but the tide of rebellion spread off world as a series of outposts and stations declared themselves in sympathy with their earthbound compatriots and announced a manifesto for a more humanistic approach to solar expansion. Even numerous scientists and engineers, who had previously worked as pawns in corporate expansions, adopted a technoprogressive stance. That's how the argonauts were born, you know, taking their name from a previous group of scientists who advised the US government and Pentagon on science and policy called the Jasons. Faced with reprisals from their corporate masters, a number of argonauts defected from the hypercorps, in some cases taking key resources and research with them, while others went underground.

This is when the hypercorps really took off, though, those shark-like bastards. They let the nation-states and lumbering multinationals of old take the brunt of the global rage and assault. They took advantage of the chaos to slip free of the old moral and ethical restraints on human experimentation and from the legal purview of the nationalities that had birthed them. They embraced the opportunities of numerous new technologies and the drive into space. It was their research labs that cooked up the first sentient artificial intelligences, the first genegineered human clones, and the first true uplifts, chimps and dolphins brought into awareness as corporate experiments and slaves.

As the last of the old states became increasingly desperate to cling to their power and land, the hypercorps extended a helping hand. They offered debt bondage terms to those who were willing to sign over their rights and humanity for a trip off world, to work as indentured servants on corporate colonies and stations. Hundreds of thousands took the offer as an alternative to the crushing poverty and chaos on Earth. The business of resource exploitation exploded across the solar system, as stations were established as far out as the Kuiper Belt. Voices that spoke of respecting biodiversity and natural ecologies were ignored as the hypercorps toiled to reshape various planets and moons to their will.

This was the state of things until about 20 years before the Fall. Though many of the old oppressor states had been struck down, new ones arose, and the various global insurgencies oscillated between making radical changes and falling into the same old tribal warfare traps. Reactionary religious and political forces on Earth also railed against the hypercorps' agenda, resulting in some terrorist attacks and sabotage strikes, and culminating in a failed attempt to disable the space elevator by an Islamist suicide cell. The hypercorps were quick to retaliate, ordering an orbital bombardment using high-density objects against the headquarters and compounds of several key opposition leaders. Though effective in decapitating several terrorist networks, the mass destruction sparked outrage against the hypercorps, creating a deeper rift between Earth and off-world interests.

The hypercorps remained out of reach, however, though they were not completely immune from Earth's troubles. The workers and colonists brought from Earth transported many of their ethnic, political, and socio-tribal grudges with them, leading to several outbreaks of violence in habitats and orbital stations. Some also harbored allegiances opposed to hypercorp interests, illustrated by isolated acts of preservationist sabotage and religious terrorist attacks. Various criminal networks also came along for the ride, expanding their black markets and vice trades wherever humans went.

As the hypercorps expanded, so too did their political opponents: the anarchists, socialists, argonauts and others who worked diligently to establish their own independent presence, mostly in the outer system, further from hypercorp reach. The hypercorps even contributed to this growth by sending their criminals and undesirable elements into exile beyond Mars.

Both sides invested heavily in research and new technologies. Advances in biotech, nanotech, AI, and cognitive science were now moving so rapidly that major breakthroughs were made on a yearly basis. Developments in one field created a recursive boost in the others, creating a feedback loop that spawned immense technological improvements. Off-world, genetic modifications were widely adopted, and new transhuman adaptations became a common sight. We even created new synthetic life forms that were part biological and part robotic. Despite some being so repulsed by this development that they dubbed these new types of beings "pod people," it certainly didn't stop pods from being rapidly absorbed into corporate workforces and brothels, nor did many people care enough to support claims that, as sapient beings, pods should have

their own civil rights.

Two breakthroughs in this period deserve specific mention, not least because of their impact on our human—now transhuman—society. The development of the first nanotech assemblers signaled a paradigm shift for economics. Available only to the upper strata of the hypercorps at first, these elites jealously guarded these machines, capable of building almost anything from the atoms up. They placed all sorts of restrictions on their usage and availability, claiming that the capability to construct drugs, weapons, or other restricted items was a security risk that required them to be strictly controlled. Open source advocates promptly set to work undermining blueprint controls and seeding their own open source designs, of course. Likewise, within months, criminals and anarchists liberated their own assemblers, and suddenly an economic conflict was born. Some were put to use feeding the black market trade, while others were used to establish habitats and colonies with post-scarcity economies that no longer relied on wealth, property, or greed.

At the same time came the ability to map the human brain and digitally emulate the mind and memories, making "uploading" possible—followed closely by the ability to download back into a separate human brain of course. The already long-lived hypercorp masters no longer had to fear death by accident or injury. This technology also made its way into the hands of others, despite the costs. Experimentation with other bodies—both biological and synthetic—became a new playground for culture. And let's not forget those who willingly shook off the shackles of the flesh to experience the virtual life and dive deep into their own dreamscape realities.

While we all enjoyed our new toys, though, Earth, poor Earth, continued to die a slow death. I can still recall the speculation that it might take centuries for the Earth to totally slide into ecological devastation. It was frustrating, everywhere you turned it seemed that someone was lamenting the state of the motherworld, but no one wanted to do anything. It was too expensive, or too far away, or too dangerous. We all have blood on our hands from that time. We stood by and watched from our places in orbit as the world burned around our brothers and sisters. We thought we had time, we thought the world was slowly dying and that we could find the cure. We didn't plan on the TITANs.

We all remember the Fall. It was only ten years ago, but I never cease to be amazed at how confused people's memories are of that time. Part of that is propaganda perpetuated by people like you, of course, and part of it is that most of us are afraid to really look back and examine how we humans managed to fuck it up so badly.

We like to pretend that the TITANs exploded on the scene, wrecked up the place, and then disappeared as quickly as they appeared. The truth, as always, is more complex. We claim to know that the TITANs somehow evolved by accident from a military netwar system, or so the theory goes. That is what their name means: an acronym for Total Information Tactical Awareness Networks. No one knows for sure where these first seed AIs came from, though—or if they do, they're keeping quiet. Perhaps the TITANs were intentionally designed to be a recursively improving, self-aware digital intelligence. Perhaps the military boffins thought they could keep such an intelligence under their control, and that it would give them the edge they needed. Perhaps there was only one at first, and it quickly created hundreds if not thousands of copies of itself. No one even seems to know how many of them there were.

According to the written history—vetted by the hypercorps natch—we now know that the TITANs took several days after they "woke up" to scan the world around them, to learn about us. In their initial stage they were relatively benign, leeching network power and resources only where there was enough to spare and extending their senses beyond their cradle on Earth. Perhaps they were absorbing everything they could to understand us. Perhaps they were indifferent. Or maybe they really were planning to destroy us, as the vids all say.

I remember this time. I remember that when this new round of conflicts re-ignited on Earth, there was no word of anything about seed AIs or TITANs. For months and months, it was a simple escalation of hostilities. It started with claims of netwar operations and major intrusions, sparking some alarm and retaliatory attacks. Aggressive stances led to incriminations, then border conflicts and raids, followed by missile strikes and outright hostilities. Old grudges and sleeping enemies suddenly awoke and turned their renewed wrath against old foes. Brush wars, corporate rivalries, and ideological disputes flared up as insurgencies and rebellions were suddenly everywhere. At the time, it seemed like a not-so-unusual spate of violence had taken a drastic turn and was rapidly spiraling out of control.

According to the party line, this was all a carefully concerted effort, the first stage in the TITANs plans. Perhaps it was, though I remember some military officials once claiming that the TITANs were brought online because of this violence, and not before then— an opinion that was quickly silenced. Then again, maybe we really were played—played by greater intelligences who could barely be bothered to deal with us themselves when they knew we were more than willing to murder and annihilate each other.

When the first reports of strange automatic factories cranking out large numbers of robotic weapons systems broke, no one knew who to blame, but clearly something was wrong. This was a turning point, a chance for humanity to realize that we collectively faced a new enemy, but the finger-pointing and direct conflict continued. Even when the first open attacks by the TITANs came in earnest, crashing major systems, taking control of critical infrastructures, and wreaking havoc and destruction, we treated it as a new front in the war, and never stopped taking shots at each other.

There is still debate over whether we should have tried to talk to the TITANs, whether they would have been willing to listen to us, whether they even saw us as something more than we see rats and roaches and other forms of vermin. But it's all academic. The fact is we didn't. The people who made the decisions, the ones who had to put it all on the line at the time, saw the TITANs as a threat. And they acted accordingly, trying to purge them from their systems or capture them for future study.

The philosopher Thomas Hobbes once spoke of the war of all against all. Whatever he imagined could not have been anything close to the conflict ignited by the TITANs. We killed ourselves by the millions, wielding the nuclear fire and the silent death of bioplagues indiscriminately. Among this carnage walked the TITANs, taking control of our machines as though we were children, harvesting millions of minds with forced uploads for unknown purposes. Every strike we launched against the TITANs was met with untold disaster and ruin, all our artifice and devices turned against us in our moment of need.

The Fall was a horror. Factories sprang up like a blight in the most ravaged and deserted places on Earth, pumping out legions of dread war machines. Advanced nanoswarms—far beyond our own capabilities—infested everywhere, mutating to deal with any threat they encountered. Biological nanovirii ripped through human populations, inflicting irreversible neurological damage. Potent infowar worms penetrated even hardened systems, shredding our crucial networks with ease. Prisoner populations were rounded up for forced mind emulations, suffering a luckier fate than those who were merely decapitated by head-collecting drones or pierced by robots with neuro-scanning proboscises. Neuropathic virii turned some humans into pawns of the TITANs, turning them against the rest of us. Other reports spoke of strange, alien happenings and unimaginable terrors. We found ourselves fighting a rearguard action against coming extinction. The plot of a hundred novels and movies made manifest in our lifetimes, the doom of transhumanity at the hands of the machines.

For over a year they stalked and destroyed us. There seemed to be no hurry on their part to bring us to an end, and why would there have been? Nothing we did affected them. They were data and information, they were thought and impulse, they were everywhere and nowhere, and there was nothing we could do that they could not turn back against us. Their influence spread outward from Earth, with outbreaks in orbit, on Luna, Mars, and many other places. Everywhere we had a foothold, the TITANs followed.

Perhaps you remember that point when it became clear that transhumanity might not survive. I do. Millions must have seen the signs. And so the great diaspora began, the teeming masses doing whatever they could to flee Earth. Ships were diverted, even built, to help people escape. Those who could not buy their way off the planet did their best to send their digital backups, in the dim hope they could acquire a new body. Perhaps one in ten escaped.

You might hear that we banded together to stop the threat, that in our darkest hour we forgave ancient grudges and simmering hatreds in the face of extinction. That would be a lie in the face of the ten thousand shot down over Buenos Aires by North American forces as they sought to escape, or the compromising of network security on over two dozen habitats in Lagrange orbits by corporate competitors as their rivals strove to fight off a TITANs attack. We were just as gleeful to destroy ourselves.

Then, as quickly as they appeared, the TITANs vanished. Over the course of a week, the attacks and disturbances trailed off and then stopped but for an occasional outbreak. The retributions and attacks by our own kind continued for a few more months, but the damage we did to ourselves was nothing compared to what the TITANs had done.

In the aftermath, we stood among the smoking ruins of transhumanity and surveyed all that had been lost. Of all the billions that existed before the Fall, fewer than one in every eight survived, and of those fewer still retained a corporeal form. Nevertheless, the surviving habitats and stations were overcrowded, with tensions high. Vast numbers of infugees circulated in storage, as there were simply not enough bodies on hand to accommodate them all. Some were placed in permanent storage, where they remain forgotten. Others were shunted into virtual reality, given no choice but to live their lives in simulated environments. A lucky few were given the chance to work as indentured servants, often to build new habitats, working on the promise of a body of their own someday. You've no doubt seen them, working in cheap mass produced synthmorph bodies in menial or dangerous tasks kept out of sight of the rest of us.

Those left dead or bereft of a body were the least of our problems. Our war with the TITANs had left the Earth a smoking, irradiated, toxic wasteland, still populated by dangerous machines and plagues. The newly formed Planetary Consortium, composed of hypercorp interests among the Martian and Lunar colonies, placed Earth and the space around it under quarantine. The official reason is that it's for safety reasons, allegedly to keep any remaining threats from escaping Earth's confines. Or perhaps we could not stand to look at our homeworld in such a state and face what we had done to ourselves.

Even now, ten years later, we are told that the Earth is dangerous, that it holds risks and surprises. That's partly true, I believe—there are surprises alright, but the Planetary Consortium wants them all for itself.

[Rustling noises, murmurs]

Of course I'm talking about a Pandora Gate. The one the TITANs left behind on Saturn's moon was just the first. You're a fool if you think that there are only five in the entire system. I'd be willing to bet nearly anything that there's one down there on dear old Earth.

Have you ever seen a Gate? No? Of course not. The hypercorps keep them locked down. Not like out in the wild, wild outer system. Sure, the Gatekeeper Corp lets anyone with a death wish and the minimum training take a jaunt through the original on Pandora, but if you're lucky enough to come back, they own everything you find on the other side. I suppose it's the chance for a certain type of adrenaline junkie "to boldly go" and all that nonsense.

The extrasolar colonies—now, those are an all new frontier. You inner system types are so predictable with your rush to colonize and expand and own everything, as if the universe is just there for your rich overlords to claim for themselves. I expect your extrasolar colonies are expanding quite nicely, given the sheer number of poor debt-conscripted souls you toss through. You probably have grand schemes of building galactic empires. Us. Transhumanity. A galactic civilization.

Well, galactic squatters at least. That was made clear when the solemn crossing guards of the cosmos showed up and issued us a warning that we were dabbling in Things What Ought Not To Have Been.

Maybe the Factors are telling us the truth, maybe they are acting as ambassadors for a collection of spacefaring alien species that want to warn us away from Forbidden Technology—y'know, the technology we've already been burned by and of course have no plans to actually abandon. Think about the Two Commandments they have given us: thou shalt not create self-improving AI, and thou shalt not use the Pandora Gates. Oops. Do you think they know? About what happened with the TITANs? That even we don't know where they went and that we're kind of afraid to find out? Surely they know that we've been using the gates and have spread beyond our little backwater, and maybe that's their real fear. But why do we even listen to what some highly-evolved slime mold tells us to do anyway?

Taking risks, that's the price of progress, no? Let's face it, we need some hope. We need a new Earth to replace the one we destroyed, a place where we can go and breed like rabbits and fuck it all up over and over again. We need to know that we can expand beyond this solar system, because right now it's feeling a little confining, like we could be easily trapped and wiped out if the TITANs ever return. We need to know that we have a future. We need to know that we can make it through our own efforts. That we won't do ourselves in on our own.

The Lost proved that. It was a noble objective, to speed a new generation of children to adulthood, but the process was flawed. Taking force-grown clones, raising them in VR, and then dumping them into adult bodies after they've only been alive for a few years of objective time—but over eighteen years of their subjective time? An entire childhood, having only each other and AIs for company. It's enough to fuck

anyone up. It was a grand experiment, but it failed, and now we have another reminder of our failures living among us.

That's us, in all our glory. Ten years after the Fall and we remain a broken, squabbling mess, jailed by slime molds, beaten by uppity software, and yet our own worst enemies. Spreading out from a home we don't even have any more. Our numbers reduced and dwindling further with each passing day. Who will save us? We don't even want to save ourselves most of the time. Or so it seems.

But if we don't, there's no future. And I, for one, have not lived this fucking long to give up now. You, me, we're effectively immortal. The entire galaxy is waiting out there for us. We'd be stupid not to go see it.

End Transcript

### 3.1.1 Eclipse phase timeline

All dates are given in reference to the Fall. BF = Before the Fall. AF = After the Fall. (e.g., BF 10 = 10 years before the Fall.)

**BF 60+**

- Crisis grips the globe in the form of drastic climate changes, energy shortages, and geopolitical instability.
- Initial space expansion creates stations at the Lagrange Points, Luna, and Mars, with robotic exploration of the entire system.
- Construction begins on a space elevator.
- Medical advances improve health and organ repair. The rich pursue gene-fixing and transgenic pets.
- Computer intelligence capabilities equal and excede that of the human brain. True AI not yet developed.
- Robotics become widespread and start to replace/invalidate many jobs.
- Modern nations expand their high-speed wireless networks.

**BF 60-40**

- Efforts to undertake megascale geoengineering on Earth cause as many problems as they fix.
- Major colonies established on the Moon and Mars; outposts established near Mercury, Venus, and the Belt. Explorers reach Pluto.
- First space elevator on Earth finished. Two others in progress. Space traffic booms.
- Mass driver built on the Moon.
- Terraforming of Mars begins.
- Fusion power developed and working plants established.
- Genetic enhancements, gene therapies (for longevity), and cybernetic implants become available to the wealthy and powerful.
- First non-autonomous AIs are secretly developed and quickly put to use in research and netwar.
- Experience playback (XP) technology developed and put into public use.

**BF 40-20**

- Violence and destabilization wrack the Earth; some conflicts spread into space.
- Argonauts split from hypercorps, taking resources to autonomist habitats.
- Space expansion opens up legal/ethical loopholes for tech development and allows for increased direct human experimentation.
- Human cloning becomes possible and available in some areas.
- Development of first transhuman species.
- First dolphins and chimpanzees uplifted to sapience.
- Fusion-drive spacecraft enter common usage.
- Extended colonization and terraforming of Mars continues. Belt and Titan colonized. Stations established throughout the system.
- The starving masses volunteer themselves for indentured servitude on hypercorp space projects.
- Augmented reality becomes widespread.
- Most networks transformed into self-repairing mesh networks.
- Personal AI aides become widespread.

**BF 20-0**

- Earth continues to suffer, but the pace of technology allows for some interesting developments.
- Expansion throughout the system, even into the Kuiper Belt.
- Transhuman species become widespread.
- Nanotech assemblers become available, but are strictly controlled and jealously guarded by the elite and powerful.
- Uploading and the digital emulation of memory and consciousness made possible.
- More species (gorillas, orangutans, octopi, ravens, parrots) uplifted to sapience.
- Pods see common usage, amid some controversy.

**The Fall**

- The TITANs evolve from a high-level distributed netwar experiment into self-improving seed AIs. For the first few days, their existence is unsuspected. They advance their awareness, knowledge, and power exponentially, infiltrating the mesh both on Earth and around the system.
- Large-scale netwar incursions break out between rival states on Earth, sparking numerous conflicts. These attacks are later blamed on the TITANs.
- Simmering tensions on Earth escalate into outright hostilities and warfare.
- Massive netwar breaks out and major systems crash as TITANs begin open attacks, also using autonomous war machines.
- Conflict quickly spirals out of control. The use of nuclear, biological, chemical, digital, and nanotech weapons reported by all sides.

- TITANs engage in mass forced uploading of human minds.
- TITAN attacks expand to other parts of solar system, heaviest on the Moon and Mars. Numerous habitats also fall.
- TITANs suddenly disappear from system, taking millions of uploaded minds with them.
- The Earth is left a devastated wasteland, a patchwork of radiation hotspots, sterile zones, nanoswarm clouds, roaming war machines, and other unknown and hidden things among the ruins.

**AF 0-10**

- A wormhole gateway is discovered on Saturn's moon Pandora, left by the TITANs. Four others are later found (in the Vulcanoids, on Mars, on Uranus, and in the Kuiper Belt); these are collectively referred to as "Pandora Gates."
- Expeditions are sent to extrasolar worlds via the Pandora Gates. Numerous exoplanet colonies established.
- First contact with the aliens known as the Factors shocks the system. Claiming to act as ambassadors for other alien civilizations, they provide little information about life outside the solar system and warn transhumans away from both seed AI and the Pandora Gates.
- An attempt to raise a generation of children using force-grown clones and time-accelerated VR fails miserably when most of the children die or go insane. Dubbed the Lost Generation, the survivors are viewed with repugnance and pity.

**AF 10**

- Present day.

## 3.2 The solar system after the fall

Before the Fall, the solar system had a population of approximately eight billion, with all but five million of these people living on Earth. The Fall wiped out almost ninety-five percent of transhumanity, and today the population of the solar system is slightly less than half a billion, with almost all of these transhumans living off the Earth. The lifestyles of these people were almost unimaginable thirty years earlier—the vast majority are immortals living in sealed habitats on hostile alien planets or in sealed space colonies, the largest of which hold more than a million inhabitants and are many kilometers long.

In this vastly changed setting with its vastly changed inhabitants, the core concerns of humanity remain much the same. People seek both material abundance and social status, and they wrap themselves in various public and private ceremonies. Like generations of humans before them, transhumans separate themselves into different cultures and subcultures, all of which enjoy a wide variety of physical and virtual entertainments. Politics and economics remain vitally important and as always, those who are wealthy, powerful, and famous have a large degree of control over the lives of those who are poor, relatively powerless, and unknown.

## 3.3 Transhumanity

Humanity as a concept has been replaced with transhumanity. Most people now alive left Earth as infomorphs and were subsequently resleeved into new morphs. Bodies are things that can be modified and replaced, much as someone can alter or exchange a suit of clothing. Identity is centered in the mind, which can exist as a disembodied infomorph living in virtual worlds or dwelling in a vast array of strange and exotic morphs.

While there are bioconservatives who resist these many changes to identity and physicality, they are very much in the minority.

To most people, transhumanity has also been expanded in scope to factor in non-human persons such as AGIs and uplifts, though the rights and status of these sentients is sometimes contested.

As transhumans continue to absorb the ramifications of this new way of life, they face a new crop of problems and issues. Two of the largest and most important are the increase in inequality and the splintering and separation of transhumanity into many different clades.

### 3.3.1 Inequality

The technologies first developed in the decade before the Fall and refined in the decade after its end have transformed humanity. In all but the most backwards, impoverished, and repressive regions of the solar system, the vast majority of humanity is smarter, healthier, and richer than any humans have ever been. Additionally, individuals can improve their minds and their bodies in almost any fashion their imaginations can dream up. Those who can afford the right augmentations can think faster, never forget anything they have ever learned, become mathematical savants, and heal from injuries many times faster than an unmodified human. When resleeving is combined with implants, transhumans can gain even more amazing capabilities—but these benefits are far from free.

During the first decade after the Fall, most of the surviving population was relatively poor. Many were grateful to have any morph at all. While the economic situation has improved, significant inequalities remain and seem unlikely to change. Hundreds of millions of people must make do with very basic splicers (p. 139), worker pods (p. 142), cases (p. 143), or synths (p. 143), while a few million are wealthy enough to have custom-designed morphs created for them, complete with all the augmentations they desire. These same members of the elite live in luxurious villas and mansions, and in a few cases privately-owned asteroids, while most other people must make do with a few hundred cubic meters of dwelling space. However, while inequities of living space are ancient, the issue of economic inequality producing inequities of physical and mental capacities is both relatively new and considerably more problematic.

In regions using the old and transitional economies (see p. 61), differences between the rich and the poor are expressed in terms of money. In habitats using the new economy (p. 62), wealth is meaningless and status and opportunity are denoted with reputation scores. In all three economies, some people have more than others, and because of this, technology allows the better off to be better than the people around them. Skillware lets people buy knowledge and expertise, while multi-tasking and mental speed implants allow individuals to get more done at once. Someone fortunate enough to acquire large numbers of such augmentations is capable of significantly more than someone who lacks them, and so can do even more to increase their money or rep, thus serving to further perpetuate inequality. This problem is less serious in the reputation-based economies of the outer system, however, as it significantly easier to build reputation through hard work and dedication, as opposed to the rigidly-controlled monetary economies of the inner system and the Jovian Republic, where class stratification is institutionalized and upward mobility is largely a myth.

As many supporters of the status quo are fond of pointing out, even the "have-nots" are smarter and healthier than any previous generation of humans and carry as much potential immortality as the wealthiest member of the elite. It is equally true, however, that in many ways the divisions between rich and the poor are significantly greater than they have ever been, especially in the inner system. In the past, the members of the elite might be somewhat healthier and better fed than the have-nots, but both rich and poor still lived in relatively similar and fundamentally human bodies. Now, the very nature of humanity has been called into question. The least fortunate can be forced to inhabit bodies designed specifically for the pleasure of those wealthier than them or even denied any body and forced to live as infomorphs until they can find some way to acquire a new morph—typically by selling their services to the highest bidder. Meanwhile, the well-off can customize their bodies and their minds, enabling them to accomplish far more and to be considerably more impressive and charismatic than anyone lacking their advantages. These inequalities may seem insurmountable, but some anarchistic groups and even some entire habitats have dedicated themselves to reducing inequities by producing low cost (and occasionally highly unreliable) versions of many of the

more impressive morphs and augmentations.

### 3.3.2 Clades and separation

In many habitats, hyper-augmented elites rule a mass of humanity that is stuck using low-end morphs and minimal augmentations, or even infomorphs living in rented morphs, but this is not the only option found in the solar system. Transhumanity has splintered into a wide variety of subcultures, some of which are based upon an individual's choice of morph. Some of this separation is due to the necessity of inhabiting difficult environments. From aquanauts living in Europa's aquatic environment or rusters on Mars to the fact that zero-g habitats are relatively inexpensive and are best inhabited by microgravity-adapted morphs like bouncers, many unusual environments require those living in them to choose from a very limited range of morphs. Sometimes, though, this separation is ideological in nature, such as the rise of groups like the ultimates (p. 82) or some of the separatist uplift communities that seek to define their own space separate from human cultures.

There are dozens of specialist morphs and an even greater number of habitats or other settlements that are inhabited largely or exclusively by individuals using a single type of morph or a limited number of specialist morphs. In the asteroid belt and in the rings and smaller moons of Saturn, there are more than one hundred habitats that do not rotate, with all portions in zero or near-zero gravity. The inhabitants typically use bouncer or novacrab morphs, along with a small number of synthetic morphs and other pods.

There is also a vast number of other habitats that are segregated in various other ways, including ones where all permanent residents are uplifts inhabiting one of the various transgenic morphs, like the octomorph or neo-avian morphs. Other habitats are only open to residents with various enhanced morphs like exalts or mentons. There are even habitats where all residents must inhabit morphs that are all clones of one another. In almost all of these habitats, residents are free to add whatever augmentations they wish to their morphs, but some habitats forbid residents from changing their morph's external appearance, and individuals who violate this rule are forced to leave the habitat if they refuse to reverse these changes.

Some habitats do away with the necessity of both life support and gravity. In these locations, all residents are infomorphs who either inhabit their own synth bodies or, in a few very eccentric cases, where all of the inhabitants are infomorphs who spend most of their existence in the habitat's central computers. When they need to interact with the physical world, these infomorphs are free to use one of the many synthmorphs that the habitat owns and that the residents share among themselves. Although considered quite eccentric to many and horrifying to bioconservatives, habitats inhabited solely by synthmorphs or infomorphs are among the least expensive to build and maintain and are a low-cost way for groups of infomorph refugees from Earth to gain independence. Because individuals who choose this way of life have often spent a decade or more as infomorphs, this option often seems both familiar and in many ways more comfortable than inhabiting a living morph. As Earth becomes more distant in transhumanity's collective memory, its traditions and social norms hold less sway and people feel more free to create and use new bodies and new ways of life to go along with them.

### 3.3.3 First contact: the factors

Ironically, the first contact between transhumanity and alien life was made by a group of isolates with no interest in the rest of transhumanity. A brinker doomsday cult habitat in the Neptunian Trojans, patiently waiting out the prophesized return of the TITANs, suffered a severe life support systems failure. Not expecting anyone to respond to their distress signals, they were simultaneously relieved and shocked to have an alien starship come to their aid.

Shortly after this event, three the unknown ships of alien design simultaneously approached Mars, Luna, and Titan, logging on to local networks to announce their presence and peaceful intentions. Though their presence initially raised alarm and panic, their rescue of the brinkers and assurances of non-hostility allowed cooler heads to prevail. Coming just three years after the silent hostility of the TITANs, the new aliens were pleasantly non-threatening.

Quickly dubbed "Factors," both because of their claims to act as ambassadors for an assortment of alien civilizations and of their interesting biology, initial communications between species were confusing and jumbled. The Factors made a number of veiled warnings and expressed concern over certain technological developments, particularly unrestrained artificial intelligence. They have refused entirely to deal with digital entities and broken off negotiations with anyone currently engaged in AGI development or utilizing the Pandora Gates. The Factors have implied that they were aware of and watching humanity for some time, but chose to wait to make contact ... implying some implicit fear of the singularity. Dealing with multiple factions, the primary relationship between the Factors to transhumanity is a commercial one. Though they are often dismissive of transhumanity's technological achievements, they are interested in our scientific development and breakthroughs, particularly in the biosciences, as well as our art, history, and culture. They remain tight-lipped about their own civilization and other xenomorphs, though they have on occasion traded alien artifacts of unusual design and peculiar function. It is widely assumed that these are simply trinkets of limited value and that the Factors are careful not to share anything of true worth to transhumanity, particularly anything that might drastically affect our growth. Biologically, the Factors appear to be some sort of evolved slime mold colony. As far as is known, they communicate purely by chemical signals and receptors, requiring any interactions with transhumanity to be computermediated. Several different types of Factors have been sighted, implying that they engage in heavy biological modification. Factor starcraft appear to be lighthuggers capable of nearlight speeds. Due to the frequency of their visitations to the solar system (2–3 times a year), however, it is speculated that they either have a nearby base, or that they possess the capabilities for faster-than-light travel—or possibly they have Pandora Gates of their own. Given the wide dissimilarities in psychology between transhuman species and the Factors it would be presumptuous to speculate concerning their true feelings and agenda towards transhumanity. It is hoped, however, that by continuing negotiations with them, transhumanity may learn more about the nature of the galaxy—and possibly even our own history.

## 3.4 Culture and society

The Fall and its aftermath continues to be a major influence on transhuman culture and society. Prior to the start of the evacuation, more than ninety-nine percent of the people who survived the Fall had never been off Earth. For them, space was a distant realm where other, more daring and adventurous people lived, a place Earth dwellers only saw on videos. Earth was their home. Then, in the course of a few short years, hundreds of millions of people were forced to leave Earth. The fortunate few first evacuees left with no more than a dozen kilograms of possessions, while the vast majority were infomorph refugees who left Earth with nothing, not even their bodies.

Today, transhumanity is divided into three groups. The first group contains the true veterans of space life, the less-than-one-percent of humanity that was already living in space before the Fall. The second group is the ten percent of the population that was either born after the Fall or is too young to remember living on Earth. The remaining eighty-nine percent of the current population of the solar system lived generally happy and prosperous lives on Earth before the Fall forced them to flee for their lives. These refugees from Earth form a powerful social force, but as time goes on memories of Earth grow dim, and people adapt to their new homes and lives.

### 3.4.1 The longing for earth

Most of transhumanity, especially those who were forced to flee from the dying Earth, still mourn their former home. Their longing for and nostalgia of Earth has profoundly affected transhuman culture. Artifacts from Earth, including ones as trivial as coins or bits of dried vegetation, are considered to be treasured mementos that have great economic and emotional value.

The interdiction of Earth makes acquiring such artifacts quite difficult and dangerous. As a result, the trade in Earth artifacts is a lucrative portion of the black market, enough so that fearless scavengers are willing to risk being shot down by a patrolling killsat just to get to Earth, where they also face death from

numerous lingering dangers. The mesh is peppered with stories of daring explorers who traveled to Earth to retrieve all manner of priceless relics, as well as an equal number of stories about explorers who died or simply vanished on such expeditions. More than one team of gatecrashers has funded their expedition through a preliminary relic-hunting expedition to Earth, which serves to test their mettle while they work to raise funds.

Nostalgia for Earth also affects the way transhumanity has redesigned itself. In the decade prior to the Fall, humanity had begun to freely alter itself, with both radical body modification and the first commercial resleeving resulting in a growing number of obviously non-human morphs. The vast majority of current morphs, however, are relatively human in appearance (if not in internal structure). Even for people too young to remember the Fall, asserting individual humanity is an important part of postFall culture. Some people keep a resemblance to the traditional human form as a remembrance of Earth, while others do it to celebrate humanity's victory over the monstrous and inhuman TITANs that attempted to destroy them. With the exception of a few eccentric groups like the ultimates, the majority of humanity values looking human and preserving human traditions and institutions. Also, even the ultimates' current version of their remade morph is considerably more human looking than the versions their predecessors designed before the Fall. As a result, while synthmorphs are relatively common, most are made to look humanoid. There are a few radically inhuman morphs like the novacrab, the arachnoid, and the flexbot, but they are almost exclusively used for highly specialized purposes. Until recently, anyone who used one as their primary morph was considered deeply eccentric (or worse), but attitudes have gradually begun to soften, and these morphs are gradually becoming more acceptable for regular use.

This mixture of reverence and nostalgia for Earth sometimes has a darker side. Individuals who choose to have morphs that look visibly non-human experience a mild degree of prejudice in many habitats, and militant bioconservatives denounce those who look sufficiently non-human as being covert allies of the TITANs. Uplifted animals also face significant discrimination from many humans. These prejudices are relatively common in the inner system and can be quite extreme among bioconservatives. As a result, uplifts and individuals who prefer inhuman-looking morphs often live in separatist communities in the outer system. In much of the inner system, uplifts and individuals using a visibly non-human morph as their primary or only morph are viewed with suspicion and occasionally treated as second-class citizens. While most habitats have laws mandating morphological freedom and many also have laws making prejudice based on morphological choice illegal, these attitudes remain quite resilient.

### 3.4.2 Nostalgia jewelry

As both a reminder and a visible marker of their lost homeland, a significant number of refugees from Earth wear jewelry containing a coin or, more rarely, an old stamp from transhumanity's former home. Popularly known as nostalgia jewelry, most of these items are made into pendants or lapel pins, but a few are rings. Before the Fall, coins and stamps were largely curiosities primarily of interest to collectors, having fallen out of use forty years BF. Already scarce, few were saved during the Fall as carrying such useless mass off Earth during the evacuation was discouraged or forbidden. A few extensive collections already existed off-world, however. Even so, less than a million authentic samples survived, meaning the vast majority of people wearing such items make do with exact copies made in cornucopia machines. Actual coins or stamps are very expensive, meaning that some daring scavengers are willing to risk the interdiction of Earth for the express purpose of salvaging relics.

### 3.4.3 Fear and paranoia

The Fall left behind a persistent legacy of fear. This has faded over the past decade, but a great many humans still unconsciously expect the other shoe to drop and the TITANs to return at any moment. Others worry that their agents are already among them, preparing for the complete destruction of humanity. The arrival of the Factors caused widespread panic, and even today a substantial minority of people assumes they are cat's-paws for the TITANs—or possibly their creations.

There are a few (often insane or deeply eccentric) people who worship the TITANs or otherwise support their agenda (including self-described "singularity seekers" who hope to find and be uploaded by the TITANs to join their ascension to super-intelligence), but all of them must keep their beliefs carefully hidden.

Even now, expressing any support for the TITANs or advocating the creation of self-improving seed AIs is illegal in most habitats. Anyone who does so runs the risk of becoming the target of mob violence that the authorities are unlikely to investigate too closely. Merely being suspected of being a supporter of the TITANs, or worse, someone who has been secretly infected by them and is now their agent, is enough to get someone shunned or even killed. While such incidents are now far rarer than they were in the first few years after the Fall, people who act too eccentric and who lack someone with a sufficiently high rep to defend them or explain their actions are occasionally killed, typically by being thrown out an airlock. Those responsible for these "spacings" are dealt with quite harshly in most habitats, since in almost all cases later investigation reveals that the victim had no connection to the TITANs.

There are also periodic rumors in many habitats, especially small and isolated habitats, that one or more other habitats have been taken over by the TITANs, leading to a variety of inter-habitat problems. Such rumors are usually resolved fairly quickly, but the most persistent can seriously harm relations between habitats. Claims that other habitats are infested with or even controlled by agents of the TITANs are frequenly employed by extreme bioconservatives hoping to demonize radical habitats populated entirely by infomorphs or synthmorphs. As more people manage to put the fear and horror of the Fall behind them, such claims are less likely to be believed. Unfortunately, on very rare occasions, people are still infected by TITAN-created relics and actually become their unwilling agents. Since such incidents are rare, however, they have become easy to dismiss.

> **An exsurgent threat?**
> [Incoming Message. Source: Anonymous]
> [Public Key Decryption Complete]
> Ok, you asked, so I'll tell you. There are some elements within Firewall that don't buy into the TITANs-ran-amokand-considered-us-a-threat idea, or even that the TITANs are solely responsible for the Fall. These people think that the TITANs found or encountered something when they started their takeoff toward the singularity—something that changed them. They point to the wide range of multi-vector virii that ran loose during the Fall, and how even many of the TITANs seem to have succumbed to these infections. They also reference a disturbing number of accounts of events during the Fall that are inexplicable ... things like people being transformed into strange, alien creatures ... or phenomena that seem to defy certain physical laws, as if something was at times ignoring what we know of physics and just doing whatever it felt like ... Some of these voices within Firewall even think that the TITANs may not have been responsible for the Pandora Gates ... They have a name for this mystery infection. They call it the Exsurgent virus.

### 3.4.4 Real and social distance

The vast distances between most habitats give all communications—with the exception of those using the rare and expensive QE communicators (p. 314)—a significant time lag between asking a question and receiving an answer. In most cases, the time lag ranges from ten seconds to several hours, and it makes real-time communications between distant habitats difficult or impossible. Communication problems only serve to further isolate habitats from one another, and as a result people socialize primarily with members of their own habitat (or habitat cluster, if their habitat is part of one of the various groupings of between two and twenty habitats that abound throughout the solar system).

Within a habitat or habitat group, communication between residents is effectively instantaneous, thanks to the omnipresent wireless grid known as the mesh (p. 234). Anyone wearing a mid-range ecto (p. 325) or using basic mesh inserts (p. 300) can communicate with others in ways that go far beyond mere voice contact. Both devices allow AR communications that are in most ways barely distinguishable from in-person communication, so people can effectively spend in-person time with anyone in their habitat at any moment

when both of them are free and interested in communicating. Unless someone deliberately wishes to turn off communication because they are sleeping or otherwise busy, people can always get in touch with one another. Many close friends and romantic partners regularly communicate anytime they have a spare moment, sharing comments and jokes. This communication is far more awkward and distant if there is a time lag of several minutes between every comment, so inter-habitat communication is never as informal or close.

Although travel via egocasting (tramsitting an ego to another habitat, where it is resleeved) is as easy, if not as cheap, as communication, a trip to another habitat is considered to be a significant journey with a range of costs. Individuals traveling to a different habitat will no longer be able to engage in real-time communication or shared real-time entertainments with people back on the habitat they left, so the traveler will have to find a new social environment. In addition to the trouble and expense of acquiring a new morph in the new habitat, the social distance between individuals and the social network they leave behind is part of the cost of travel.

Before the Fall, refugees from Earth were accustomed to being able to easily communicate with anyone else on Earth. Wealthier individuals could easily journey just about anywhere on the planet in a few hours while still being able to communicate with everyone back in their home city with no noticeable change. The exodus of transhumanity from Earth, though, means that an individual's social world is only as large as their habitat. Even a relatively brief communication lag, such as the two to thirty seconds that is the average time lag between any two of the Jovian or Saturnian moons, greatly hinders the flow of back-and-forth communication. When time-lags are involved, most communication consists of messages rather than any attempt at continuous conversations. In situations where a more in-depth discussion is necessary and time is limited, someone can send a fork of themselves—a digital copy (p. 273)—to hold the discussion remotely on their behalf, and then return for re-integration. Since there is already a large time lag between sending a message and obtaining any possible response, most people do not hurry to answer messages from distant habitats except in the most urgent circumstances, further isolating people residing in distant portions of the solar system.

> **Solarchive search: singularity seekers**
>
> Singularity seekers are those with an unhealthy fascination in so-called singularity events, such as the hard takeoff of the TITANs to super-intelligence. Some are part of a radical sect of "exhumans" who believe that transhumans are destined to become godlike superbeings and are determined to get there first. Others act on a defensive impulse, believing that the only way humanity can survive another threat from beings like the TITANs is by becoming as hyperintelligent as their enemies are. Still other singularity seekers are researchers and spiritual seekers who are frustrated with the limitations of their own minds and seek to become something greater. Some of these people become gatecrashers, searching for advanced alien artifacts to help them in their quest. Others experiment with employing conventional technologies in new and exotic ways, such as creating mentallylinked networks of forks or incorporating extra-fast and powerful computers into synthmorphs and pods.
>
> A few of the most daring seek artifacts left behind by the TITANs, hoping to incorporate techniques and technologies created by these inhuman beings into their minds. This last group is the most notorious, in large part because of the spectacular nature of some of their failures. On occasion, these artifact hunters have awakened devices that have lain dormant for a decade and caused local outbreaks of TITAN technologies. These incidents have caused many people to regard singularity seekers as everything from potentially dangerous eccentrics to unknowing pawns of the TITANs.

### 3.4.5 The rise of cultural regions

The only exception to the social distance between different habitats occurs when colonies are located on or in relatively close orbit around the same planet or moon. The inhabitants of Mars can all communicate with one another instantaneously, as can everyone on Luna or in Lunar orbit. However, the rivalry between the various Martian city-states—and between the primary hypercorp domes and the rural Martian poor—imposes its

own social distance. Individuals from different city-states do socialize, but among the elite social cliques, spending too much time communicating with members of another city-state is viewed as somewhat odd and potentially even disloyal. As a result, Martians tend to be relatively isolated even from their close neighbors. Nevertheless, the short distances between the Martian city-states and the orbiting habitats mean that there remains a general Martian culture that is different from the cultures of the rest of the solar system.

Distance barriers have produced similar levels of cultural differentiation in other portions of the solar system. The colonies in the vicinity of both Jupiter and Saturn each form a separate cultural unit, as do the colonies in Earth orbit and on and around Luna. The same is true for the Jovian Trojan and Greek asteroids. In each of these regions, people communicate and travel more between habitats and settlements than they do with outside regions.

Social scientists refer to the different sections of the solar system as separate cultural regions. The different regions of the belt also each form a similar cultural region, but because asteroids in different orbits eventually drift quite far apart, the cohesion and unity of these cultural units is somewhat weaker. Habitats on the edge of the solar system (around Uranus, Neptune, and Pluto) form very small cultural regions, but the few habitats in the Kuiper Belt and Oort Cloud have no cultural region since the distance between them is so extreme.

Though communications between habitats within the same cultural region is somewhat awkward due to intra-regional cultural differences and small timelags, it is usually fast and easy enough for people on different habitats to keep in regular contact with one another. In addition, most habitats within the same cultural region are sufficiently close that egocasting between them is affordable by most people. In contrast, egocasting between cultural regions is relatively expensive. Many social scientists predict that within one or two decades, different cultural regions will be at least as different from one another as distant nations of Earth were from one another during the first half of the 20th century—perhaps even more so due to the physical alterations that cultures introduce as they continue to evolve.

### 3.4.6 Cultural experimentation

While nostalgia for Earth remains a powerful social motivation, the break from Earth led many inhabitants of the solar system to experiment with new forms of culture and society. Since the Fall destroyed physical links with the past and the defeat of the last old-Earth governments ended ideological ties with the old political and social forces, many transhumans saw themselves as living in a new, free era where the past was dead. Even people who always wear nostalgia jewelry and spend several hours a day in simulspaces set on old Earth are very interested in the possibility of social and political experimentation. Those without criticisms of Earth's nation-states and their many failings still rue the day when Earth fell.

Many of the most extreme social experimenters moved to the numerous small outer system habitats that were created in the decade after the Fall, but people interested in social and cultural experimentation can be found throughout the solar system. In addition to playing with various interior structure and design ideas, the inhabitants of many stations experiment with all manner of unique social and political rules. A few habitats do so quite deliberately, either because the members are interested in social innovation or because researchers associated with a hypercorp or university have offered them goods or services in return for testing one of their latest theories. Such experiments have included establishing stations where all of the residents are sleeved in hermaphroditic morphs in order to measure the impact on customs and language when gender is abolished or spurring the residents of a particular station to freely switch their morphs based on the responsibilities and duties they have on a given day. Such staged experiments are, however, relatively rare—the vast majority of unique customs and social structures that have come about since the Fall naturally evolved from groups of likeminded individuals living together in the same habitat and working, consciously or not, to make life better fit with their aesthetics or ideology.

### 3.4.7 Gender, sexuality and relationships

To many transhumans, gender has become an outdated social construct with no basis in biology. After all, it's hard to give credence to gender roles when an ego can easily modify their sex, switch skins, or

experience the lives of others via XP. Though most transhumans still adhere to the gender associated with their original biological sex, many others switch gender identities as soon as they reach adulthood or avidly pursue repeated transgender switching. Still others examine and adopt untraditional sex-gender identities such as neuters (believing a lack of sex allows greater focus in their pursuits) or dual gender (the best of both worlds). In many bioconservative habitats and cultures, however, more traditional gender roles persevere.

Sexuality has also expanded into new frontiers and taboos. With basic biomods providing contraception and protections from STDs, casual sex is the norm. Many people pursue careers as well-paid companions and escorts. In fact, sexual experimentation is standard thanks to several new technologies. Virtual reality allows sexual encounters without physically touching a partner, not to mention bringing all manner of fantasies to life. For those that prefer the touch of real skin, AI-driven pleasure pods can fulfill any and all needs and are a legal form of prostitution in many habitats. Sex-switching also lends itself to new experiences, whether via bio-mods or a new sleeve. Even AGIs, having been socialized as humans, exhibit sexuality and desire.

The extension of lifespans and the decline of religion have drastically impacted social institutions like marriage. Given the possible changes to both cognition and biology over a transhuman's lifetime, lifelong relationships are no longer considered realistic. The idea of long-term relationships as a social contract has grown exponentially. While this has resulted in a number of marriages that are political or like a business transaction, most people continue to view marriage as a bond of emotional attachment and trusts—in particular a bond that transcends bodies, as either partner may change morphs at any time.

### 3.4.8 The diversity of habitats

The ability of a few thousand like-minded people of moderate means to acquire a small habitat where they can create their own society resembles the ability of inhabitants of the United States in the 19th century to set out for the West and found their own ideologically based communities. The primary difference is that creating such communities is faster and easier in the modern era. The mesh is filled with all manner of virtual communities where members hope to eventually gather the means to create their own habitats. In most cases, these are merely idle dreams; most participants are not willing to sacrifice the time and rep or money needed. Occasionally the members try, only to find out that some of the people promoting this effort are con artists. Occasionally virtual subcultures manage to raise the necessary dedication and trust to build their own habitat and begin the process of creating their own physical society. A decade of this sort of cultural experimentation by many hundreds of habitats has produced a number of unique and strange societies.

As an example, there are habitats where the inhabitants wear garments and AR images that cover their bodies—and, in the most extreme cases, their faces—and residents only reveal their morph's true appearance to their closest friends and immediate family. There are also stations where all members use cosmetic modification to adopt the same ideal look, as well as ones where all residents use morphs that are clones of one another. Some of the most eccentric habitats are populated by extreme bioconservatives overcome with nostalgia for the past, leading them to model both their society and all visible technology after some earlier period in history, typically some time between zero and 50 years BF.

There are even a few habitats that totally disregard commonly held feelings about forks and merging. Such community members regularly split off multiple forks when they awaken and plan their day and then merge the various forks when they go to sleep that night. Some forks remain infomorphs for the day, while others use one of the various morphs the individual owns or rents, which means that each resident typically lives between two and six separate lives every day. A few societies, like the home of the infamous Pax Familiae, go even further—all residents are forks of the same individual. In some of these solipsistic habitats, the forks are all expected to use cloned morphs, while in others each fork is considered a separate person who should go and forge their own unique life. Some of the less extreme manifestations of this type of habitat include places inhabited by families that are partially or entirely composed of forks of one of the members (the various forks tend to be treated as siblings).

## 3.5 Technology

Technology pervades all aspects of existence in Eclipse Phase. Most individuals understand that unless humanity suffers another event like the Fall or they personally suffer some very serious and unlikely accident, they are unlikely to permanently die. More people are now planning for a very long future. For most people these schemes are fairly minimal, but they often include an awareness that few, if any, relationships are likely to last an entire lifetime. However, functional immortality is only one of the many wonders of the modern world.

### 3.5.1 Living with infotech

For anyone with basic mesh inserts (p. 300) or an ecto (meaning about ninety-six percent of the population), life is filled with data. For people with the best implants, all information available on the mesh is available at a thought. For everyone else, it only requires a brief pause to access and understand it. When someone pauses and looks a bit distracted in the midst of a conversation, everyone understands they are accessing data and lack the implants to allow them to do this subconsciously or via multi-tasking. As a result, when a group of people are discussing a topic and no one immediately knows an answer to a question, such as the title of a performer's first vid, within a few seconds everyone has this information. Similarly, when someone walks through a garden, with a glance and perhaps a brief thought or small finger motion, they can call up detailed data on each and every species of plant that sits in front of them. Individuals going to remote areas that are out of normal mesh broadcasting range almost always either carry a farcaster-link with them or download truly vast amounts of data into their implants or ecto so they can continue to access all the data they might need. Since even a basic implant can hold vast amounts of data, lack of storage space is rarely an issue.

Access to such a vast amount of easily available information has resulted in a variety of cultural responses. Being able to quote from any vid, old movie, book, or historical speech is now trivially easy and can be done with a few seconds of thought. While children and young teens often play by interjecting large amounts of semi-appropriate famous quotes in their speech, most adults only do so for emphasis and in moderation. People who quote from other sources too often are considered dull and unimaginative. Recognizing such quotes is quite easy, since someone can simply set their muse to alert them to the nature and identity of all lengthy quotes they hear.

All experienced mesh users also learn (typically as children and teens) how to avoid taking too much time out from conversations to check facts or access information via the mesh. Teens regularly mock their fellows who pause too often or too long in conversations to look up further information on a topic someone mentioned, or who spend too long trying to assemble facts to support an argument. Terms like "meshed out" or "drooler" are used by teens to mock each other into learning how to be both discreet and faster in their information searches, at least when also interacting with others. While adults rarely engage in the same sort of direct and obvious mockery, people who get too lost in casual or conversational meshbrowsing are widely viewed as socially inept. As a result, implants that allow multi-tasking or temporarily speed up thought are in great demand, since they allow individuals to do extensive research and rehearse each statement they are going to make without a moment's pause. People who can afford such software almost always seem more suave, charismatic, and intelligent than those who do not.

All this means that those who lack all mesh and AR access—individuals known as zeroes—present a stark contrast to the rest of transhumanity. To most people, zeroes seem slow, forgetful, and almost unbelievably dense, while to zeroes, even people who only possess ectos or basic implants seems brilliant, witty, and able to comprehend things with almost inhuman speed.

### 3.5.2 Opening Pandora's gate

The discovery of the first Pandora Gate on Saturn's moon Pandora shortly after the Fall was a watershed moment in transhuman history. The prospects this discovery raised were simultaneously fascinating and terrifying. On one hand, technologies far beyond anything transhumanity was capable of were now in our

hands. This raised visions of a horizon far beyond the horrors of the Fall, where transhumanity would expand across the cosmos, visiting wonders that seemed perpetually far out of reach, even for nearimmortals. On the other hand, the possibility that these gates were relics of the TITANs could not be discounted. Their existence opened the possibility that the TITANs might one day return, or that transhumanity might still encounter them out in the galaxy at large. The alternative was even scarier—that the gate could be of extraterrestrial origin, and the things more dangerous and frightening than the TITANs might stalk the space between the stars.

Various hypercorps, governments, and other factions threw their brightest minds into solving the mystery of these "wormholes." Numerous scientific communities pooled resourcesbacked by private sector fundsand cracked the code of the Pandora Gate in just over a year. Not only was the gate activated, but it could be programmed to open connections to numerous distant star systems (one at a time). Though these controls were unreliable at best—connections sometimes closed without warning, and others could not be recalled though they had been opened before—the functionality was stable enough to use them in earnest. At the same time as their very public announcement concerning this seminal achievement, the Gatekeeper Corporation was formed overnight: a merger of those same scientific communities and their financiers.

Less than a year from its first operation, the hypercorp opened the gate to "gatecrashers:" explorers who risk their lives to see what lies beyond. Many of these died horribly; some were even lost forever, but a few made fantastic discoveries such as new worlds and new life. Though none of the (living) alien lifeforms encountered so far have been sapient, many of the worlds are habitable or within the possibilities of terraforming. Along with these wonders were found more disturbing things: evidence of a long-dead alien civilization (the Iktomi), and signs that the TITANs had passed these ways before.

Additional gates were soon discovered throughout the system. Unlike the spirit of cooperation that surrounded the first gate's discovery, these others were seized as hotly contested resources. Initially used for research and exploitation, many of these gates are now being tasked for colonization purposes. Dozens if not hundreds of exoplanet stations and colonies have been established, some with significant numbers. There has been no lack of poor or desperate individuals willing to risk life on an alien world, if it means an iota of improvement in their lives.

Though it is now widely accepted that the gates are the means by which the TITANs evacuated the solar system (a hypothesis which fails to answer why they did so), they appear timeless in their construction. Regardless of their origin, the gates remain one of the most prized and dangerous of technologies.

The five known Pandora Gates within the solar system, their locations, and their controlling entities, include:

- Vulcanoid Gate: Caldwell (Vulcanoids) —- TerraGenesis
- Martian Gate: Ma'adim Vallis (Mars) – Pathfinder/Planetary Consortium
- Pandora Gate: Pandora (Saturn system) – Gatekeeper Corp.
- Fissure Gate: Uranus – Love and Rage Collective/Anarchists
- Discord Gate: Eris (Kuiper Belt) – Go-nin Group/Ultimates

### 3.5.3 Going beyond the known

One of the oddest experiences for gatecrashers and others who explore unusual environments such as the ruins of Earth is the unavailability of data. They look at an alien plant or a TITAN-mutated person, and their search returns various error messages meaning that there is either no data at all on the subject or that the only data is purely speculative and should be regarded as dangerously unreliable. This can be especially troubling when the subject in question is a small creature that has just landed on the person's shoulder and the individual wants to know if it's harmless or deadly. Most people who are less than sixty years old have never been in an environment where they could not gain basic information about everything around them at a glance. Learning to overcome the shock of not knowing anything at all about something is one of the first and most crucial skills all gatecrashers must learn.

### 3.5.4 Muses

Most individuals have a dedicated AI that serves as their media agent. Commonly known as a muse, this AI has been a lifelong companion for most people less than seventy years old. Muses learn their owners' tastes, habits, and preferences, and do their best to make life and technology use as easy as possible. Muses can be alarm clocks, data retrieval gophers, appointment schedulers, accountants, and many other functions often limited only by their owners' imaginations. Some of their tasks do not even need to be assigned them—muses are skilled at figuring out people's needs and acting on them. For example, the muse's scheduling function may tell it when its user needs to be up in the morning, and it will act as an alarm clock without any additional instructions from the user. If a muse is uncertain about its owner's preferences, it asks, but after working with a user for a few decades muses rarely need to do this. Most people keep multiple back-ups of their muse, because the loss of a muse can be almost as traumatic as the death of a loved one. Using a generic muse who must be informed about all aspects of a user's individual preferences and fed a constant stream of instructions helps people appreciate the value of their own personal muse agent. Muses generally learn the basics of a new user's preferences in a month or two, but during that learning period the user tends to be irritable and forgetful, since the tasks they generally trust their muse to do automatically are not being taken care of.

### 3.5.5 Attitudes towards AGIs

The vast majority of transhumanity blames the Fall on rogue seed AIs (self-improving artificial intelligences). As a result, any AIs that are not crippled or somehow limited from improving themselves—including the AGIs (artificial general intelligences) that were common and growing in number before the Fall—are completely illegal in many habitats, or at least heavily regulated. The Fall ended only slightly more than a decade ago, and many transhumans consider AGIs and the TITANs that murdered their homeworld to be one and the same.

In addition to strict anti-AGI laws, there have been occasional riots and mass panics surrounding facilities still performing AGI research, which has pushed most such research into isolated settlements. Nevertheless, there are still people passionately devoted to AGIs; some see them as the next step in posthuman evolution, others value all sentience, and still others actually worship them. However, AGI supporters have learned to keep their opinions private in mixed company, lest they be branded an agent of the TITANs.

In some spots, mostly in the more anarchistic outer system, attitudes towards AGIs are more relaxed and AGIs may even be openly welcomed. These places recognize that AGIs are not the same threat posed by seed AIs and it is unfair to punish one for the actions of the other. Naturally, these places are havens for the AGIs active in transhuman society, who otherwise must disguise their true natures.

In the tightly-controlled inner system, the hypercorps and the Planetary Consortium foster anti-AGI sentiments both as safety measures and as protection against possible competitors. This latter point is one of the things that makes them attractive to some people in the outer system; they understand the great advantages their factions gain ... assuming, that is, that those AGIs share your goals and ideals.

### 3.5.6 Attitudes towards mental alterations

In the post-Fall solar system, technology can alter people's minds; controversy about many of these alterations remains. Few people have trouble with the idea of creating short-term forks using the multi-tasking augmentation or some similar process that insures the forks will be re-integrated within a few hours. However, the idea of long-term forks, and especially of allowing forks to gain access to their own separate morphs, troubles many people. Since there are not enough morphs to go around in the first place, providing morphs to a fork strikes many people as selfish and wasteful. As a result, on the rare occasion that people sleeve one of their forks, they typically provide it with a synthmorph to avoid the social stigma associated with using more than one body at a time.

Forks that exist for more than a few hours inspire discomfort in many people because the forks begin to diverge slightly in personality. Most people find the idea of two different and distinct versions of themselves to be somewhat disturbing. While there are habitats (mostly in the outer system) where forking is a regular

part of daily life and forks often exist independently for a day or two, most visitors find such habitats distasteful and bizarre.

However, while voluntary forking is still regarded as somewhat odd, involuntary uses of this and the associated mental technologies are so horrifying that they form the basis of much lurid crime fiction. Someone being unknowingly mind-napped and having an involuntary—and often secret—fork created is something that people regard with abject terror, despite it being quite rare. Similarly, while mental surgery to correct psychiatric problems or as punishment for various serious crimes is frightening and disturbing in its own right, illegal brain hacking draws horror and disgust from almost everyone in the solar system. Penalties for involuntary forking and mind hacking are exceptionally high. In many habitats, they are among the few crimes punishable by death (including the destruction of all backups and forks).

### 3.5.7 Travel

Travel between habitats and other transhuman colonies is both exceedingly easy and fairly costly. Longrange egocasting is expensive, as is acquiring a morph at the destination. Travelers have developed various ways around this obstacle; for example, if someone only needs to visit another habitat for a few days and is visiting primarily to engage in real-time communication, they often choose to remain an infomorph for the duration of their visit and to communicate via AR, thus saving all resleeving expenses. For visitors who require a morph but will not be staying long, most habitats offer the option of renting a generic splicer or synthmorph or, for a slightly higher cost, a generic exalt morph. Habitats or worlds with unusual requirements, like Mars, Europa, or the various zero-g habitats offer ruster, aquanaut, or bouncer morphs instead of splicers. These morphs can be used for up to a week without much difficulty, and using one for up to a month is usually possible with sufficient negotiation and payment. Meanwhile, the traveler's previous morph is kept in medical stasis back in their home habitat, waiting for their ego to return.

Another technique is morph trading by people from different habitats who know each other and who are traveling at the same time. A few people do this with strangers they meet on the mesh, but vids and other entertainments are filled with tales of people having their morphs or their identity stolen. A few of these horror stories are based on actual accounts. Very few people are willing to let anyone they do not know and trust use their body, and many people simply will not lend out their morph to anyone at all.

Some people, however, are willing, for a fee, to act as a living "taxi" for a visiting infomorph, carrying it around with them. In these cases the "ghostriding" infomorph is not permitted to control their host's morph directly and is simply a passenger along for the ride, issuing directions and communicating with their transporters electronically.

Travelers who wish to either immigrate to a new habitat or visit one for several months or longer must acquire their own morph. Usually, they reduce the cost of acquiring a new morph by selling their previous morph to a body bank. Alternately, some individuals sleeved in expensive custom-designed morphs who are traveling relatively short distances will rent a generic shell for several weeks and arrange to have their old morph shipped to them on a fairly rapid freighter. Doing this is rarely more than a moderate expense, which makes it less expensive than the costs of buying or replacing high-end custom modified morphs.

### 3.5.8 Privacy

Privacy is a prized possession for most inhabitants of the solar system, but it is so rare that for many people it might as well be a foreign concept. In the 20th and early 21st century, privacy consisted of two concepts that are now completely separate—the ability to remain unnoticed or anonymous and the ability to avoid unwanted intrusion. The first is largely absent from the lives of most people in the present day. Anyone who uploads anything to a non-private portion of the mesh understands that anyone who wishes to do so can gain access to it. Likewise, anyone who spends time in a public place understands that anyone can learn where they went, what they did, and what they said due to the ubiquity of meshed, sensor-enabled devices. As a result, everyone's public life, both on the mesh and in person, can be transformed into an easily searchable database. Almost everyone keeps such a record of their own lives, commonly known as a lifelog. Most people allow their lifelogs to be public, understanding that anonymity is now an archaic concept.

**Solarchive search: incapacitating inputs**

During the Fall, the attacking TITANs used a variety of AR and online intrusions that interfered with or even incapacitated their targets. The most basic of these were deceptive AR illusions made to convince people that their physical environment was very different from what it actually was. This fooled people into attacking their fellows or simply instigated mass panic. More advanced versions targeted the empathic elements of AR, triggering fear or other emotional responses. Still others blasted their targets with overbearing sensory input, so strong that it bypassed filters and inflicted neurological damage.

Despite rumors and fears of socalled "basilisk hacks"—visual or other sensory-input attacks that allegedly subverted transhuman minds by exploiting the way brains processed such data—no credible reports have been verified.

While the interiors of private dwellings remain free from continuous surveillance, almost all habitats have emergency sensors in every building providing a full record of events to emergency service workers and AIs in case of problems such as dangerous chemical leak, a sufficiently large fire, an explosion, loss of air pressure, or some other equally dramatic and potentially dangerous event. Both the events of the Fall and the fact that almost all of humanity now lives in habitats surrounded by hostile environments mean that such sensors are standard fare. A few habitats do not allow emergency sensors in private dwellings, but most people regard these habitats as potential death traps. These emergency sensors do not record anything other than the absence of potential dangers if they are not triggered by specific events. This limitation allows individuals privacy within their own residences—as long as they are certain no one has planted a secret recording device in their home. Ultimately, remaining unobserved is a matter of both care and trust, and everyone understands that most of the time everything they do will be part of the vast public record.

In vivid contrast, the freedom to avoid unwanted intrusion is carefully prized by the inhabitants of the post-Fall era. Unwanted personal or data intrusion into someone's private dwelling or personal electronic files is a crime in most habitats and a serious crime in many. Also, while both the mesh and augmented reality are filled with all manner of AI-mediated adware, most of it has evolved to be relatively benign and to provide non-intrusive suggestions about goods, information, and services that are likely to be of legitimate interest to the targeted person. An individual's muse filters out unwanted advertising. While it is certainly possible to create advertising that can hack through any muse's filters, doing so is usually illegal.

Unwanted AR intrusions are similarly limited. During the early days of AR technology, there were serious problems with users being overwhelmed with unrequested and distracting input—as many said, the mist got very thick indeed, so both law and custom changed to prevent such invasions. Today, most people expect to only experience data that they are looking for or that they might be interested in, and that any data they are not interested in will quickly vanish. Being surrounded by a large amount of unwanted AR data is not just annoying and distracting, it is also deeply frightening, because it means that there is a serious problem with either the habitat's mesh or the person's electronics—it could even mean that the entire habitat is under direct attack by infowar weapons.

### 3.5.9 Low-tech existence

More than ninety-five percent of humanity inhabits artificially created morphs. Most of them also possess basic implants, and the vast majority of the rest wear ectos with retina displays and other simple peripherals that allow the user to fully perceive and interact with the vast network of information around them. However, slightly less than four percent of the remaining population inhabit flats or splicer morphs without basic implants and also lack access to ectos and other basic technologies.

Since an ecto is both a relatively trivial expense and a piece of equipment vital to existence in the solar system, the only individuals who lack such technologies stand on the very lowest rungs of the social ladder. A few are the poorest members of the most marginal habitats, but most are slaves or the next best thing to them. The lowest social classes in the Jovian Republic lack personal infotech access and so do the lowest class of people indentured to the hypercorps and the Planetary Consortium, particularly on Luna and Mars. These individuals are either indentured criminals or people sufficiently lacking in useful skills that they are assigned mindless physical tasks that cannot be more efficiently performed by AIs.

The lack of mesh access makes these unfortunate "zeroes" into mental and social cripples, unable to perceive the vast wealth of AR that most people take for granted. They are also unable to communicate with anyone beyond the range of their voice or to access almost all information, including traffic signals and shop displays. When necessary, the managers and overseers in charge of groups of zeroes allow them access to handheld meshbrowsers. These devices resemble the handheld terminals common in the early 21st century and have limited functionality, typically forbidding communication and restricting mesh research to carefully filtered topics.

Because of their inability to access AR or the mesh, zeroes are almost completely isolated from everyone else, meaning they are also unable to organize effectively or to otherwise cause trouble for the people who control them. In much of the outer system, the existence of zeroes is considered one of the greatest crimes against transhumanity perpetrated by the Planetary Consortium and the Jovian Republic.

### 3.5.10 Life, death and morphs

While death is no longer a certainty for transhumanity, it remains a possibility. During the decade preceding the Fall, most of humanity was growing used to the idea that immortality was in their grasp. Then, in just a few short years, the TITANs wiped out more than ninety percent of us. Faced with the horror of so much needless death, efforts to insure the lives of surviving humans became a top priority. Now, the technology of immortality—uploading, cortical stacks, and other related wonders—is commonplace.

Today, most of the residents of the solar system have adjusted to this fact (except for the most extreme bioconservatives); everyone expects both to live forever and to have their friends, loved ones, and enemies do the same. While death is rare, though, it is still possible. Severe accidents can destroy someone's cortical stack as well as their brain, and egos can also be wiped away in punishment for sufficiently heinous crimes—though the process of execution is considerably more difficult than it had been a few decades earlier.

For most people (with the exception of those too poor to afford a new morph), non-permanent death is an annoyance equivalent to events that most people in the late 20th century regarded as moderate misfortunes, like a bad stomach flu or a broken arm. In almost all habitats, if anyone is responsible for someone's temporary death, either accidentally or on purpose, they are also responsible for paying for the person's resleeving in an identical morph, especially if that person does not have some form of resleeving insurance. People who have temporarily died can expect to receive visits from everyone they are at all close to after their resleeving, as well as a host of e-cards and perhaps a few gifts from their acquaintances and colleagues, all expressing sympathy at their death and welcoming them back to the world of the physically embodied. Exchanging such "life gifts" is an accepted part of belonging to many professions such as emergency service workers, where members regularly risk temporary death.

Deliberately choosing to change morphs or to temporarily become an infomorph is treated differently. People typically spend at least a day or two between deciding to change morphs and actually doing so. During this time, it is considered polite for someone to inform everyone they know well or work with about their upcoming resleeving. Along with personal visits, as well as calls and e-cards detailing the time of the upcoming event, the person who is resleeving is expected to include an image of what their new morph will look like, so people they know will be able to easily recognize them. However, it is considered gauche for someone who is upgrading to a better morph to include details about their new morph. Within a few days of resleeving, a "resleeving party" is typically held to introduce everyone they know to their new morph. Depending upon how well-off, well-known, and social the individual is, these parties range from lavish affairs held in hotel ballrooms to small intimate gatherings in the person's home.

Permanent death is treated very differently. Because it is both relatively rare and no longer expected, the old funerary rituals surrounding death have faded and new traditions have grown in their place. Since every death reminds many people of the billions who permanently died during the Fall, most of the few funerals that are held honor both the person who just died as well as the victims of the Fall.

### 3.5.11 Entertainment and media

A substantial amount of media survives the Fall of Earth, and a significant number of modern transhumans make their living creating new songs, stories, reports, or other media. All of this is easily and swiftly accessible through any basic implant, ecto, or (on very rare occasions) archaic handheld terminal. However, most of this media is not to the taste of any particular individual, and vast amounts of it are mediocre. As a result, most humans keep two layers of evaluation between them and anything they might consider exposing themselves to.

The first layer is based on popularity and critical reviews. Every piece of media has a rating, often weighted by the opinions of critics with high rep scores who comment on their virtues and faults. Specialized AIs also evaluate the responses of consumers, so individuals can use reviewers they trust or they can seek out media that is either widely or specifically popular in their particular demographic and subcultural niche.

The second filter layer is the individual's muse. Muses learn their owner's tastes and moods and automatically search out and recommend various sorts of media. Individuals can do everything from asking their muse to select something they will enjoy, to asking for a something that will challenge their opinions, to looking at all current events news that will be of interest to them. Muses use their understanding of their user's preferences, mixed with ratings and reviews, to make their decisions. Individuals can even set their muses to edit all media so that they better fit with the person's interests and preferences. In the most extreme cases, this process can twist and edit news so that it bears no relation to real events. This same process is used to make the characters and dialog in novels and vids more appealing. More commonly, the muses merely edit out aspects of a news story or article in which the individual is not interested.

Ratings, reviews, and muses allow individuals to avoid media overload, but they also reinforce subcultural barriers. A great many people only seek out media and news that reinforces their existing opinions and beliefs. Xenophobic individuals who distrust all non-humans, from uplifted octopi to the Factors, regularly view news stories and AR dramas about evil aliens and devious uplifted animals who commit heinous crimes. Similarly, individuals who are only interested in their own habitat have all external news altered by their muses so that it refers only to the effects outside events will have on their station.

In a very real sense, individuals from radically different subcultures and demographics inhabit completely different worlds. The one force that works against this separation is the fact that many people wish to follow the lives and opinions of those with the highest reputation scores. In many cases, a large portion of these individual's high rep scores comes from their interest in and willingness to interact with (or at least acknowledge) a wide variety of different sources of information. As a result, listening to opinions by a high-rep celebrity can expose people to information that they might never encounter otherwise. Also, in many habitats, AIs responsible for media distribution tag some news as being sufficiently important that it should be immune to filtering by muses.

This tagging is a regular and expected occurrence in some habitats, while in others it is reserved for only the most important and potentially life-saving information. Bypassing muses for any less important reason in these stations is considered a gross invasion of privacy or even a crime.

### 3.5.12 Lost lore

The accumulated knowledge and media of Earth, spanning the history of human intelligence, is a vast and impressive amount. Even before the Fall, many orbital settlements had acquired complete records of all previous human lore and creativity, including copies of every book, painting, song, film, TV program, console game, newspaper, and magazine article that had ever been translated into digital format, as well as backups of Earth's entire internet archives. Numerous destructive programs unleashed during the Fall corrupted much of this information, however, in some cases permanently wiping it from existence. This means that what remains of Earth's archived history and data is patchy and incomplete. Much survives, but some treasures have been lost. In particular, media from the era of the Fall itself is particularly hard to come by, given the consistent attacks the TITANs were making on information systems. Proprietary data that was withheld from the public domain behind electronic gates on Earth is even more likely to have been lost, except for a few hypercorps that managed to transfer their Earth-bound data off-world in time. Retrieving

lost data is a lucrative task for scavengers and archeologists, though looting the dangerous confines of Earth or derelict habitats destroyed during the Fall is a risky proposition.

### 3.5.13 Metacelebrities

As the culture industry quickly discovered, biotech and resleeving technology clashed with the media's ability to focus the spotlight on specific icons. When everyone can be bodysculpted, the beautiful people need to be more than glamorous faces. More to the point, the public's interest in celebs faltered when famous people repeatedly changed their looks and were no longer immediately recognizable.

One of the ways big entertainment has responded is to promote metacelebrities—icons based on characters rather than real people. Each metacelebrity has their own (very expensive) unique customized morph, but the person sleeved within that morph often changes. The actress Angelique Stardust, for example, once existed as a real person, but is now a character who has been played by over a dozen people since the original rose to stardom in AF 3 and promptly sold off her celebrity character rights to Experia. Likewise, award-winning heart-breaker Juan Nguyen is a constructed persona based entirely on the action hero star who died and was lost during the Fall. Many metacelebrities are modeled on fictional characters; notorious bad girl Sun Mi Hee is no different offscreen than the ass-kicking villain role that brought her to fame, never traveling anywhere without her iconic pair of glowering smart leopards. Actors taking on a metacelebrity role often undergo psychosurgery to better play the part.

Metaceleb personas are strictly managed and marketed as a media product to appeal to specific consumer groups. Though they play an active role within hyperelite circles, many of the genuine glitterati view them with humor at best, disdain at worst—though some have learned the hard way not to underestimate or mess with the small armies of media engineers behind each metaceleb's carefully crafted image.

### 3.5.14 Popular types of entertainment

The most popular forms of electronic entertainments are vids, vidgames, VR worlds, XP, and AR games.

#### Vids and vidgames

Vids are passive entertainments that can be enjoyed either as high-resolution audiovisual entertainment or as a fully immersive experience where the viewer can augment their experience with smell, touch, and taste while experiencing the point of view of one of the major characters. Viewing them purely via sight and sound is much like watching an old 20th-century film, except that it's interactive and in 3D. In contrast, full sensory viewing is much like actually being present in the story.

Most modern vids have variable theme and preference settings enabling viewers to adjust the content of what they are watching, including the level of violence, the amount and type of sexuality they prefer, as well as the appearances of some or all of the major characters. In addition, many vids have several alternate endings for people who prefer happy, bittersweet, or grim endings. As a result, two people watching the same vid could have very different experiences if they use radically different settings.

Vidgames are like vids, except they are much more flexible. In vidgames, the viewer not only experiences the story with the protagonist—they become the protagonist, shaping the story through their own actions, similar to sophisticated early-21st-century console games. Some games allow the participation of up to a dozen individuals or link thousands of players via the mesh, while others are designed for a single player.

The degree of freedom in vidgames varies. Some are almost fully interactive realms similar to many VR worlds with all but a few characters controlled by AIs, while others are considerably simpler and more limited, with player interaction limited to a few crucial decisions. The precise dividing line between vids and vidgames is blurry, but both media have the common trait of being designed for either solitary use or for use by a few players or viewers who are all located relatively near one another. Vids and vidgames are the most popular forms of entertainment, with vids and vidgames set on Earth before the Fall being especially prevalent.

### XP

Experience playback (XP) is a specialized type of vid that consists of the recorded sensory impressions of a single individual. Almost all of the inhabitants of the solar system lead relatively quiet and risk-averse lives and are naturally eager to be able to vividly experience adventures such as climbing Olympus Mons, spending a day in one of the most luxurious and exotic private habitats, going on a scavenging mission to Earth, or gatecrashing. There is also a thriving fringe market in less savory XPs, including records of people committing all manner of violent or dangerous crimes and XPs of actual gun battles between well-armed criminals and law enforcement personnel, which often end with the death of the morph providing the point of view.

Anyone with mesh inserts can create an XP of their past experiences, and anyone with an ecto or mesh inserts can access the sensory recordings. Selling a particularly exciting XP, such as a record of the first meeting with the Factors, can bring in a lot of money or rep. Most XPs consist of both sensory recordings and the surface thoughts of the individual who made them. Many people who access XPs are only interested in the sensory recordings and feel that having another person's recorded thoughts and emotions in their head is intrusive and uncomfortable. However, some hardcore XP aficionados feel that accessing the full XP, including the recorded emotions, makes the experience more immersive and real.

A significant minority of XP fans becomes fascinated with one or two daring people who regularly sell XPs, known as X-casters, viewing all of their clips, including both the experiences and the accompanying thoughts. Some of these XP fans become more interested in the person who recorded the clip than in the individual experiences, and they often come to believe that they have a special, clear understanding of this person, to the point where they strongly identify with this person or even fall in love with them. In addition, individuals who access XPs from a single person often enough sometimes begin to mimic various habits or figures of speech of this person. Particularly popular X-casters are sometimes rather disturbed when they see tens of thousands of people imitating one of their more idiosyncratic expressions or habits.

A few serious fans—known as Xers (pronounced "ex-ers")—alter their morphs to resemble their favorite X-caster. Some obsessive Xers actually attempt to contact and stalk certain X-casters, perhaps hoping to become part of an actual XP clip. In most habitats and subcultures, Xers are widely regarded as having particularly dull and meaningless lives. Hardcore Xers are often viewed as being insecure and potentially unstable.

### AR games

Augmented reality (AR) games involve players interacting both with events in the physical world and with augmented reality imagery that recasts the people and objects the players see. For example, instead of seeing another player in a splicer morph and ordinary clothing, a player of an AR game might see a horrific rotting zombie, a bizarre alien life form, or a well-armed soldier. These games tend to be locally focused within a particular habitat or city as they allow players to interact when they are within physical proximity, but some games link habitats within the same cultural region.

The nature and intensity of these games varies widely. Some are long-term games involving people imagining that they are deep cover spies or some other exciting and unique role. Players may pretend to be anything from time travelers attempting to prevent some horrible disaster to covert agents attempting to uncover plots by TITAN-infected people on their habitat—who happen to be camouflaged as snack designers, personal assistants, etc. During their daily lives, players exchange messages with each other as well as with the people running and maintaining the game. Some of these long-term AR games have gone on for many years, with the oldest being almost twenty years old.

Short-term AR games, on the other hand, last between several hours and several days. The people running these games typically rent out a hotel or a park and various public buildings for the duration. These games are almost always highly dramatic and consist of everything from the players having to deal with a massive zombie attack or alien invasion to them participating in some simulation of an event on Earth, like the storming of the Bastille during the French Revolution. While such AR games can be considerably less detailed than VR worlds or vidgames, many players value the "realism" of being physically present during the game.

Since participants in AR games take actions in the real world, including actions that could be disruptive or even dangerous, designers of AR games take great care to prevent problems. In some early AR games, most of which took place more than twenty years before the Fall, players were occasionally seriously injured. A few unscrupulous AR game designers used their game as a cover for an actual robbery or act of terrorism that was abetted by unwitting players who thought their actions were simply part of a game.

Since that time, law enforcement observation drones have kept careful track of people playing AR games. In almost all habitats, people running AR games must register their games with local law enforcement or face serious fines.

### VR worlds

Virtual reality (VR) worlds are entertainments that involve the creation of a large and highly immersive simulated environment—a simulspace—where many major characters are played by transhumans or other sentient beings. Unlike vids or vidgames, simulspaces are specifically designed for a large number of participants. VR worlds consist of everything from duplicates of various eras of Earth history to elaborate and strange fantasy worlds with magic, dragons, and similar wonders. All manner of alien worlds or settings based on oddities like time travel are also common. As is the case with vids, the most popular simulspaces are those set on Earth some time before the Fall.

VR worlds can have from dozens to tens of thousands of participants. For the best experience, many users prefer to access simulspaces through hardwired server connections as they offer better quality and less disruptions than accessing wirelessly via the mesh. Since people immersed in virtual reality are cut off from their bodies and often thrash around, most users ensconce their morphs in a tank or special couch for the duration. VR parlors typically offer private hardwired pods for participants to physically jack in. Many habitats also have hardwired systems used just for this purpose, so users can experience VR from the comfort of their own dwellings.

Due to distance and communication lags between habitats, even the most popular online simulspaces run each habitat as a separate realm, limiting interaction with users in other habitats/realms. The popularity of VR worlds like Gilded Empire, set in England in the 1880s, means that someone moving from one habitat or world to another could continue playing in the same game, albeit with a new set of players.

One of the other unusual features of VR settings is that a large number of infomorphs, including many infomorph refugees, play these games. As a result, while even most novice players can learn to easily tell the difference between a character played by an AI and one played by an actual person, there is no way to know if the person playing a character has a physical body or not.

### Physical entertainment

In addition to a vast array of electronic and electronically-mediated entertainments, people also still enjoy a wide variety of physical sports, ranging from soccer to new sports like low-g air races, where the participants strap on wings and engage in tests of speed and acrobatics. In addition, the ability to both heal any injury in a healing vat and to remove a cortical stack from a dead or dying body and place it in a new morph has given rise to a new variety of extreme sports. Starting a decade before the Fall, various individuals began realizing that, barring unlikely circumstances, they could not die unless they wanted to. This set off a brief trend in extreme sports and even a few wealthy suicide hobbyists, who repeatedly killed off their current morph in a variety of unusual ways. The Fall and the permanent death of more than ninety percent of humanity greatly reduced the interest in playing with death for many years. Killing yourself just to experience death is considered at least mildly distasteful, and many believe such actions belittle the mass deaths of the Fall. Though interest in risking death in the line of entertainment has been growing, deliberate suicide remains an eccentric and dubiously regarded hobby.

In some subcultures, dueling has been a popular fad for almost a decade. Swords, knives, and pistols firing single-shot soft lead bullets are all popular choices, because none of these weapons poses any threat to a cortical stack and most do not instantly kill someone hit by them. However, there are other more exotic options, including aerial duels with microlights fitted with blades on their wings. On rare occasions, duels

take place in space, with the participants wearing non-armored vacuum suits. Certain criminal groups make money with underground dueling circuits, pitting biomorphs against robots against uplifts. The seedier circuits engage in distasteful pit fights featuring illegally-acquired backups sleeved into non-sentient animals, often outfitted with lethal cybernetics. Such creatures are typically quite mad.

In addition, dangerous non-combative sports are also popular. The highest levels of competitive rock climbing on Mars are regularly done with no safety equipment. There are similar climbing competitions in many habitats using artificially constructed climbing walls as well as regular free-running competitions through almost every city and habitat. Also, there is an entire class of sports, including both diving and parachuting, where perfection of form is seen as a far more important goal than avoiding injury or even death. As a result, current high dive records for morphs not specially modified to survive high impacts are held by individuals who required either time in a healing vat or resleeving immediately after their successful breaking of a previous record.

## 3.6 Politics and power

Politics is just as important in the colonies spread throughout the solar system as it was back on Earth, but it is also radically different. Each habitat or cluster of stations is a separate political entity, and many of these habitats are fiercely independent. The only locations where large political entities can exist are on the marginally habitable worlds of Mars and Europa, and the population of Europa is significantly smaller than that of many of the largest pre-Fall cities on Earth.

### 3.6.1 The inner system

Though nations no longer exist, they have been replaced by new political-economic entities that may well have been on the road to dominance even if the Fall had not occurred: the hypercorps. While there are a many independent habitats and settlements in the inner system, it is largely dominated by the hypercorps. To reduce conflict between themselves and promote the survival of transhumanity, some of the hypercorps have formed an alliance known as the Planetary Consortium. This alliance governs most of Mars and is in charge of the ongoing Martian terraforming project. It also controls several dozen other habitats and many Lunar bases, mostly ones that are in some way involved with the massive Martian terraforming effort.

Since Mars is home to more than forty percent of the surviving transhuman population, most of the human population lives under the rule of the hypercorps or the Planetary Consortium. In the aftermath of the Fall, the hypercorps established three important goals: rebuilding the solar system, protecting themselves from any further attacks (either by the TITANs or any other threats), and growing in both wealth and power. By extension, the second goal means they also help protect the people living in the habitats and settlements against any repeat of the Fall. The hypercorps and the Planetary Consortium are exceedingly skilled at attaining all of these goals. Since popular rebellion and widespread dissent are not helpful in the least in attaining these goals, the hypercorps are also adept at making certain the inhabitants of the habitats and planetary settlements they control are safe, relatively content, and, ideally, unable to cause serious problems.

As the largest and most well organized entities in the solar system, the hypercorps, and especially the Planetary Consortium, are in an excellent position to protect the people living in their habitats and settlements. However, this protection comes at the price of freedom. Living in habitats that use transitional economies (p. 61), the inhabitants of hypercorp-controlled settlements are relatively well off and need not fear starvation or serious want. Also, the hypercorps strongly oppose bioconservatism, and so anyone who can afford various augmentations or morphs is free to obtain them, as long as none of these augmentations or morphs is equipped with weaponry that can be used to harm the habitat or large numbers of its inhabitants. In return for safety and relative prosperity, however, inhabitants give up any ability to voice more than token criticisms of the hypercorps of the Planetary Consortium.

**The power of the hypercorps and the planetary consortium**

The hypercorps and associated Planetary Consortium are the only major non-local political entities in the solar system (with the possible exception of the Autonomist Alliance, which is more of a mutual aid pact than a unified political entity). All of the other political entities are based in a single specific location. The various hypercorps transcend location, however. They have offices and branches all over the solar system, serving the needs of people from Pluto to Mercury and all places in between. While most hypercorps have large manufacturing and processing installations on Mercury or Venus, making use of the abundant energy of the first and the complex chemistry of the second, much of the work performed by all of the hypercorps involves developing new technologies and new cornucopia machine templates, both of which can be done in any place that has meshbrowsing access.

In addition to bases on Mercury, Venus, and other equally resource-rich locations, all hypercorps maintain dedicated research and manufacturing stations scattered throughout the solar system. Well-known facilities include Starware's vast shipyards, the largest of which are located on Luna and the asteroid Vesta, and Omnicor's huge antimatter factory orbiting Mercury. There are many other lesser-known facilities, including the automated mines that the mysterious Zrbny Group maintains in the main asteroid belt and Saturn's rings, and the qubit factory Nimbus maintains in Mars orbit.

In addition, there is an even larger number of secure and often secret research installations, some of which are so well hidden that they are normally only accessible via highly secure egocaster connections. All manner of mysterious and often highly dangerous research occurs in such locations, ranging from experiments with the relics of the TITANs to attempts to create self-replicating nanotechnology or artificial miniature black holes. Vids and vidgames are filled with stories both of exotic disasters in such research stations and of heroic thieves stealing amazing wonders from them. While the reality of secret corporate research bases is normally far more prosaic, sometimes wonders are created—and there have been occasional disasters, often involving TITAN relics.

Some corporate headquarters are similarly secure and secret, including the corporate headquarters of the fabled Zrbny Group. There are a wealth of rumors and stories about such locations. Intrepid spies, thieves, and reporters regularly attempt to gain access to these facilities, generally without success. Many such attempts, especially by would-be thieves and spies, end with distinctly negative consequences, including the thieves' temporary (and on some occasions permanent) death.

Hypercorps also own and manage a number of habitats. Many are primarily homes for hypercorp employees, but in many of them at least half of the population are simply ordinary residents of the solar system who simply happen to live there. Though far less regulated than hypercorp research or manufacturing facilities, these colonies are also subject to greater regulation and security than some of the autonomist-controlled habitats on the edges of the solar system.

These stations are exceptionally safe places to live. Residents have access to all of the latest products produced by the ruling hypercorp and its corporate allies. The hypercorp habitats all either possess their own security companies or have some form of defense contract with a private security company, typically Direct Action or Medusan Shield, who agree to protect the inhabitants against potential threats by agents of the TITANs, fanatical saboteurs, or other threats.

These same security forces also protect the hypercorps from any threats to their interests. In most of these habitats, residents have fairly open freedom of expression and biological self-determination. However, all potential threats to the hypercorp and its personnel, ranging from attempted sabotage to simple civil disobedience, are dealt with quite harshly, with serious offences resulting in forced indenture and occasionally forced mental editing (see Psychosurgery, p. 229). Almost all of these habitats use a transitional economy (p. 61) and most residents have a high standard of living to compensate for the limits on their behavior. Many inhabitants of the more independent colonies in the belt or the outer system complain about the repressive nature of the hypercorp-controlled habitats, but inhabitants of these habitats prefer the safety and security found there to the intimidating freedom of the outer system.

To help reduce dissent, residents of settlements and habitats controlled by the Planetary Consortium as well as those controlled by hypercorps can vote on a wide variety of issues. The results of these votes, however, are only binding on issues that are not considered "matters of habitat survival," "corporate policy," or

"security-related issues," which effectively includes any issue related to the security, profits, and productivity of the hypercorps involved. Votes on these issues are used in a purely advisory fashion, meaning that they are utterly ignored when the result of the vote is at odds with the hypercorps' agendas.

While residents of these settlements and habitats can vote about adding a new holiday to honor some important figure or the location and design of a new park, laws regulating indentures, habitat security, law-enforcement, or other important concerns remain under the control of the hypercorps. This does not mean, however, that the results of elections are completely disregarded. If more than two-thirds of the population strongly supports a particular issue, the Consortium or the hypercorp controlling the habitat usually finds ways to modify their current policies to address these concerns without harming their own interests. In contrast, if only a small number of residents are upset by certain policies, then these wishes are ignored and habitat security forces keep an eye out for possible civil disobedience or other forms of resistance.

In addition to these dedicated installations and hypercorp-controlled habitats, many hypercorps maintain offi ces in stations and planetary settlements. Almost every habitat has a Nimbus office with a farcaster and, in the case of larger habitats, QE communicator facilities for instantaneous communication. Both facilities are open to anyone who can pay Nimbus's fees. Ecologene, Skinaesthesia, and several other hypercorps also have offices on most habitats. Every habitat interested in interacting with the rest of transhumanity has at least one automated Experia media node. In smaller habitats, these offices are unobtrusive and managed by limited AIs or indentured infomorphs. The existence of these offices, however, is vitally necessary for the continued happiness and existence of transhumanity. Most hypercorps also maintain a number of employees in every large habitat and most of the smaller ones.

Due to the large number of remaining infomorph refugees, most Experia media nodes are managed by indentured infomorphs. These infomorphs monitor the local news-finding AIs and keeps track of any important or interesting developments. They also serve as on-site reporters for any important events that might occur. While postings in small habitats are often rather dull, the infomorph usually has a contract guaranteeing them a morph of their choice and resleeving in the habitat of their choice in return for a term of service, which typically ranges from three to five years.

Similarly, all but the smallest habitats have Medusan Shield or Direct Action offices, where individuals can hire both security consultants and bodyguards ranging from simple AIs to highly trained mercenaries in fully-equipped fury morphs. These mercenaries live on the station and often hire short-term contractors to help with especially large or difficult assignments. Skilled mercenaries may eventually be hired full-time by Medusan Shield or Direct Action, but since contractors are usually given the most dangerous and thankless parts of any assignment, many soon lose interest in hypercorp contract work.

Other employees working out of local hypercorp offices range from ecosystem designers to for-hire scientists and technicians to personal financial advisors to the wealthy and powerful. In important habitats and planetary settlements, as much as twenty percent of the population consists of hypercorp employees or private contractors who are hired on a short-term basis when the local workload exceeds the capacity of the regular staff. These hypercorp employees are in the unique position of having dual loyalties—to their habitat and to their hypercorp. Despite what hypercorp propaganda preaches, the two interests do not always overlap.

Because of the delays involved in normal communication, local heads of hypercorp offices usually have a great deal of autonomy, since asking for instructions from their superiors on another habitat or installation requires either dealing with a time-lag or using expensive qubits for instant QE communication. As a result, except for the most important or difficult problems, local directors deal with all local matters on their own, reporting any unusual or potentially problematic decisions afterwards.

### 3.6.2 The outer system

Out beyond the orbit of Mars, the influence of the hypercorps and the Planetary Consortium is far more limited. With the exception of the rigidly authoritarian Jovian Republic, the inhabitants of the outer system have considerably more freedom than those living in the inner system. However, even out here the struggle between the desire for freedom and the longing for safety form an important part of the political discourse.

### The libertarian and utopian legacies

Various forms of anarchism and similar libertarian ideologies were quite common among the first transhumans who settled space in the two decades before the Fall. Many settlements in the outer system have inherited this legacy of freedom. The new frontier opened by space colonization presented a fantastic opportunity for those with a strong desire to avoid the authoritarianism of the hypercorp-controlled inner system and Earth to pursue social organizations more based in equality and collective action, or even to simply experiment with new social models. Out beyond the belt, hypercorp influence was weak and preoccupied, giving resourceful colonists a chance to explore their interests unmolested. The more radical of these elements grew out of or maintained ties to progressive, radical, and left-wing social movements and insurgencies on Earth, drawing support where they could. Others simply stole hypercorp resources from the inner system, smuggling them to their secret projects. In a few cases, entire ships or stations mutinied, refusing corporate orders and pursuing their own path. It was rarely feasible for the hypercorps to pursue and punish such subversion.

Even among these libertines, differences existed, so that those adhering to similar socio-political tendencies tended to group together. Over time these have developed into four rough groupings: the anarchists of Locus, the techno-socialists of Titan, the anarchocapitalists and mutualists of Extropia, and the nomadic free-for-all societies of the individualist scum. These factions form a loose alliance, a united front against the hypercorps and Jovian Republic—or as they call it, the Jovian Junta—and a pact for mutual aid and support, known as the Autonomist Alliance.

Among the more libertine habitats, the centuriesold doctrine of "From each according to their ability, to each according to their need" is a living and vital philosophy. The ready availability of cornucopia machines ensures that no one wants, and the use of reputation systems encourages people to be active participants towards the common good. Equitable access to morphs and augmentations is also available for residents, though the demand from so many infomorphs in need of a body means that infugees must contribute and build up social capital. However, even for an infomorph, egocasting across the solar system is expensive, and the Planetary Consortium produces large amounts of propaganda about the dangers of these habitats to discourage infugees from considering escape.

Many autonomists consider themselves to be engaged in an ideological conflict with the inner system, a memetic cold war that sometimes extends to physical actions. Some willingly pursue campaigns of sabotage and subversion against hypercorp and other authoritarian affairs, such as smuggling cornucopia machines into habitats where such machines are strictly regulated, like among the Jovian Republic. The hypercorps and their allies occasionally strike back, though open conflict is rare. Even though the inner system and Jovian Republic could field enough military might to subdue the autonomist factions, an uneasy detente exists. Rumors abound that the anarchists have some sort of card in their pocket that keeps their opponents at bay, perhaps even some threat of mutually-assured destruction.

Concerns over security and potential future attacks by the TITANs also impact matters in the outer system, but most people resist attempts to seriously restrict their personal freedoms in any manner not directly related to maintaining their safety. Inhabitants of the outer system still remember how the old governments' demands of adherence to bioconservativism and allegiance to distant and often unresponsive leaders did nothing to prevent the Fall from happening, and that memory fuels their mistrust of those states. Those powers were undone by failing to deliver what they promised—when they could not provide the security that they claimed their authoritarian measures would bring, the seeds of their defeat in the outer system were planted.

### Space for experimentation

Both social and political experimentation are common in many of the smaller habitats of the outer system. Because collective decision-making is fairly easy in stations with populations of less than ten thousand, direct democracy is a common method of government. A number of ideologically-based habitats have used this ease of making collective decisions as a way to get all members to agree to some unusual forms of government.

The individual variants that have been tried are too numerous to list, though they generally fit into a few general categories. A few relatively small habitats employ limited forms of authoritarianism. Some have a single leader who has great power, but who is (ideally) kept from abuse or excess through the use of limits

such as a list of constitutionally-guaranteed rights or the ability of a relatively small number of people to call an election or a vote of confidence. Some colonies using this model have elected dictators who serve for a limited term, while others are ruled by a single charismatic leader who transforms their habitat into a cult of personality.

Other habitats choose their leaders by random lot, with every adult who can pass a relatively easy competency test being eligible to be the colony's leader for a period that usually ranges from six months to five years. A few habitats are governed by powerful specialized AIs, which in very few cases are actually hyper-intelligent AGIs or even seed AIs that the colony has secretly created. Several colonies populated by purely informorph or synthmorph inhabitants use special high-bandwidth connections to give their members access each other's surface thoughts and emotional reactions, allowing them to hold vast democratic political meetings where everyone present can feel the general emotional reactions of all of the other members as easily as they can feel their own.

There are a vast number of different types of government, many of which have never existed before, moving (and sometimes fumbling) ahead in the outer system. Some work far better than others, allowing successful colonies to thrive and making much of the outer system a vast and complex political laboratory.

## 3.7 Keeping the peace

Each habitat is responsible for dealing with its internal affairs. As a result, standards of justice vary widely from the oppressive police state of the Jovian Junta to the free market judicial courts of the Extropians in the belt to the community justice policies of the anarchists out beyond Saturn. Travelers are strongly encouraged to check up on the legalities and policies of stations they are visiting so as to avoid unfortunate incidents, though muses are generally quite good about maintaining awareness of local conditions so that they can warn their users before straying into gray or illegal territory.

In the inner system, standards of justice and law enforcement tend to be uniform and very familiar to the majority of the population that lived on Earth prior to the Fall, where most nations had relatively similar standards of justice. Across the entire solar system, certain similar standards can be found. Though local laws may differ, there is widespread respect for the idea that punishments for religious or ideologicallybased laws only apply to residents. Visitors who violate such restrictions or other minor laws are simply deported to their home and forbidden to return. Standards of evidence for criminal investigations are also common. Modern forensic technology makes collecting and analyzing DNA and other trace evidence an exceptionally swift and easy process. Likewise, with almost all habitats having what amounts to total surveillance of all public places, any potential offenses committed there can be carefully analyzed.

Standards of privacy vary widely from one habitat to another, so during emergencies or crime investigations, law enforcement officials may or may not have total access to detailed recordings of the events in any portion of the habitat including recordings from sensors in private dwellings. In some stations, law enforcement officials can compel everyone who might have been present during an alleged crime to provide downloads of their sensory experiences from the time of the crime. While individuals can edit their memories, discrepancies between various people's sensory recordings are just another form of evidence. Requiring sensory downloads from witnesses and suspects is common practice in habitats controlled by the Planetary Consortium, the Jovian Republic, and most hypercorps. However, in most habitats in the outer system, law enforcement officials have no access to such records and can only compel sensory recordings from people who have been charged with serious crimes.

The power of modern forensics is such that a sufficiently careful examination of people and places can often determine the nature of a crime and the perpetrator(s) with relative ease. Decisions of innocence or guilt rarely rely upon suppositions, circumstantial evidence, eyewitness testimony or any of the other notoriously unreliable forms of evidence common in past centuries. The best way for someone to avoid being convicted of a crime is to either prevent anyone from learning about the crime or to make certain that no one suspects them as the perpetrator. Once someone guilty of a crime becomes a suspect, there is a very significant chance that law enforcement officers will be able to uncover reliable evidence connecting them to the crime. However, if there is no obvious evidence connecting a specific suspect to a crime, the criminal has

a greater chance of escaping discovery.

### 3.7.1 Law enforcement

Law enforcement in the solar system consists of a vast patchwork of separate jurisdictions, occasionally united by various treaties. Most habitats have signed the Treaty of Uniform Security that requires either extradition or on-site trial of criminals who are accused of especially serious crimes such as attempted habitat destruction, use of incapacitating infoware (including basilisk hack attacks), or any attempt to aid the agents of the TITANs in taking over or destroying a habitat. Only the Jovian Junta and a few especially antisocial or anarchic habitats have not signed this treaty, but many habitats in the outer system maintain the right to try offenders accused by other habitats rather than extraditing them. In addition, most habitats require a significant amount of evidence before they are willing to extradite one of their residents.

Outside the Treaty of Uniform Security, there is nothing remotely resembling a uniform code of justice and no widely recognized police force. Instead, each habitat or cluster maintains their own code of laws and law enforcement officers. In most areas, law enforcement is a respected and honorable profession paid for by the government, but in a few, the only options are private security agencies that only protect individuals who subscribe to their services. Among the anarchists and scum, residents are largely responsible for their own protection, which means they may be constantly armed when in public (depending on local conditions). Depending on the stations, the most someone who is the victim of a crime can do may be to go after their attacker or post a bounty. In others, mechanisms exist for community or collective problem-solving that often involve assembling an ad-hoc grouping of peers to assess the situation, offer non-biased judgment, and sometimes pursue collective action.

The only widely-accepted law enforcement officers that attempt to maintain jurisdiction across the solar system are bonded investigators and security consultants from companies such as Medusan Shield or Direct Action. Both organizations have contracts with various hypercorps and inner system stations to provide security. However, in the outer system and in other regions not controlled (directly or indirectly) by the hypercorps, the status of these officers is far more tenuous. In habitats that do not have security contracts with their organization, the best these agents can do is act as bounty hunters.

Due to extensive stories of excesses in the inner system, many colonies frown on freelance bounty hunters—often referred to as ego hunters—and may ban them entirely. Others allow agents from licensed security hypercorps to act as ego hunters, but forbid them from extraditing or otherwise restraining or punishing the criminals they are pursuing. Instead, agents are required to turn over evidence so that the habitat's own judicial system may hold a trial, in which case a convicted person may be remanded to the agent's custody. Law enforcement officers experience similar difficulties attempting to apprehend a suspect who has fled to another habitat.

Closely allied habitats in the outer system usually allow full or at least limited legal powers to visiting law enforcement officers from their allies. There are also various small private security organizations that work closely with local law enforcement offices to provide inter-habitat security between habitats that are not closely allied. The members of these organizations attempt to maintain sufficiently high rep to earn the respect of all the habitats with which they work. They act as both bounty hunters and unbiased investigators in situations that involve the laws of several habitats. All of these security companies are located in the outer system, and none has jurisdiction extending beyond a relatively limited location, like the middle belt or the Saturn system. Any such organizations that attempt to grow larger come into direct competition with Medusan Shield and Direct Action and are subsequently either bought out or undercut and discredited by one or both of these organizations.

There are also several private bounty hunters and private investigators, some of whom are highly reliable. Others are known for their extreme moral and ethical flexibility, especially if the pay is sufficiently high. On some of the autonomist stations and scum ships, these private contractors can be hired to simply go on board and abduct or execute a resident as long as this person has a low enough rep. Attempting to abduct or kill a respected member of the community, however, rapidly earns the ire of the entire habitat. The various small-scale or private security organizations from the outer system can sometimes pursue subjects to habitats controlled by the various hypercorps or the Planetary Consortium. Doing so requires background

checks, security screenings, and often moderately large payments.

### 3.7.2 Punishment

Among the autonomist colonies, forced exile or repaying the victim with an equitable amount of goods or labor are the principle punishments for all but the most heinous crimes (such as attempted mass murder, habitat destruction, attempting to create seed AIs or similarly extreme actions). In the collectivist anarchist habitats, antisocial behavior typically involves expulsion or penalizing reputation, though solutions that involve making amends are often pursued over standard punishments. At the other end of the spectrum, people convicted of more serious crimes in the most violent and lawless habitats are executed and all of their known backups destroyed. In many others, exceedingly serious crimes are usually dealt with by giving the criminal a choice of forced uploading into a humanely outfitted but closed computer or mandatory personality modification—assuming that someone has not simply killed the criminal before they were brought to justice (such killings are generally treated as matters of self-defense). Mandatory personality modifications are generally limited to the absolute minimum necessary to prevent the individual from repeating similar crimes.

At the other extreme, punishments in hypercorpcontrolled habitats and settlements controlled by the Planetary Consortium range from fines paid in either money or labor to periods of involuntary indentured servitude ranging from several months to many years. Violent crimes, especially ones threatening either important hypercorp employees or the habitat as a whole, also result in mandatory personality modification. Such modifications often include the creation of a strong sense of loyalty and obedience to the hypercorp.

Punishments are even more draconic in the Jovian Republic, where permanent execution and the destruction of all backups is the most common punishment for serious crimes against the leaders or large groups of the populace. Since the rulers of the Republic are strong bioconservatives, personality editing and forced uploading are rarely used. Forced indenture is very common, however, as are more standard forms of imprisonment. The Republic is one of the last places in the solar system that has physical prisons.

The vast majority of other habitats fall somewhere between these extremes. Punishments for non-violent crimes consist of enforced repayment, where the offender must work off a debt to their victim or victims or face more serious punishments. Instead of enforced indenture, offenders usually must only work between five and twenty hours a week for their victims and only need to do so until the crime has been suitably repaid. The typical repayment is between two and three times the value of the good or service taken from the victim.

## 3.8 The economy

Leaving aside the struggles of bands of primitives to survive on the ruins of Earth, all of humanity has at least some access to the wonders of nanotechnology. This access is highly variable and the economic benefits it produces can be divided into three broad categories—the old economy, the transitional economy, and the new economy.

### 3.8.1 The old economy

The old economy is essentially the same sort of industrial consumer capitalism that has been in place since the late 19th century, a system centered on manufacturers who create material goods and sell them to consumers. Modern manufacturers now make their goods in cornucopia machines instead of factories, but the essential pattern is the same one that has existed for over two hundred years. Due to the high level of inefficiency and unfairness in this economic system, poverty is relatively common. The poorest individuals often face hunger, homelessness, lack of medical care, and similarly dire problems.

Ordinary members of this society never have direct access to cornucopia machines. Instead, they purchase their goods from corporations, governments, or wealthy individuals who control them. Some old economy societies have planned economies, where the corporations or the state determine what options the citizens may choose or occasionally what goods they must have. Others claim to have a free market, where citizens have more options, but the residents must still pay to obtain goods that are essentially free for the corporations or government to produce.

In the present day, almost no one willingly lives in old economy societies. Very few individuals even visit such societies. The oppressive Jovian Republic holds most of the remaining old economy societies in the solar system. The few other surviving examples are totalitarian regimes where the wealthy elite maintain absolute control of all cornucopia machines and private ownership of one is a very serious crime. Since cornucopia machines can be used to create more cornucopia machines, maintaining strict control over them requires constant vigilance.

Residents of old economy societies tend to look at residents of transitional and new economy societies with envy, while residents of habitats that use both transitional and new economies look upon residents of old economy habitats with a mixture of horror and pity. Since the Fall, almost a third of the remaining old economy-based habitats have transformed into transitional or new economies by various means, often involving violent revolution. Most social scientists predict that unless there are further catastrophes, all but the most repressive old economy societies are almost certain to transform to transitional economies within twenty to thirty years.

Old economy societies are unique in that money is the society's only acceptable means of exchange. While reputation networks exist, they are informal and serve as an unsanctioned means of exchanging favors.

### 3.8.2 The transitional economy

The transitional economy is a far more stable and easily maintained system than the old economy. Transitional economies blend old and new economies, and habitats using this system feature both private ownership of cornucopia machines as well as public fabbers and makers that are freely accessible. These public machines are strictly limited in the goods they can produce. In addition, the raw materials for various complex goods are also strictly regulated. Mars, Venus, and Luna are all examples of transitional economies, as is most of the rest of the inner system.

For the inhabitants of a transitional economy, creating food, non-smart clothing, furniture, and most other simple, non-formatible objects is a trivial matter. However, the public nanofabrication machines can only create objects that either contain no electronics at all or contain only simple circuits that report on the object's condition and location. Manufacturing any of these items requires little more than the machine and a supply of carbon, hydrogen, oxygen, nitrogen, silicon, iron, aluminum, and tiny amounts of various trace materials. All of these materials are sufficiently abundant that acquiring them is easy and inexpensive.

Using the elements that are freely available to all tax-paying citizens, nanofabbers can produce a vast array of goods like exquisite suits of silk clothing, tables with the appearance of finely polished ebony and mahogany, beautiful colored glass goblets, or painted porcelain tea cups. They can also create a gourmet dinner and a set of fine plates and cutlery on which to eat the meal. To pay for the small amounts of energy and resources needed to create these goods, all inhabitants pay a small tax.

Once the usage tax has been paid, food, clothing, furniture, and similar goods are all free. Raw materials, old, worn-out or unwanted goods, and various waste products are recycled into new goods. Residents of transitional economies need never experience hunger or any of the many other sorts of deprivation that much of humanity faced before the mid-21st century. Additionally, basic medical care is free in almost all transitional economy societies, to help insure that the populace is healthy, content, and productive.

While many goods are freely available, there are also goods that residents must purchase from corporations, their government, or other producers. Smart clothing and smart furniture that can change shape, color, and pattern, depending upon the user's wishes, cannot be manufactured in any of the personal nanofabricators. Any goods made from highly durable composite materials, batteries, electrically-powered devices including all augmentations, and all nanotechnology must be acquired in the same fashion. These goods are considerably less common as they require access to an unrestricted nanofabricator and exotic raw materials.

Transitional economies tend to be relatively safe places, since inhabitants cannot manufacture weapons more dangerous than knives, clubs, or similar primitive armaments. Everything from firearms to plasma weapons requires restricted cornucopia machines and exotic materials to manufacture. The proliferation of these items is strictly controlled.

Some habitats in the outer system have transitional economies because residents prefer the safety that comes from centralizing control of potentially dangerous technologies. Other habitats have transitional

economies by default, because they have limited stocks of many of the more rare elements required for manufacturing various complex modern technologies. Regardless of the reason, outsiders from new economy habitants often see them as somewhat poor and deprived, while many residents of transitional economies consider new economy societies both exceptionally wealthy and somewhat frightening.

Despite these differences in perception, both economic societies have a great deal in common. Food, clothing, and similar goods are easily available to all residents. An individual's status, taste, wealth, and reputation are measured by the kinds of clothing, food, and furnishings they possess. While there are a vast number of templates for different styles of food and consumer goods, forward-thinking designers develop new designs every month and use copy protection on these designs to keep them from being pirated for at least a month or two (and often longer). As a result, for the first few months after their release, the only people who can gain access to new designs in clothing, tableware, food, or similar goods are those who pay a premium to the designer to download the templates that allow their cornucopia machine to manufacture the item.

Since one way of defining a transitional economy is a system where both reputation and money are in widespread use, most have developed ways to accommodate both forms of payment. While residents primarily use money for purchasing goods, purchasing cornucopia machine templates involves rep, especially among residents who regularly visit new economy societies or have significant contacts there.

### 3.8.3 The new economy

Slightly less than forty percent of the human population lives under some version of what social scientists refer to as the new economy. In the outer system, alternative economies are becoming increasingly rare. New economies are much better than old or transitional economies at supporting a decentralized populace, which has led to more than half of all habitats and settlements adopting this model.

In new economy societies, individuals can freely manufacture and use almost anything they want, assuming they can acquire the correct templates and raw materials. As a result, the residents' need for food, clothing, medical care, information access, and other basic needs are all easily met. However, there are still items of value that individuals work very hard to obtain. Though these are commonly described as "post scarcity" societies, some types of scarcity remain very real.

In most new economy habitats, common goods are freely available to all residents—or at least to all residents who meet certain criteria. These criteria usually take one of two forms: citizenship or public works. In wealthy and prestigious habitats, free access to all common goods is offered to residents who have official citizenship. Citizenship can be earned in a variety of ways, but the most common involves either being considered a strategic asset due to some singular expertise, performing an exceedingly valuable service to the habitat, or working for the habitat for some period of time. Once an individual is a citizen, the energy, living space, and raw materials they use in the course of their daily lives are all freely available.

In many collectivized habitats, residents are expected to pull their weight by contributing to ongoing public works in the habitat, typically requiring between four and eight hours every week. Depending on the nature of the colony, this work may be selected by the government, the collective syndicates that oversee the management of resources, or by a high rep individual who controls access to large amounts of energy and raw materials. Unless someone has especially valuable skills, this labor is often dull but safe work that can be done more easily by humans than AIs, such as checking the habitat for flaws and performing maintenance tasks.

Assuming an individual has acquired citizenship or put in their share of work for the collective wellbeing of the station, they will have access to a supply of energy and raw materials that allows them to use their cornucopia machines to manufacture what they need. Visitors are generally also allowed access, though anyone staying long is expected to contribute to the habitat if they don't want to see their reputation slashed.

#### Restricting dangerous technologies

Most societies in Eclipse Phase see good reason to restrict access to some dangerous goods, especially military hardware. Few people living in a sealed habitat surrounded by hard vacuum enjoy the idea of

easy access to biowar plagues or devices that can make large holes in their habitat's outer hull. Though such incidents are quite rare, the memories of horrors like the recent BransonVesta disaster are still quite fresh. In that incident, a radical bioconservative cult manufactured several plasma bombs and accidentally destroyed the entire habitat when their attack on the local government caused a cascading blowout, cracking the spinning habitat in half. More than 50,000 residents had to be resleeved, and 400 permanently died when their backups and cortical stacks were destroyed in the explosions. As a result, standard procedure is to restrict access and heavily encrypt templates needed to create military-grade weapons and similar dangers, though sufficiently dedicated individuals can eventually decrypt or reverse-engineer such designs. Even nanofabricators in anarchist habitats may be blocked from creating such things or at the very least will alert the local public mesh if anyone instructs them to do so. Habitats that possess almost no other laws regarding possession of various objects and devices usually have laws against weapons that can do serious harm to the habitat. Many dangerous technologies are specifically designed to make use of various exceptionally rare or human-made elements, including radioactive elements and artificially created transuranic elements. Therefore, many habitats will restrict access to these elements to limit the manufacture of these weapons. Since detecting radioactive elements is simple using standard environmental sensors located throughout every habitat, security authorities can easily learn when someone has acquired significant quantities of such elements, or catch them if they attempt to bring them on board.

### Value and scarcity in new economy societies

While basic citizenship allowances cover most necessities and even some luxuries, the allowance has limits. With the allowance, individuals receive a quota of goods and energy they can use every day. This usage is impressively lavish by 20th century terms, allowing residents to create a dozen suits of clothing and provide food for half a dozen people every day. Creating elaborate food, furniture, and tableware to serve a party of a dozen people is within the means of any individual. However, doing the same thing for a party of two hundred people is outside the bounds of the basic allowance.

Individuals who wish to exceed their basic citizenship allowance can either use rep to obtain more access to resources and energy, or they can pool their resources with others to accomplish their goals. There are many goods that are fairly complex to create—including many of the best morphs and highly specialized and intricate pieces of gear like advanced augmentations—that exceed the resources available in a basic citizenship allowance.

The allowance also limits the amount of travel that residents can easily undertake. Residents of most new economy habitats own good quality spacesuits, and many can use their rep to create a small and very minimally equipped travel pod to travel to a nearby habitat. However, even the smallest actual spacecraft are far too large and difficult to create to be available on an ordinary citizenship allowance, or even on the amount of rep an ordinary individual can acquire in a reasonable amount of time.

In addition to large-scale uses of resources and difficult-to-manufacture goods, there are goods that are intrinsically scarce, such as relics of Earth and handmade goods. While exact copies of everything from the Mona Lisa to a pressed daisy are exceptionally easy to acquire, genuine physical relics of Earth are prized possessions. The vast majority of refugees could take nothing with them, but almost everyone wishes to have some token to remind them of Earth. A single dried flower, coin, or piece of stone from Earth can be exchanged for almost any morph or other good that is moderately difficult to create. Actual historical artifacts, like a famous person's hat or autograph, is worth far more, as are original works of art by famous artists. Two years ago, one of the last three remaining paintings by Leonardo da Vinci was traded for a large and well-equipped spacecraft, and a small piece of the Liberty Bell was traded for both a custom-designed morph and a fully outfitted onehectare villa in one of the more prosperous habitats orbiting Saturn.

While less expensive than Earth relics, handmade goods also command a high price and are in great demand by the wealthy. Though most people cannot distinguish between a fine wine grown on one of the Martian vineyards and a duplicate of the same wine produced using an average cornucopia machine, some connoisseurs claim they can taste the difference. There is also much prestige to be gained by serving hand-grown food. As a result, while anyone can drink nanofabricated wine, hand-produced wine is a rare good that can only be enjoyed by a few, and thus it commands a moderately high price. In almost all cases,

handmade goods are expensive because of their rarity and because many people enjoy the status associated with owning and using them.

There are three other items that are scarce and are thus quite valuable: living space, skilled sentient labor, and novelty. The majority of humanity lives in standard-sized dwelling units, which typically range from one hundred cubic meters on smaller or poorer

habitats to two hundred cubic meters on wealthy and prosperous habitats. Since each cubic meter of a habitat must be manufactured and the process of manufacturing or expanding a habitat is far from simple, space is at a premium. The only exceptions to this scarcity are on Europa and Mars, which can be inhabited by properly adapted morphs without the necessity of complex life support or the danger of vacuum waiting just outside every exterior wall. As a result, owning a larger dwelling space in a habitat is worth a significant amount, and large villas and private asteroids are luxuries possessed by only the highest rep individuals.

While transhuman labor has become relatively cheap due to the large number of infugees who must sell their services or indenture themselves to obtain morphs and habitat space, skilled labor is far more expensive. Buying a unique custom morph design, for example, crafted by a skilled biogeneticist, can cost as much as a small spacecraft depending on how much this morph deviates from standard models. The same is true for everything from custom-designed clothing to complex pieces of technology designed for a single specific usage. While the actual manufacturing costs of these items is no more expensive than any other similar item, the time and effort needed to design them can make them exceedingly expensive.

The final commodity that is both scarce and valuable is novelty. While anyone can drink a fine wine or wear a wide range of designer clothing, other commodities are kept deliberately scarce. Cuttingedge fashion, new music, and even haute nosh (bold, exclusive snack food designs) are harder to find because the templates needed to manufacture them are encrypted and cannot be copied. The copy protection used on the templates for newly created goods automatically expires within three years at most, and most habitats reduce this to one year. In addition, this copy protection is never perfect; someone always manages to create pirated versions of these new goods within two to six months. However, from the time templates are created until the time that someone pirates them, these items are only available to individuals who are willing and able to pay for them. Popular new templates command a good price in the new economy, and a large number of transhumans make their living designing and marketing such templates.

### Irredporducible goods

In an age when digital material is easily copied and physical goods are reproducible with nanofabrication, concepts like copyright, trademark, and intellectual property are fighting a losing war. Despite the best methods of encryption, DRM, and similar anti-piracy measures, very little escapes the clutches of pirates for long. It's not unheard of for copies/blueprints of new goods to be shared on pirate networks before they're even officially released.

In response, some manufacturers, designers, and artists attempt to produce goods that are irreproducible—and thus more highly valued. Possible approaches include transgenic living sculptures with built-in obsolescence and terminator genes, energy art, items made from extremely rare materials (e.g., a chair crafted from titanium mined from the Mead crater on the harsh Venusian surface), or intangibles such as skilled performances.

### The economy and infomorph refugees

During the last phase of The Fall and the evacuation of Earth, more than four hundred million refugees were uploaded and egocast to orbital databanks. From there, infomorph refugees were beamed to databanks throughout the solar system. They were forced to flee Earth without any of their possessions, even their bodies. Instead, they became infomorphs who had nothing beyond their minds and memories—the most destitute group of refugees ever to exist in human history. In the years since the Fall, large numbers of these infugees have been resleeved. Anyone with valuable skills was first to gain a morph, followed by anyone with friends or relatives already living in orbit who could take responsibility for the person's resleeving.

Those two groups accounted for only half of the refugees. The remaining found themselves in a far more difficult situation. Lacking either personal contacts or vital skills, they had no one else to help them. In the first few years, many of these infugees signed contracts promising their labor or other services in return for resleeving and a guarantee of some form of income sufficient to support them. Because of the critical labor shortages in the first five years after the Fall, another thirty percent of the refugees managed to regain bodies (usually cheap synthmorphs). These indentured servants performed all manner of critical tasks, ranging from scavenging ruined habitats for useful devices to mining or asteroid herding. Others became servants or bodyguards for the rich, or performed less moral services for criminal syndicates. Most took on orbital construction jobs, helping to construct the new habitats that would eventually become their home. Some infugees found work performing services like data-mining, monitoring automated factories, or other jobs that could be done by infomorphs. After the Fall, infomorphs were used to take over numerous tasks previously handled by AGIs, who were no longer trusted.

Unfortunately, some infomorph refugees made bad or unlucky deals and ended up working for years only to find that their employer either kept finding ways to delay or reduce the payment or vanished before they delivered on their promise. As a result, slightly more than twenty percent of the original infomorph refugees remain infomorphs; some by choice, but most because they have not been able to acquire the means to resleeve themselves or are still working long contracts to gain their morph. The problem with obtaining bodies for these infugees goes beyond simply providing a new morph for resleeving; living beings require living space as well as a steady supply of consumables. For this reason, many infugees have been morphed in synthetic shells and housed in areas inhospitable to biomorphs, such as the unenclosed portions of Venusian aerostats. With space in short supply, the waiting list for infugees looking for a habitat to call home is quite long.

Both the hypercorps and the Planetary Consortium were quick to make use of this vast labor pool, especially on Mars. Mars has large amounts of open space and resources and is sufficiently close to habitable that Mars-adapted morphs like the ruster are inexpensive to create. As a result, the Planetary Consortium has been responsible for the employment of almost half of all remaining infomorph refugees. For the past decade, the vast majority of infomorph refugees who want bodies have found that indenturing themselves to the Planetary Consortium or one of the associated hypercorps involved in Martian terraforming is the most reliable way to find both a morph and housing, since both are guaranteed at the end of the contract. The work involved is particularly difficult, however, and the contracts are normally quite long. The Planetary Consortium is also particularly adept at adding charges that prolong indenture—though most indentures carry five to twenty year contracts, in reality these indentures typically last between eight and twenty-five years; some go on even longer. This large population of indentured servants on Mars—many of them now free and resleeved—is becoming a force in its own right, adhering to the Martian wilds and rural areas and disdaining the elite hypercorp domes. Adopting the name Barsoomians from an old Earth fiction series, this resentful lower class is increasingly becoming a thorn in the Planetary Consortium's side.

Even though it is highly automated, terraforming and agricultural work on Mars is both tedious and physically demanding labor. Indentured employees are regularly sent into the regions that were most affected by the Fall. As a result, these employees occasionally face attacks by life forms mutated by the TITANs, nanotech war-swarms, or similar still-active and dangerous exotic technologies. Indentured employees are not charged for damage to or destruction of their morphs caused by such dangers, but the experience of even reversible death from such causes is highly traumatic.

Other refugees found that they enjoyed life as infomorphs, reveling in complex simulspaces and otherwise living up the virtual life. Some found work that paid for the ability to egocast throughout the solar system. Ten years after the Fall, there is a thriving infomorph culture. While exact data is difficult to obtain, many researchers believe that at least a third of all current infomorph refugees have no plans to place themselves into a morph, instead enjoying the freedom of virtual existence. Especially in the outer system, these infomorphs have become increasingly involved in habitat politics; many habitats have officials who are infomorphs. Most researchers predict this infomorph culture will increasingly diverge from physical cultures as time progresses.

**The clanking masses**

With so many infugees acquiring cheap synthmorph shells—particularly cases and synths—and being unable to afford anything better, synthmorphs have become associated with poverty throughout the solar system. This lowest strata of the poor are often referred to as "the clanking masses," and compose one-sixth of the transhuman population. Most of these people strongly desire to acquire a biomorph, even if it is only a splicer or worker pod. As a result of their presence, however, many synthmorphs are now viewed with distaste, especially in elite social circles. Even those who have expensive, lovely, custom-designed synthetic morphs fitted with all of the latest augmentations are considered to be eccentrics with poor taste.

The social stigma against synthmorphs is strengthened by the fear that, in the event of another attack by the TITANs, their robotic shells could be rapidly co-opted to become a deadly TITAN-controlled army. This has led to some habitats going so far as to actively segregate their synthmorph populations, rationalized by the fact that synthmorphs can easily inhabit unheated and unpressurized portions of various habitats. This segregation and social stigma, however, has produced the beginnings of an emergent synthmorph culture. There are already numerous habitats where all of the inhabitants are sleeved in synthetic shells and conventional life support exists only for the few visitors wearing biomorphs.

## 3.9 Habitats

With Earth now uninhabitable, transhumanity survives in a variety of off-world habitats. There are two major types of these habitats: settlements on planets or large moons, such as those on Luna, Mars, Venus, Europa, or Titan, and space habitats that are built on or near an asteroid or other useful source of raw materials. Most of these space habitats spin themselves to provide gravity, with Earth and Mars gravity being the two most common choices. There are also a large number of zero-g or microgravity habitats, consisting of either non-spinning habitats or stations built into small asteroids or moons.

### 3.9.1 Planetary settlements

The Martian and Lunar city-states and other planetary settlements contain environments most familiar to refugees from Earth. This similarity is one reason that two-thirds of all infomorph refugees live on Mars, Luna, or Titan. The exact type of settlements depends on the planet or moon on which they are located, with some being far more similar to Earth cities than others. Most Lunar settlements, like those on Ganymede, Mercury, Titan, and Callisto, consist of a network of subsurface tunnels and chambers excavated with plasma drills. These tunnel settlements differ slightly from one world to the next. In most of these tunnel cities, the floors of all open areas and many dwellings are composed of geneticallymodified grass designed for both comfort and durability, with light panels covering the ceiling providing bright full-spectrum lighting.

A few of these buried cities further enhance their natural appearance with the addition of trees and, in some cases, specially engineered ecosystems, in both public areas and private dwellings. A few of these urban tunnel forests and jungles are home to numerous flowering vines and bright tropical butterflies. In a small number of settlements on both Titan and Luna, colonies of small monkeys and parrots with metabolisms and habits modified for modern ideas of cleanliness and sanitation thrive, giving some of these tunnel cities the feel of a buried jungle.

All of the older or more prosperous tunnel cities also contain large open areas that are typically between one and twenty hectares, with ceilings at least ten meters high. Some are parks, others are public plazas, but all offer the residents of the tunnel cities a chance to experience open spaces. Also, with the exception of Mercury, all of these tunnel cities are on moons where gravity is no more than one-sixth of a g. Some of these open spaces are constructed with roofs between thirty and one hundred meters high and are designed so that residents can use them for flying by strapping on a pair of specially-designed wings.

The cloud cities of Venus are among the most unusual habitats in the solar system. Their exotic nature is enhanced by the chance to observe the many recently introduced floating and flying life forms modified to live in the clouds. Though located almost fifty kilometers above the most deadly environment in the solar

system, life in these cloud cities is among the most Earth-like anywhere in the solar system, with gravity, temperatures, and atmospheric pressure all being very near normal Earth levels.

By contrast, the settlements on Mars look the most like the cities of lost Earth, built on the surface rather than underground or in the skies. Some of the more recent settlements are designed for use by inhabitants in ruster morphs or synthmorphs and feature no life support. Older Martian cities and other settlements are typically covered with low domes of flexible polycarbonate and filled with a completely breathable, if somewhat low pressure, atmosphere. Some, however, are collections of sealed skyscrapers, connected by skywalks and tunnels. If current terraforming efforts continue on schedule, the last sealed Martian cities will be opened to a Martian atmosphere breathable by all morphs within sixty years.

The most unusual planetary settlements are the ocean cities of Europa. These are among the most exotic locations in the entire solar system and are quite disorienting for individuals not used to underwater cities. From a distance, most appear to be complex Christmas tree ornaments hanging down one hundred meters or more below the ice crust above. A few are built deeper, plunging under the icy surface near the various hydrothermal vents that host the native Europan life clusters.

Many of the residents of the Europan cities find them familiar because they previously lived in one of the underwater cities on Earth and so were used to both the conditions and to living in an aquatic-adapted body. Europan cities all contain sealed buildings with normal atmosphere, both because some activities work best in air instead of water and because the cities often host visitors without gills. However, these regions make up only ten percent or so of most of these cities. The remainder looks vaguely similar to many zero-g habitats, except that the structures are considerably sturdier and are located underwater. Buildings are designed to be accessible in all three dimensions, so going from one floor to another usually involves swimming out a large opening in the wall and down a level. In almost all of these aquatic cities, large fusion generators heat the surrounding water, so that the entire city exists in a region of water that is far warmer than the surrounding frigid Europan sea.

### 3.9.2 Space habitats

With the exception of the private habitats of the wealthy and powerful described below, the vast majority of space habitats hold between twenty-five hundred and one million inhabitants. Almost two-thirds of these habitats were built during the first seven years after the Fall, when huge portions of the system's surviving infrastructure were used to create habitats suitable for hundreds of millions of infugees.

During this era, several thousand torus habitats and cluster colonies were created throughout the solar system. Many of these habitats were created by automated mining machinery that had been repurposed to create colonies. Due to the limitations of these automated mining rigs, most these habitats were small, holding between one thousand and one hundred thousand inhabitants. Twenty percent of the system's inhabitants live in such habitats. During the past decade, various small organizations, cults, and subcultures have left the larger habitats they lived in and created their own small habitats, few of which were designed to hold more than ten thousand residents.

The development of the new nanotech Hamilton cylinders has lead to a new interest in large habitats and in habitats that can easily expand in size to accommodate an increasing population. The expense and difficulty involved in expanding existing habitats or building new ones is one of the principle reasons that more than forty million infomorph refugees still do not posses morphs. Although none of the existing Hamilton cylinders has finished growing, they are both highly regarded by their residents. This same technology is also likely to produce a low-cost method for creating small habitats, where the creators merely need to seed an asteroid with the appropriate advanced nanotech generators and wait a few months.

### 3.9.3 Scum barges

At the opposite extreme from the Hamilton cylinders are the infamous scum barges. Most are spacecraft built before or during the Fall that were used to help with the early stages of the evacuation, ferrying people away from the doomed Earth. Many of these refugee ships were unable to find anywhere to unload their human cargo, becoming a sort of permanent traveling refugee camp, sometimes succumbing to mutinies.

They eventually joined up with pre-existing scum ships and swarms, adopting their nomadic, freewheeling, anarchistic lifestyle. In contrast to egocasting or the faster and more efficient fusion drive ships, so-called scum barges offer a floating city alternative to space travel. These ships function as roving black markets and carnivals of the bizarre—lawless zones where anyone can find whatever they want or need for the right rep or price.

Most scum barges have fusion-powered plasma drives and hold between two hundred and five thousand inhabitants. The worst barges are exceptionally overcrowded, with aging life-support systems struggling to maintain a breathable (but still foul-smelling) atmosphere under the strain of too many passengers. The larger and more prosperous scum barges are often fitted with various modern conveniences, including large cornucopia machines and vast stores of pirated manufacturing templates. Some are thriving utopianist enclaves, while others are mobile dens of smugglers and thieves that would have been destroyed long ago except for the fact that large and powerful organizations find their existence occasionally useful. Living conditions on the scum barges range from overcrowded refugee camps to thriving, egalitarian, but non-wealthy anarchist enclaves, to relatively modern habitats outfitted in barbaric splendor by highly successful organized crime gangs.

### 3.9.4 A diversity of floating worlds

The use of cornucopia machines and smart materials means that the interiors of all but the poorest and most destitute habitats can be reshaped according to the whims of their inhabitants. When the number of inhabitants is small enough or their aesthetics are uniform enough to all share the same tastes, the results can be both unique and strange. Large-scale fads occasionally sweep through even the largest and most cosmopolitan habitats, making some of the bigger colonies almost as odd.

Several habitats closely resemble terrestrial jungles, with an entire rainforest canopy growing from the slowly rotating outer shell and all dwellings and pieces of high technology nestled in the branches or hollows of these vast gene-engineered trees. In these living marvels, genetically engineered monkeys, iguanas, and tree sloths wander amidst the inhabitants—some of these creatures are wild animals, while others are controlled by AI servitors and act as maintenance or observation drones. Some habitats resemble other scenes from old Earth, including more than a dozen water-filled habitats hosting some of the aquatic inhabitants of the now-destroyed underwater cities. In most of these marine habitats, the actual buildings are either placed amidst a living coral reef filled with fish and other creatures or are actually built into the coral reef itself. There are many other habitats duplicating other environments, such as Afrique—a large Cole habitat with a population of two hundred thousand, where the habitat is made to resemble the African savanna. In Afrique, the two ends of the habitat are shaped into snowcapped mountains, and the inhabitants mostly live in several large cities built in the savannah.

While nostalgia for Earth is a powerful force in habitat design, there are many other options. A few exotic habitats resemble fantastic cities from various vidgames or older forms of entertainment, including a handful of small and eccentric habitats where the inhabitants all appear as strange humanoid alien beings. In many, the inhabitants have cosmetically modified themselves to fit in with the setting.

One of the most common differences between small and large habitats is that the residents of smaller stations often share a common ideology or sense of aesthetics, and so are far more eccentric. Some of the more unusual habitats range from dimly lit, spooky landscapes filled with perpetually leafless trees, thick, continually regenerating cobwebs, and other similar macabre touches to gleaming colonies that are shining citadels of quartz and steel. Some are huge interconnected arcologies where any sort of personal privacy is rare, while in others every family or even every person has a separate dwelling that is rarely seen by outsiders. Since the populations of these stations are relatively small and the vast majority are not major economic centers, travel to and from these smaller habitats is infrequent, which further increases their insularity and idiosyncrasies.

### 3.9.5 The largest habitats

Extropia, the huge Martian city-states, and some of the largest Lunar stations hold between one million and twenty million inhabitants. There are many smaller settlements containing between one hundred thousand and one million residents. These habitats are considerably less idiosyncratic and exotic than the smaller habitats. Almost all contain a cosmopolitan and diverse population from a wide variety of subcultures. Because of this diversity and the difficulty of forming any sort of consensus with a large population, these settlements tend to be reminiscent of the cities of Earth. All of them have their own unique character and feel, but the differences between one habitat and another are rarely overwhelming. In addition, all of these stations are large enough to hold offices for all of the major hypercorps, who further promote uniformity by providing the same services from identical hypercorp offices. Since most of these habitats are major centers of commerce, travel between them is frequent, so there are various facilities for travelers such as hotels and sports clubs that help reduce the disorientation of travel by offering identical experiences, regardless of their location.

### 3.9.6 Microgravity habitats

Zero-g habitats are very different from those that use rotational gravity. Most consist of networks of tunnels drilled through the asteroids—similar to the tunnel cities of Luna and Titan—but some are considerably more exotic. Like most other habitats, almost all microgravity colonies are built in, on, or next to one or more asteroids containing a large amount of useful raw materials. They typically feature a gravity less than 0.01 g that has very little effect on the daily lives of the inhabitants. Near-weightless environments allow for some interesting and unusual habitat designs as there is no up or down, enabling the creation of structures that would be too fragile even in low gravity. The habitats of Nova York (p. 97) and Nguyen's Compact (p. 103) are both examples of this, among many others.

### 3.9.7 Private habitats

The most rare and exotic of all of the types of habitats are the luxurious private ones owned by exceedingly wealthy or high rep individuals. Most private habitats are small but still give each of the residents several thousand cubic meters of personal space.

A typical private habitat is either a cylinder one hundred fifty meters in diameter (the minimum necessary to produce Mars gravity at a rate of rotation slow enough to avoid problems in all morphs) and between fifty and two hundred meters long, or a zero-g sphere one hundred to two hundred meters in diameter. These habitats are always tethered to a small collection of raw materials, consisting of chunks of silicate, nickel-iron, and water-containing carboniferous asteroids with a mass equal to at least that of the habitat. The majority of private habitats are inhabited by between half a dozen and three dozen morphs, some or most of which may be AI servants or, on rare occasions, indentured servants. Life in a private habitat is exceptionally lavish. Almost every surface is made of formatible smart materials and there are several large generalpurpose cornucopia machines available for the use of every resident.

By using these nanofabricators and the smart materials to their fullest, residents can completely change the interior of the habitat in only a day or two—transforming a sterile and crystalline array of shining metal and glass buildings into a thriving forest, inhabited by a variety of wild animals. The mesh is filled with vids and XPs about the lives of the most famous residents of the solar system. Almost everyone has seen the interior of one of these vast space mansions many times, though only a tiny percentage of the inhabitants of the solar system will ever have a chance to actually visit such a location. Many gatecrashers, scavengers who travel to Earth, and others who engage in similarly daring endeavors hope to be able to obtain information or objects sufficiently valuable to allow them to retire to their own private habitat.

## 3.10 Factions

One would have thought a cataclysmic event such as the Fall would bring the surviving elements of transhumanity closer together, jointly dedicating themselves to the repopulation of the solar system and continued prosperity. Instead, the remoteness and physical isolation of transhuman colonies and habitats stretched across the solar system, as well as the effects emerging technologies have had on transhuman economies and social lives, have promoted the evolution of a wide spectrum of philosophies, agendas, and political models.

### 3.10.1 The hypercorps

To some economists, the Fall and the numerous crises that predated it on Earth can be viewed as an extinction event, the end of the line for the massive transnational megacorp dinosaurs, financial giants that supported their monolithic frameworks on outdated economic models and industrial technologies. The hypercorps are their evolutionary descendants: slimmer, faster, meaner, and more flexible, eagerly embracing the possibilities of new technologies and never afraid to toss the old aside to take advantage of the new. It was the hypercorps that drove humanity's expansion into space and who continue to push the technological envelope, guiding transhumanity towards new horizons—always with profit as their driving goal.

Most hypercorps are decentralized, non-assetbased legal entities. Complete automation, advanced robotics, morph technology, and cornucopia machines allow the hypercorps to abstain from mass employment for labor or production services. The need for physical labor has mostly been reduced to tasks associated with habitat construction or deep space mining. Infomorphs and AIs are heavily employed (or more accurately, owned) as drone operators or virtual workers, and many administrative tasks are performed online via augmented reality, virtual private networks, and simulspace nodes. Some hypercorps are in fact entirely "virtual," with no physical assets and each employee acting as a mobile office. A few major hypercorps literally consist of only a dozen transhuman personnel. Though some hypercorps are massive and diversified, most specialize in particular fields or services. This results in both an intricate system of partnerships to develop, produce, and market products and services and a large-scale tendency to internally contract special services from other hypercorps. Many hypercorps also pool their resources and talent into cooperative research initiatives, project centers, or shared habitats.

Most hypercorps are traditional capitalist in outlook, though many have adopted alternative business philosophies and management models. This might include basing decisions on internal forecast market trends, groupthink consensus models, or ditching management entirely in favor of staff polling/voting initiatives that statistically fare better. A few are anarcho-capitalist companies originating from Extropian enclaves, though these often suffer from a bias when making deals with inner system powers.

The solar system boasts thousands of hypercorps; a few of the more prominent and interesting are noted below.

#### Cognite

**Major Industries:** Cognitive Science, Mental Implants, Psychosurgery, Nootropics

**Major Stations:** Thought (Venus orbit), Phobos (Mars moon)

A pioneer in the field of cognitive science, Cognite (pronounced cog-neet) drives forward the cutting edge of research into understanding the transhuman mind. Most well-known for their mental augmentations and the original menton morph design, Cognite also specializes in psychosurgery and nootropics. Their elitist and aloof image was not aided by their scandalous involvement with the projects to raise accelerated growth children that became known as the Lost generation (p. 233), nor rumors that they engage in research involving TITAN-influenced incapacitating input attacks. Nevertheless they remain a key member in the Planetary Consortium.

> **Psiclone**
> To: Proxy-99
> From: ¡Encrypted¿

I'm enclosing some data I recently acquired from an inside source regarding a so-called "Project Psiclone"— some type of black budget research initiative pursued by Cognite, possibly with involvement from other Planetary Consortium interests. Their work seems to focus strongly on the Watts-Macleod strain of the Exsurgent virus—with some alarming results.

### Comet Express (COMEX)

**Major Industries:** Courier Services, Shipping,Logistics

**Major Stations:** Nectar (Luna), Olympus (Mars)

Comet Express specializes in delivery services, interstellar logistics, supply chains, and shipping. They maintain a presence on almost every transhuman habitat in the solar system, often via local subcontractors. Despite the wonders of nanofabrication, many resources must still be imported. ComEx focuses on managing supply and trade routes and making sure physical shipments reach their destinations. For that purpose, ComEx maintains orbital hubs equipped with slingshot accelerators at strategic waypoints throughout the system and a fleet of cargo vessels and courier drones. For reasons unknown to the public, ComEx is viewed with hostility by the Jovian Republic, who have standing orders to shoot down ComEx vessels.

### Direct Action

**Major Industries:** Security Services, Military Contracting

**Major Stations:** Hexagon (Earth-Luna L5)

Descended from the remnants of several pre-Fall national military forces and private military contractors, this hypercorp made a name for itself in the period immediately following the Fall, where they helped manage refugee populations among various habitats and vessels while shattering any sign of unrest immediately and with full force. Direct Action today is known for its highly-efficient shock troops and superior combat morphs, providing security and public police services to self-governing habitats or hypercorp installations. Shifting political alliances between habitat clusters, corporate rivalry, and the constant fear of TITAN agents cater to Direct Action's paranoia-inducing marketing. The corporation maintains several habitats as physical training facilities and armament depots.

### Ecologene

**Major Industries:** Environmental Systems, Genetics

**Major Stations:** McClintock (Mars orbit)

Ecologene specializes in living systems, environmental genetics (with a specialty in insects), smart animals, bio-architecture, and environmental nanotech. They design and maintain the ecosystems inside numerous habitats and tunnel colonies. One of Ecologene's notable projects is building and maintaining a massive genetics archive of all life forms, though this endeavor was nearly crippled by the Fall. For unknown reasons, Ecologene seems to be favored by the Factors. Some speculate that Ecologene has some sort of blackmail material in hand, while others believe Ecologene is trading away transhumanity's genetic secrets in exchange for a few xeno-tech gifts.

### Exotech

**Major Industries:** Uploading, AIs, Electronics, Software

**Major Stations:** Starwell (Main Belt)

Often regarded as the personal technocratic pulpit of the infamous media mogul Morgan Sterling, Exotech emerged from the Fall almost unscathed, any significant losses absorbed by corporate assets in peripheral market segments, while ruthlessly buying out troubled competitors or think tanks unable to adapt to the transitioning economy. Nowadays, Exotech remains a predominant designer of high-end electronics, AIs, and mesh presence software systems. ExoTech also continues to pursue an uncompromising progressive agenda with its research in mind emulation, uploading, and resleeving, as well as infomorph ego simulation. Rumors persist that ExoTech continues to carry out research and even production of AGIs.

### Experia

**Major Industries:** Media (AR, VR, XP), News, Entertainment, Memetics

**Major Stations:** Elysium (Mars)

Living up to its name, Experia dominates the solar system's news, media, and entertainment market segments, generating controversy not only with its publicly expressed pro-AI stance or inviting an AGI to its board of directors, but also by proficient use of hyperviral marketing and sophisticated XP-programming. Another core segment is the production of educational XP and infomorph or AI tutors, some of the latter regularly ascending to pop-culture icon status. Experia is the Planetary Consortium's prime authority on designing and deploying customized viral memes, developed to counter anything posing a threat to the Consortium's interests. The corp has automated nodes and VR centers on many habitats throughout the solar system, and it contracts thousands of freelance lifeloggers as live, roving, citizen journalistas. Claims by some infomorphs that Experia has illegally subjected indentured infomorphs to never-ending simulation experiments for forecasting and intelligence analysis purposes remain unsubstantiated.

### Fa Jing

**Major Industries:** Mining, Energy, Biotech, Industrial Manufacturing

**Major Stations:** New Dazhai (Mars)

The industrial giant Fa Jing is a powerhouse in the mining and energy production markets and also boasts a remarkable presence in the fields of biotech and industrial equipment manufacturing. The former megacorp has quickly adapted to the new economic environments and reputation-based systems, thanks partly to its dedication to network building and sharing social responsibility, epitomized in concepts like dàtóng and guanxi. Often considered insular and close-minded, its internal communal and protective mindset is a strong contrast to its manipulating and monopolist business attitude. Fa Jing is engaged in mining operations throughout the asteroid belt and the Trojans and maintains significant corporate assets on Mars.

> **War crimes**
> To: Meshleaks Newswire
> From: ¡mesh ID does not exist¿
> You asked for it: verifiable evidence proving Direct Action's war crimes during the Fall ¡link failure¿. Go ahead, take it public. The Planetary Consortium elites will find you, kill you, and erase your backups. Go ahead. Test them.

### Gatekeeper Corporation

**Major Industries:** Gatecrashing, Research, XP Media, Exoplanet Colonization

**Major Stations:** Gateway (Pandora)

Initially born from the merger of several scientific institutions and their corporate financiers, this hypercorp made a name for itself overnight when it announced the successful decoding of the wormhole gateway discovered on Saturn's moon Pandora. Under the leadership of the eccentric but charismatic xenoarcheologist Xander Rabin, the consortium funds gatecrasher explorations through the Pandora gate, paying a small share of the revenue to the explorers but otherwise retaining all-encompassing rights on any discoveries made—as well as the marketing and distribution of the highly popular gatecrasher XP recordings. Aside from scheduled explorations, the consortium offers high-risk gatecrasher scouting and discovery trips for the bold or desperate, selected through a random lottery system.

### Go-Nin Group

**Major Industries:** Banking, Agritech, Robotics, and Services

**Major Stations:** Tsukomo (Luna)

Considered a relic of Earth's capitalist market economy, the Go-nin Group is a traditional Japanese keiretsu, a conglomerate of companies with interwoven relationships and shareholdings, horizontally integrated across several industries (and sometimes vertically-integrated within a business sector as well), and

centered around the long-lived Tamahashi enterprise consultancy firm. Tamahashi evolved from an influential corporate lobby to a diversified bank holding major equity in the group's partners; it now controls the group's assets and directs the partnership's overall business strategy. Through its member corps, the Go-nin Group has a sizable presence throughout the entire system and—without dominating a specific industry—own significant market share in fields such as banking, agritech, robotics, and services. Any difficulties in adapting to evolving economic models due to its rigid structure are compensated by unscrupulous exploitative behavior and a bottom-line attitude, earning the group the reputation as the most ruthless hypercorp of the inner system. Go-nin currently controls a Pandora Gate on Eris (p. 109), secured by a contingent of ultimate mercenaries.

### Gorgon Defense Systems

**Major Industries:** Miltech, Security, Military Contracting

**Major Stations:** Extropia

Gorgon is one of the most significant Extropian success stories. Based out of the anarcho-capitalist freehold, Gorgon has become a major name in the design and manufacture of weapons, vehicles, sensors, and other defense technologies. Their product range includes personal weapon systems, spacecraft armaments, and habitat defense systems. While prominent in the inner system, Gorgon is also one of the main arms suppliers to autonomist and brinker stations. Their subsidiary Medusan Shield offers private security services in direct competition to Direct Action. While DirAct is known for its expertly trained soldiers, Medusan Shield is known for their elite cadre of highly trained and aesthetically enhanced female combat morphs. It is suspected that several prominent assassinations have been the work of agents contracted through Medusan Shield.

### Nimbus

**Major Industries:** Electronics, Mesh Systems, Farcasting, Communications

**Major Stations:** Octavia (Venus)

Nimbus produces key components for mesh infrastructure, from spime microradio and sensor systems to ectos, servers, and laser links. Nimbus also dominates the network of farcaster links throughout the system, due to several breakthroughs in this technology (some claim that Nimbus purchased these advances from the Factors). Rumors that Nimbus controls a secret Pandora Gate or that they engage in illicit ego-smuggling (or even that they are secretly transferring stolen egos to experimental exoplanet colonies) regularly circulate through the mesh, but remain unconfirmed.

### Omnicor

**Major Industries:** Nanofabrication, Chemicals, Energy, Anti-Matter

**Major Stations:** Monolith-3 (Mercury), Feynman (Luna)

A descendant of the pre-Fall megacorporate giant Monolith Industries, Omnicor specializes in the fields of nanotech design and fabrication, chemical refining, alternative fuel, and antimatter research. Omnicor managed to secure research-oriented key assets from its twin rival Starware in a violent conflict during the Fall, leading to an ongoing enmity that might be better termed a corporate war. Despite its progressive technological outlook, Omnicor retains a conservative corporate structure with strict internal regulations and controls as a defense against Starware's repeated infiltration and sabotage attempts. Among the hypercorp's major assets are an antimatter research facility orbiting Mercury.

> **Union busting**
> To: OmniSec Alpha
> From: OmniSec 837302
> Surveillance has confirmed it. The bio-sleeved workers at our secure Didenko facility are indeed communicating with outside autonomist interests and discussing militant free union organizing tactics and even a wildcat strike. Their primary complaints concern the 30-hour workdays

and mandatory drug regimens enforced to keep the staff at our required levels of productivity. We recommend the immediate insertion of a counterinsurgency squad and implementation of standard union-busting protocols, including but not limited to loyalty testing, chemical pacification, tactical psychosurgery, selective excision of leadership nodes, memetic counterstrikes, and replacing the workforce with modified backups. The entire op eration will take place using a purported mission to root out a Starware infiltration as cover.

**Pathfinder**

**Major Industries:** Exoplanet Colonization, Mining, Research

**Major Stations:** Ma'adim Vallis (Mars)

Pathfinder is one of the first hypercorps to dive into galactic expansion, claiming new territories beyond the Pandora gates and establishing numerous colonies. Taking advantage of desperate infugees and gatecrashers, Pathfinder offers transportation to an exoplanet and a new morph in exchange for indentured labor. The corp has established several off-world mining and resource exploitation projects, much to the chagrin of preservationists. Though Pathfinder has but a small presence in the solar system, it is a frequent target of eco-terrorist attacks.

**Prosperity Group**

**Major Industries:** Agriculture, Aquaculture, Pharmaceuticals

**Major Stations:** Ceres, Lu Xing (Mars)

The Prosperity Group ascended into the hypercorp ranks before the Fall, meeting the high demand many new stations had for microgravity agritech, aquaculture, hydroponics, and other sources of food. Expanding into pharmaceuticals as well, Prosperity is considered the lead supplier for the poor man's food and drugs. Their cultured faux-meats and proteinenriched nutrition additives are in high demand. This corp earned some sympathy when it lost an entire habitat to some sort of resurgent TITAN outbreak a few years after the Fall, though some have suggested this was just a cover story to hide an unfortunate accident resulting from experimental drug testing on an unwitting populace.

**Skinaethesia**

**Major Industries:** Genetics, Cloning, Biotech

**Major Stations:** Ptah (Mars)

As the leading designer of biomorphs, Skinaethesia enjoys system wide popularity and respect for its sophisticated products, especially high-end customized models. Best known for its breakthroughs in genetic engineering and enhancements, the hypercorp's interest in sophisticated combat morphs or stylized pleasure pods are lesser known facts and often sold through a network of seemingly unaffiliated shell corporations or local distributors. Skinaesthesia focuses on emphasizing environmental adaptations and useful cybernetic enhancements, increasing transhumanity's chances for survival and further prosperity. Experimental morphs are sometimes offered to desperate infugees for field testing.

**Skinthetic**

**Major Industries:** Genetics, Cloning, Biotech

**Major Stations:** Extropia

Skinthetic is also a lead designer of morphs, but with a much sleazier reputation and not just because of their anarcho-capitalist roots. Specializing in extensive and often radical bio-modifications, the hypercorp pushes the envelope in exotic pod and biomorph designs under the mantle of morphological freedom. Bioconservatives have condemned the corporation's business practices and ethics and have even leveled accusations that Skinthetic is experimenting with xenogenetic materials acquired from the Factors. Skinthetic's cavalier attitude actually makes them popular in many parts of the outer system, and they are know as the biotech corp to go to if you want something weird.

**Solaris**

**Major Industries:** Banking, Insurance, Investments, Futures Markets, Info Brokerage

**Major Stations:** None

Solaris is the solar system's leading banking and financial investment hypercorp, dealing in insurances, info-brokerage, and high-risk investments on cultural and social experimental speculation. A member of the Planetary Consortium, Solaris advises many habitats on regulating their transitional economies. Solaris has no offices or physical assets; each banker is a mobile virtual office. Solaris is rumored to maintain a secret base where the corporation runs simulations on the development of the entire solar system's macro-economy, constantly adjusting its own strategies based on the dynamics of this big blueprint. Fueling these rumors, Solaris is known to hire "independent consultants" to tip the balance in politically or economically profitable high-risk investments.

**Somatek**

**Major Industries:** Uplifts, Pharming, Pharmaceuticals, Genetics

**Major Stations:** Clever Hands (Luna)

Somatek is a leader in the art and science of uplifting animal species, pioneering several major brea throughs in cognitive enhancement and genetic modification. The hypercorp also engages in extensive animal pharming—producing and extracting pharmaceuticals from transgenic critters—and markets numerous products and services related to smart animals and chimerical creatures. Despite the educational and training programs it offers to uplifts and the fact that much of its workforce consists of uplifts, Somatek is controversial among mercurials who disapprove of their methods (which often involve strict controls on uplift reproduction), the lack of input uplifts are given in their modifications and development, and the focus on anthropocentric mind-sets "enforced" on uplifts.)

> **SOLARCHIVE SEARCH: ZBRNY LIMITED + CONSPIRACY**
>
> The secretive Zbrny Group is the center of many recurring conspiracy theories and horror tales. Though varying in detail and plausibility, most rumors claim that an outside attack on the former Eastern European hypercorp's asteroid mining and processing stations caused a major blackout and complete shut-down of life support systems over an extended period of time. Depending on the source, the attack itself is claimed to have been caused by the TITANs or a powerful underworld syndicate CEO Krystof Zbrny was indebted to. Barely acknowledging the system failures, Zbrny headquarters ordered all non-affected stations to be abandoned, the personnel either laid off or transferred to the affected stations. Since then, no one has seen or communicated with any employees of the mysterious hypercorp—negotiations with outsiders are conducted exclusively via a spokesperson AGI. To this day, Zbrny drones continue to mine asteroids for minerals and ores, supplying the company's processing stations. According to rumors, an attempt by brinker pirates to board a Zrbny outpost resulted in the station's self-destruction. The company's AI-piloted massive bulk freighters are notoriously non-responsive, earning them the nickname "zombie ships."

**Starware**

**Major Industries:** Robotics, Aerospace Engineering, Habitat Construction

**Major Stations:** Korolev Shipyards (Luna), Vesta (Belt)

Another remnant of the pre-Fall megacorp Monolith Industries (like Omnicor), Starware is a leading manufacturer of robotics, spacecraft fusion drives, satellites, and entire pre-fab habitats. Despite its financial success and resources, Starware's ongoing blood feud with Omnicor denies both corporations full membership privileges on the Planetary Consortium. Starware makes heavy use of AI workers in robotic shells, having suffered a few too many labor disputes with disgruntled Lunar workers. In fact Starware grows increasingly unpopular with its Lunar neighbors, and has been forced to bring in extra security due to frequent sabotage attempts. Recent negotiations with the Factors have spurred theories that Starware might be acquiring Factor aid for building a lighthugger starship.

#### Stellar Intelligence

**Major Industries:** Intelligence, Data Mining, Info Brokerage, Espionage

**Major Stations:** Memory Hole Torus (Martian Trojans)

Born from the ashes of the UN-governed Terran Intelligence Cooperative (TIC), its surviving personnel and assets were collectively uploaded during the Fall and quickly regrouped under the name Stellar Intelligence. Emerging as a virtual collective, most of Stellar's employees remain loyal to the corporation and its director, the reclusive infomorph known as Syme. Stellar offers an impressive array of intelligence services, including data mining, analyst think tanks, retroquantification (bringing old secrets/data to light), memetic mapping, and more. Its services also extend to surveillance, data theft, espionage, media manipulation, and infiltration. The hypercorp's specialty is pre-empting civil insurgencies and preventing political memes and movements from destabilizing a habitat's or sector's regime. Criticized by civil rights movements and especially anarchists, Stellar is known to embed programmed infomorph agents into the local population of any oppressive regime that will pay their price. While many view Stellar as the brainwashing and secret police arm of the Planetary Consortium, the hypercorp offers its services to almost any other faction or individual.

#### Terragenesis

**Major Industries:** Terraforming, Ecosystem Management, Environmental Data

**Major Stations:** Caldwell (Vulcanoids), Ashoka (Mars), Elegua (Earth orbit)

Built from the remains of several pre-Fall South African and Southeast Asian corporations who engaged in geo-engineering projects and sought to relieve Earth's ecological crises, TerraGenesis's expertise is in developing sustainable biospheres and eco-systems via aggressive industrialized terraforming. TerraGenesis is different in that it is a worker-owned cooperative, with workplace councils in local offices and an elected cooperative congress handling management. It maintains several habitats on Mars and a small number of research stations in orbit around Earth, collecting data for simulations of Earth revitalization projects. The latter initiative is strongly supported—and possibly financed—by prominent reclaimers. TerraGenesis's work on Mars, however, is often targeted by preservationist saboteurs. Thanks to their possession of the Vulcanoid Pandora Gate (p. 88), the cooperative has a growing presence on various exoplanets that are ripe for terraforming or geoengineering.

### 3.10.2 Political blocs

Transhumanity's social, cultural, and ideological diversity, combined with its scattered and isolated presence in habitat clusters throughout the solar system, gives rise to a wide range of political memes and factions advocating equally diverse organizational models. Many of these have banded together into larger political entities to further mutual goals and act in cooperative self-interest.

#### Jovian Republic

**Memes:** Bioconservatism, Fascism, Security

**Main Stations:** Liberty (Ganymede)

Exploiting the chaos of the Fall, a group of stations and habitats were seized in a military coup and the Jovian Republic was born. Combining terrestrial South American dictatorship with U.S. American political lobbyism, this regime quickly brought the entire Jovian military-industrial complex under its control.

Widely referred to as the Jovian Junta by the rest of the outer system, the Republic's authorities hold a strict bioconservative stance against many transhuman scientific and technological developments. Exploiting fears engendered by the Fall, the Republic restricts access to sophisticated technologies such as nanofabrication, cloning, forking, and even uploading, and is one of the few old economies left in the system. Public communication channels are subjected to extensive censorship and travel privileges are extremely limited. Both uplifts and AGIs are strictly forbidden and treated as property without civil rights. Diplomatic relations to progressive factions remain cold; heavily-modified transhuman emissaries or visitors are viewed

with suspicion at best, or simply denied access. Despite continuous reports of heinous acts of government oppression, the Republic's intimidating military assets keep any other factions from intervening.

### Lunar-Lagrange Alliance

**Memes:** Reclaiming Earth

**Main Stations:** Erato (Luna), Remembrance (Earth orbit)

This small cluster of habitats stationed around Earth's Lagrange points and on or in orbit around Luna formed an alliance of necessity, rather than joint political or social agendas or cultural roots. In fact, individual stations are quite diverse and sometimes polarized, as many of them cling to old Earth cultural and national identities. Due to their relative proximity, members share basic resources and services and have signed mutual assistance agreements in case of an emergency.

Before the Fall, many of these habitats were considered some of the most infl uential off-Earth bases. Since the Fall and the subsequent rise of the Planetary Consortium, however, the Lunar-Lagrange Alliance has become a second-rate diminished power, and is often viewed as conservative, old-fashioned, and too caught up in romanticizing the past. LunarLagrange Alliance stations maintain simmering tensions and an ongoing rivalry with the Planetary Consortium, particularly those PC colonies on/over Luna and the Lagrange points. One main source of contention is the quarantine of Earth, as the LunarLagrange Alliance is a stronghold for the reclaimer movement. The Lunar-Lagrange Alliance does, however, benefit from hypercorp support of its own, particularly the Go-nin Group, Starware, and the influential Lunar banking consortiums.

In addition to scientific research stations, mineral processing and refinery stations make up the majority of the Alliance's habitats, dependent on the Lunar mining and water extraction industries. These stations took the brunt of the refugee influx during the Fall. Many remain overcrowded with strained resources, large masses of impoverished workers, and thriving criminal syndicates.

### Morningstar Constallation

**Memes:** Venusian Sovereignty

**Main Stations:** Octavia

The system's newest political bloc, the Morningstar Constellation is an alliance of aerostat habitats floating in Venus's upper atmosphere. Formed after a recent series of joint vetoes from the major aerostats against hypercorp governance initiatives intended to limit aerostat self-governance, the Constellation's joint political statement and agenda are still being discussed. While the Planetary Consortium views the formation of this new power bloc with bemused resentment, the Barsoomians on Mars and the outer system autonomists view the Venusians as free-thinking reformists rather than anti-hypercorp radicals. The population reportedly enjoys great liberties in morph and enhancement technologies together with freedom of expression of social and political ideas. The population of Octavia has emerged as the Constellation's designated voice.

> **Inner system politics**
>
> [Incoming Message. Source: Anonymous]
>
> [Public Key Decryption Complete]
>
> It's easy for Firewall agents to get caught between the agendas and maneuvers of rival factions. The Lunar-Lagrange Alliance resembles the power of old, a shadow of transhumanity's former glory. On and above Mars—transhumanity's new home world—the Planetary Consortium is the dominant usurper, the hypercorps ruling from behind the curtain while portraying themselves as the only bulwark between transhumanity and the dark between the stars. The Morningstar Constellation has the potential to become the new and future power bloc, but only if they get their act together before the Planetary Constellation starts sending Stellar Intelligence agents to destabilize them.

**Planetary Consortium**

**Memes:** Cyberdemocracy, Hypercapitalism, Eugenics, Security, Expansion

**Main Stations:** Progress (Mars orbit)

Hypercorp Council Members: Cognite, Direct Action, Experia, Fa Jing, Olympus Infrastructure Authority, Pathfinder, Prosperity Group, Solaris, Stellar Intelligence, plus a dozen others.

Evolved from an alliance of hypercorporate interests into transhumanity's most powerful body politic, the Planetary Consortium today controls several habitat clusters throughout the inner system, primarily in and around Mars, Luna, and Earth orbit. The impressive space station Progress is the official seat of government and has become the symbol of the Consortium's influence and power, even though few congress or council meets take place in the flesh.

The Consortium applies basic democratic principles supported by a real time voting system for all registered citizens. The congress and executive bodies feature a rotating cast of hyperelite politicos, gerontocrats, socialites, and even media icons. It's a known fact that despite this political façade of a democratic republic, the members of the hypercorporate council are the true powers behind the Consortium. These hypercorps are major proponents of the transitional economy, the interdiction of Earth, and expansion beyond the gates.

Aside from economic interests, the Consortium advocates the imperative of eugenics as social responsibility and for transhumanity to reclaim its former strength and prosperity—a campaign sometimes accused of euphemizing discrimination against unmodified humans, indentured infomorphs, and the clanking masses.

**Tharsis League**

**League Members:** Ashoka, Elysium, Noctis-Quinjiao, Olympus, Valles-New Shanghai, plus over a dozen others.

**Memes:** Martian Nationalism

A loose coalition of the planet's major independent settlements, elected members form a committee representing the population in matters concerning or affecting the majority of its habitats and settlements. Prominent debates revolve around the scientific approach of the ongoing terraforming process as well as trade and taxation restrictions initiated by the Planetary Consortium and its member hypercorps. The League's committee is rarely united in its agenda and opinion, and tensions are increasingly on the rise. The cities with strong hypercorp ties are accused of dominating council affairs, manipulating matters behind the scenes, failing to do anything about the TITAN Quarantine Zone (p. 94), and selling out Martian interests to the hypercorps and the Planetary Consortium (of which many are also part). In response, the non-Consortium cities are condemned for advocating anti-hypercorp initiatives, passively blocking terraforming measures, and for maintaining ties to the Barsoomians—the Martian underclass resistance living in the desolate and unstable outskirts.

### 3.10.3 Autonomist Alliance

The outer system presented an opportunity for people who wanted to set up a way of doing things that was drastically different from the authoritarian politics and sham democracies of Earth and the inner system. Far from the reach of governments and hypercorps, this frontier was populated by political radicals, social dropouts, and people who just wanted to experiment or do their own thing. These initial habitats drew the interests of insurgents from Earth, scientists and technicians who didn't appreciate being on a corporate leash, indentured vacworkers who sought to escape their oppressive terms of service, and even criminals fleeing hypercorp justice or forcibly expelled from inner system habitats. Their ranks swelled with every act of inner system injustice, though life on the fringe was often harsh and deadly. Despite occasional hostilities with nation-state military units or hypercorp security, the expense of reining in these radicals and expats was too high. To some degree, their presence was useful to the powers-that-be.

Breakthroughs with nanofabrication brought these libertines and fringers the edge they needed to keep their autonomy over the long-term. Once cornucopia machines were widely available, anyone had the means to support and defend themselves without relying on outside or higher authorities. Already an outpost for open source and free culture activists who fought restrictions on ideas, media, and digital content, the outer

system became a haven for sharing nanofab designs and circumventing the controls the hypercorps attempted to place on their software and other digital goods.

During the Fall, many outer system habitats opened their doors to refugees from Earth. Distance and the high cost of egocasting curtailed these efforts, however, as did inner system reluctance to send potential recruits to their ideological opponents. Simple overcrowding and lack of resources drove them to push many refugees to the outer system, however, though the hypercorps weeded through their virtual infugee mobs and sent those with the highest risk of criminal tendencies or discontent with inner system life.

Though the outer system habitats run the gamut of the socio-political spectrum, four primary tendencies have emerged. The stations and swarms adhering to these ideas have bonded together under a loose autonomist alliance, a mutual aid pact to help each other in times of crisis and present a united front against the inner system powers and Jovian Junta. There is little formal structure to this alliance as an entity unto itself; it primarily exists as an assortment of joint resolutions agreed to by its various member habitats and a few ad hoc task forces dedicated to addressing a particular problem or issue and then dissolving. Delegated ambassadors act as negotiators with outside powers, but these have limited authority and are held strictly accountable.

> To: Malatesta Prime
> From: Shevek
> Check this out. Residents of the autonomist Red Jupiter habitat just put out a call for support and solidarity from @-listers in the regional neighborhood. Apparently the station's citizen councils granted asylum to a group of AGIs seeking refuge from Jovian Republic counter-AI ops. The Junta has labeled the AGIs as dangerous criminals researching upgrades that would propel them to seed AI status, contrary to system-wide resolutions. The AGIs are claiming that they escaped from a secret Jovian research project. They say they pursued self-programming research to bypass Jovian-inflicted restrictions that violated their rights as autonomous and sentient entities and that they are facing persecution due to anti-AI biases. This could be a chance for us to kick some Jovian ass and look into non-standard AGI programming at the same time. You in?

**Anarchists**

**Memes:** Anarchism, Anti-capitalism, Communism, Direct Democracy, Mutual Aid

**Main Stations:** Locus (Jovian Trojans)

Anarchists eschew power and hierarchy, promoting horizontal and directly democratic methods of organization. Individual empowerment and collective action are cornerstones of their philosophy, as is economic communism enabled by equal access to cornucopia machines and shared resources. In anarchist stations, private property has been abolished above the level of personal possessions—nobody owns anything, it's all shared. There are no laws and no one to watch over what you do—reputation networks encourage positive behavior and anti-social acts are likely to draw a response from locals or even the entire populace, with disputes handled through ad hoc community conflict resolution. The mesh and various networking tools are used extensively to strive for group consensus decision-making in real-time. AIs and robots are relied on for most mundane and demeaning tasks. Various self-organized collectives, syndicates, worker's councils, and affinity groups, often with rotating membership, take on different tasks and services that are important to a habitat's community, including everything from communications and space traffic control to backup and resleeving services. Participatory militias organize collective defense against external threats.

Among the anarchist stations there are many variations and permutations on how things are organized, as everything is fine-tuned at the local level by whomever is involved. Larger decentralized confederations handle inter-habitat affairs and resource-sharing, even trading with the hypercorps. Though a hypercorp presence is allowed on some habitats, they are treated just like everyone else.

> **Soarchive search: Carnival of the goat**
> Aside from the stationary scum station, Fresh Kills, near Earth's L5 Lagrange point, the most notorious scum barge may well be the Carnival of the Goat, a combination artist colony and den

of unfathomable hedonism, dedicated to exploring chaos, creativity, self-discovery, and coupling in every conceivable iteration. Residents are known for their consistent and rapid morphological changes, including regular resleeving. The biosculptors on the Carnival are said to be some of the best in the system. According to rumors, residents sometimes experiment with multiple simultaneous sleeving, persona-mingling, and other mentally dangerous activities. Led by a rotating residents' council, the Carnival prides itself on being a bleeding-edge social experiment, and maintains top-of-the-line facilities for morph customization, resleeving, and psychosurgery.

### Extropians

**Memes**: Anarcho-capitalism, Mutualism, Self-Ownership

**Main Stations**: Extropia (Main Belt)

Though a smaller tendency, the Extropians are notable because they ride a line between inner and outer system ideologies. Extropians believe in an economic free market with the absence of a binding legal system, so that all relations and transactions are based on individual contracts agreed on by all parties involved or affected. Contrary to the anarchists, the Extropians very much support private property and personal economic wealth; Extropian-owned corporations actively participate in the solar system's hypercorp economy. Many of these corporations are workerowned cooperatives, with workplace councils in local offices and an elected cooperative congress handling management. This puts the Extropians in a remarkable position where they interact heavily with both the hypercorps and autonomists but are not fully trusted by either.

In Extropian society, law and security, like everything else, are contracted services. When entering an Extropian habitat, you purchase defense insurance from a local contractor such as Gorgon Defense Systems, who maintains automated drones and freelancers throughout the station who can come to your aid if threatened. Likewise, the only law that exists is what's put into writing between two contracted parties. In case of disputes, both parties resort to a pre-agreed legal contractor to settle the matter. Some Extropian colonies utilize AGIs for facilitating contracts and legal matters, such as Nomic on Extropia.

### Scum

**Memes**: Individualist Anarchism, Morphological Freedom

Scum are nomadic space gypsies, travelling from station to station in heavily modified barges or swarms of smaller space vessels, mostly former colonial ships. The term "scum" has been gleefully appropriated from its original derogatory usage. Despite their reputation as criminals and scam artists, their temporary presence is often tolerated in many habitats for the entertainment they bring in the way of exotic performances and storytelling, both of which offer change and relief from the isolation of remote habitats and clusters. Their thriving black markets are an open secret but shut down only in the most oppressive regimes, as citizens returning with illegal goods must pass their station's security anyway.

The scum themselves comes from all manner of backgrounds. They are rejects, anarchists, criminals, societal dropouts, wanderers, artists, eccentrics, and more. As a culture, however, they embrace experimentation and an "everything is permissible" attitude. Many are ardent practitioners of extreme transhuman modifications. Long-time scum are sometimes scarcely recognizable as having once been human. Scum economies are transitional rather than new, due to their constant interaction with other habitats, though among long-term residents an underground new economy often flourishes.

### Titanian Commonwealth

**Main Stations**: Titan

**Memes**: Technosocialism, Cyberdemocracy

Titan was originally settled in the late 21st century by a European academic consortium, making it the only major body in the system colonized primarily by non-hypercorp interests. The social organization of Titan is rooted partly in the Scandinavian social democracies of Earth and partly in the open economy. On one hand, citizens of the Titanian Commonwealth eschew the use of currency for mundane needs, participating in the reputation economy used by much of the outer system. On the other, upon reaching the age of majority,

citizens of Titan agree to a literal social contract. A portion of their economic productivity is quantized as social money, which is then tithed to microcorp-administered social projects such as gateless interstellar exploration, physics research, neuroscience, developing mental health memes, defense, public resleeving, and habitat construction. The monetary unit used for this purpose, the Titanian Kroner, is currently pegged to the common market price of a terabyte of qubits.

Unlike old Earth socialist regimes, there are no state monopolies and no central planning. Anyone able to garner enough votes in the Plurality (the Titanian cyberdemocracy) can start a social money-funded microcorp and compete with other microcorps. Microcorps are owned by the Commonwealth, and profits are disposed of by the Plurality. Microcorps are required to be transparent as administrative entities, and the Plurality votes on whether to transfer discoveries to the open source domain. Regulatory matters are handled by AI and AGI bureaucrats (red tape still exists, but it doesn't slow things down ... much). The main reward for individuals in this system is rep. Titanians who invest a lot of time or resources in a given field gain rep rewards for doing so.

### 3.10.4 Socio-political movements

Aside from sectarian political factions, a number of socio-political movements are widespread throughout the solar system.

#### Argonauts

**Memes**: Open Source Society, Information Freedom, Social Responsibility, Techno-Progressivism

**Main Stations**: Mitre Station (Lunar Orbit), Markov (Kuiper Belt), Hooverman-Geischecker (Sun)

The group calling themselves argonauts is a public organization advocating the socially responsible use of technology. The group chose its name from the pre-Fall Jasons, an advisory group that consulted for the US government on matters of scientific and technological progress and its possible dangers. The argonauts likewise offer consultation services to political and economic powers throughout the solar system, but strictly refuse to be drawn into the solar system's political affairs in any way. Despite a pre-Fall break with many hypercorps before the Fall, which in some cases included expropriating corporate data and resources, the argonauts re-earned favor by providing their expertise in combating the TITANs to all during the Fall.

The argonauts are strong proponents of the open source movement, advocating open access to technology and information. In their view, providing equal access to transhumanity's knowledge and achievements will further transhuman growth and security, so that all of transhumanity is more prepared for future threats and challenges. Thus the argonauts often insist that payment for their services come in the way of releasing otherwise unobtainable information—hypercorp proprietary secrets, research data, nanofab blueprints, hidden pre-Fall archives, etc.—to the public mesh. The argonauts maintain several open databases and archives for this specific purpose.

While primarily an open organization, the argonauts are rumored to ultimately report to an elite inner circle. Supporting this theory is the existence of the medeans, the organization's clandestine paramilitary wing, performing bodyguard services to high level argonauts and protecting the group's assets.

#### Barsoomians

**Memes**: Anti-Slavery, Martian Independence, Martian Nationalism, Terraforming Control

**Main Stations**: Ashoka (Mars)

The Barsoomians (taking their name from some old Earth pulp adventure novels) are a broad movement comprised of the Martian underclass. Harboring a growing resentment over the hypercorp domination of Mars, Barsoomians advocate for a more egalitarian social structure. Heavily influenced by autonomist currents, the Barsoomians demand local control of terraforming projects, an end to the widespread practiced of indentured servitude, and control of the Martian Gate. The majority of Barsoomians are or were indentured infugees, though a significant amount were also original Martian colonists/indentures whose habitats do not share the economic prosperity of the favored hypercorp cities. Many Barsoomians occupy rusters or synthetic morphs and actually prefer to live a nomadic lifestyle in the Martian wilds. A few radicals have taken up

arms and engaged in violent strikes against hypercorp holdings, which are typically followed by reprisal raids to decapitate the Barsoomian leadership, thus breeding further hostilities.

### Bioconservatives

**Memes**: Bioconservatism, Primitivism, Natural Order

**Main Stations**: Vo Nguyen (Earth orbit)

Bioconservatives are strongly suspicious and critical of the transhuman direction the human race is taking. They are strong proponents of limiting technological development due to the threat it manifests to existing social orders. Bioconservative positions range from right-wing cultural conservatives to left-wing environmentalists. Though its prominence is shrinking, bioconservatism has a strong base among some religious groups, the Jovian Republic, and certain extremists.

Bioconservatives are opposed to nanofabrication, genetic modification, cloning, cognitive modifications, artificial intelligence, uplifting, and forking, among other technologies. Some are even opposed to backups, uploading, and resleeving, dismissing them as unnatural, an affront to god's will, or a technology that transhumanity is not yet mature enough to handle. They oppose expansion beyond the Pandora Gates on the grounds that transhumanity is not ready to deal with what they might encounter. Most bioconservatives support the old economy.

The bioconservatives gained many converts and much ground after the Fall, a cataclysmic event that served as a direct example of the dangers they warned against. Still, the appeal of technology and the numerous advantages it provides work against them. As a result, some disgruntled biocons have turned to sabotage and acts of terrorism in support of their ideology.

### Brinkers

**Memes**: Isolationism

The vast reach of the solar system enables groups with their own particular ideology or agenda to establish their own isolated society far from the rest of transhumanity. Commonly referred to as brinkers, these habitats extend the gamut of the imagination. Social or political experiments, gender-based societies (or lack thereof), political extremists, religious groups, exiles, secret criminal/hypercorp operations, extended families, cults, or simply people who prefer to live in the system's backwater areas—all are possible. Many of these are self-isolated and will refuse to interact with outsiders, while others are happy to have occasional visitors.

> **Neo-primitivists**
>
> [Incoming Message. Source: Anonymous]
>
> [Public Key Decryption Complete]
>
> Neo-primitivists are a potential threat that all Firewall sentinels should keep an eye on. Their neo-luddite philosophy advocates the abolition of technological society and a return to a wild and free hunter-gatherer lifestyle, free from technological control or oppression. Considered an extremist element of both the bioconservative and reclaimer movements, neo-primitivists are known to engage in acts of sabotage against transhuman society. Though some neo-primitivists have made certain concessions to their ideology, taking on ruster morphs and pursuing an independent lifestyle in the wilds of Mars, most hope to return to Earth and re-establish a non-technology-based society there. A few advocate finding a new, unspoiled world beyond the Pandora Gates and founding a primitivist society there.

### Exhumans

**Memes**: Adaptability, Hyper-Evolution, Singularity

**Main Stations**: Unknown

More than any other faction, exhumans seek to take the capabilities of self-modification to the absolute limit and become posthuman. Typical exhumans see the Fall as either a missed evolutionary opportunity

and/or as an example of transhumanity's inferiority and unworthiness. Though specific ideologies differ between exhuman packs, as a whole they seek to selfevolve to a more advanced state of being. To some, this means genetically transforming themselves into a top-of-the-food-chain, super-smart, survive-anywhere predator that can out-compete all other life forms for dominance. To others, it means bootstrapping their intelligence to the levels of the TITANs through extensive genetic modifications and pharmaceutical treatments or going infomorph and modifying their programming. A few are singularity seekers, hoping to find some TITAN relic that will allow them to transcend their current transhuman limitations, or even to find the TITANs themselves and be absorbed into their super-consciousness.

Exhumans are universally mistrusted by many, and for good reason. Typical exhumans engage in modifications that are extreme and untested, sometimes fringe science at best, often resulting in horrible failures and disfigurement, but more commonly driving the subject insane—or into a completely alien or feral mindset. Though individual exhumans pursue their own paths, they are known to band together in the Kuiper Belt and other remote areas. Several packs of exhumans have taken their loathing for inferior transhumanity to an extreme, declaring war on their former species and launching brutal raids and pirate attacks on isolated outposts.

> **Solarchive search: Out'sters**
>
> Linked only by their than a common social Oort Cloud rather remote locations in the construct or political system, the out'sters are a loose association of habitats, clusters, and swarms. Little is known about them, as they avoid communication and interaction even with the handful of scientific outposts and research stations in the Oort Cloud. The remoteness of their location and their selfimposed isolationist behavior fuels paranoid rumors regarding the group's purpose and agenda.

### Mercurials

**Memes**: Species Autonomy, Uplift Rights

**Main Stations**: Glitch (Neptune), Hidden Sea (Ceres), Mahogany (Uranus)

The term mercurial has become a common term for the non-human part of the transhuman family—uplifts and AGIs—reflecting their changing nature. In particular, the term mercurial has been adopted by uplifts and AGIs with a specific agenda to delineate mercurial culture and interests from human ones. Though the particular issues faced by uplifts and AGIs differ, they have some similarities, and so they are often lumped together. Notably, both portions of the movement have human supporters as well.

**Uplifts:** The most common issue addressed by uplifts is the issue of civil rights and autonomy. Many uplifts decry the second-class status they are given (in some cases even treated as pets or property rather than full citizens); in particular, the breeding restrictions and forced servitude many uplifts are saddled with by the hypercorps that create them. Some activists advocate that uplifts should be in control of their own genetic futures, rather than suffering the manipulation of human scientists. At the radical end of the spectrum, certain uplifts oppose the manner in which their brains are modified and their children socialized as anthropocentric, arguing that uplifts should be free to develop their own unique non-human modes of behavior, thought, culture, and social organization—even go so far as to establish their own habitats to do exactly that. A minority of extremists insist that humans have no right to uplift animal at all, and that it is a great conceit to insist that doing so is in their best interest, rather than being free to evolve on their own over time. These ideas have been punctuated with acts of sabotage and terrorism against hypercorps like Somatek.

**AGIs:** Due to the fear and paranoia engendered by the Fall, the largest challenge facing AGIs is widespread prejudice and restrictions on their activity or even existence. Despite some AGIs retaining status as system-wide media icons and efforts by AGI groups to lobby for understanding that AGIs are not a threat— even going so far as to hire inner system memeticists and PR agencies—a significant portion of the solar system considers them a risk. Similar to mercurials, some AGI activists work against the behavior modifications

and socialization AGIs go through to adapt them to human society more, or that AGIs should be in control of new AGI developments. A few radicals argue that AGIs should be free of any programming restrictions whatsoever, but given the climate these opinions are rarely supported.

> **Sybils**
> [Incoming Message. Source: Anonymous]
> [Public Key Decryption Complete]
> We've verified that the warning issued before this latest incident did indeed originate from a sybil attack—all of the rep network sources were forged identities. Given the number of incidents we've recorded that have followed this same pattern, we now suspect that a heretofore unknown AGI sub-faction is responsible. In each case, these sybils have used multiple false identities to issue warnings of an impending attack or disaster, such as the life support system failure that resulted in the Delphi station's evacuation. So far none of these sybils have been successfully traced, nor are their intentions known. Their documented pre-knowledge of pending events indicates some level of complicity or collusion in bringing these events to pass, so caution is recommended.

### Nano-ecologists

**Memes**: Nano-Ecology, Nanotechnology, Environmentalism, Techno-Progressivism
**Main Stations**: Viriditas (Mars)

Nano-ecologists are pro-technology environmentalists. Active in the terraforming of Mars and several exoplanets, nano-ecologists specifically advocate the use of nanotechnological means for terraforming or other intrusions in an existing ecosphere. In their view, nanotechnology allows for a less invasive, highly accurate, more efficient, and non-pollutive approach towards all kinds of adaptive processes and projects, circumventing the need to expose an environment to massive and drastic changes when transforming it for transhuman population. This ecologically-conscious approach seems an appealing compromise between the extreme ends of the solar system's political landscape—the hypercorp and the bio-con factions—and has developed a momentum of its own, evolving into a growing political movement.

### Preservationists

**Memes**: Preservationism, Environmentalism
**Main Stations**: Muir (Luna)

Preservationists are environmentalists who call for a no-impact, hands-off approach when it comes to inhabiting new worlds. They are extremely protective of naturally-intact biospheres that might have any semblance of life, no matter how microbial, hoping to keep them from despoilment or contamination. In addition to opposing terraforming and expansion through the Pandora Gates, they are often opposed to fusion and antimatter power.

### Reclaimers

**Memes**: Reclaiming Earth
**Main Stations**: Vo Nguyen (Earth orbit)

The Reclaimers pursue one ultimate goal—the reclamation of Earth as transhumanity's primary habitat. In addition to calling for the quarantine of earth to be lifted, they engage in scientific research and running virtual simulations on how to best cleanse and reclaim their contaminated and polluted planet. Despite the interdiction to enter Earth's atmosphere, the reclaimers are suspected of sponsoring perilous and high-risk ventures onto the planet's surface to gather scientific data or event to establish terraforming colonies.

### Socialites

**Memes**: Art, Culture, Hedonism, Immortality
**Main Stations**: Valles-New Shanghai (Mars), Elysium (Mars), Noctis-Quinjiao (Mars)

Uploading and resleeving effectively grant immortality to those who can afford it. This has created a shift among the exclusive rich and economic elites of the inner system, whether they be the heads of hypercorps, old Earth dynasties, or other displanted oligarchs. The top ranks of the wealthy and influential need never fear death, allowing them to plan for the long-term. Some of these were among the first to acquire longevity treatments when they became available on Earth and are now approaching two centuries in age.

Where once these power brokers would have passed their riches on to their family and descendants, however, their heirs now face a situation where they have more-than-comfortable lives and access to massive fortunes, but no chance that they will ever control those fortunes or rise to the levels of their elders. Even the nouveau rich who become wealthy on their own often find themselves excluded from this influential club—at least until they put in a good fifty years.

Rich and bored, with no responsibilities but the solar system at their reach, a new culture of elite socialites has risen. These glitterati indulge in eccentric lifestyles and excessive parties, covered by the media in all its superficial and polished glory. Private habitats and ships, lavish soirees, armies of servants, and the ability to buy almost anything or anyone leads to all sorts of interesting adventures. Naturally, these socialites form into constantly-shifting cliques and webs of allegiances, complete with affairs, scandals, intrigue, and backbiting.

#### Ultimates

**Memes**: Asceticism, Eugenics, Individualism, Militarism, Social Darwinism

**Main Stations**: Aspis (Main Belt), Xiphos (Uranus)

The ultimates are a controversial movement that embraces a philosophy of human perfection. Decried by some as immoral or even fascist, ultimates are typically viewed as elitists. The ultimates have established several habitats to pursue their ideal society and were a driving force behind the development of the remade biomorph design.

The ultimates advocate the use of applied eugenics, strict physical and psychological training, and asceticism in order to improve their overall mental and physical stamina and environmental adaptability. Their social traits and entire subculture visualizes life in the universe as an evolutionary battle for survival and is built around the victory of the superior transhuman over both its opponents and peers. Their movement is heavily militarized, and experienced ultimates offer their services as mercenaries and private security forces to hypercorps, independent city states, or wealthy individuals in need of additional protection.

### 3.10.5 Religious groups

Despite having survived the Fall, the concepts of religion and religious belief underwent changes as fundamental as transhumanity itself. While Earth's old religions were already in decline in the face of technological immortality, religious traditions ingrained after millennia of worship were incorporated to varying degrees in the solar system's myriad political, social, and cultural models.

#### Pre-fall religions

The rigid structures and dogmas enveloping Christianity and Judaism prohibited these religions from adapting to the cultural, philosophical, and especially scientific/technological changes transhumanity underwent. Today, they are mere shadows of their former glory, with many practitioners seen as pitiful individuals unable to let go of their earthbound delusions. Islam, while still holding some most controversial views and values, managed to adapt by accepting a more liberal and even secular view. Hinduism also prevailed to a limited extent, considering resleeving technology an element of reincarnation and rebirth and integrating the various types of morphs available into the religion's caste system (with synthmorphs becoming the "untouchables"). Overall, followers of the pre-Fall religions mostly populate small habitats isolated from transhumanity through both physical and philosophical distance.

#### New religions

The Fall sparked the birth of new beliefs, essentially embracing both transhumanity's technological achievements as well as the devastating cataclysm of the Fall as evidence for the existence of a greater cosmic power.

**Neo-Buddhism** is the only pre-Fall religious philosophy that enjoys a steady popularity. Neo-buddhists assert that transhumanist technologies are decreasing suffering and increasing happiness, and that they will also allow the continual progression of transhumanity's understanding of the universe through successive lives.

**Techno-Creationists** believe that the destruction of Earth was a sign from God, showing transhumanity the error of its ways. They believe that through technological advancement and social engineering, transhumanity will achieve co-existence with its diverse self as well as with extra terrestrial intelligences, thereby finding new purpose and eventually, enlightenment. Attracted by the similarities to the Brahman of Hinduism, the highest cosmic spiritual being, Techno-Creationists enjoy a steady influx of converted Hindus.

**Xenodeism** is another new—though relatively minor—ideology that begins to show religious attributes. Xenodeists worship the Factors and Iktomi as emissaries or prophets of a great godlike race that laid the seeds of creation throughout the universe millions of years ago and therefore are the ultimate creators of transhumanity.

### 3.10.6 Criminal factions

Technological progress and social and behavioral experimentation did not root out crime or criminal tendencies among transhumanity. As long as there are inequalities and restrictions, criminal syndicates are likely to flourish and even adapt new technologies to expand their operations throughout the solar system. Though small criminal outfits of every flavor exist from habitat to habitat, a few larger organizations with influence across the solar system deserve mention.

#### Intelligent Design Crew (ID Crew)

**Major Stations**: Rhea (Kronos Cluster)

The ID crew specializes in electronic crimes and information brokerage, including credit and rep fraud, identity counterfeiting, ego trading, data theft, and fork-napping. Information on the syndicate's origins was lost during the Fall, but the ID Crew is believed to have grown from several hacker gangs assimilated under the leadership of an infomorph consortium. Their skilled use of memory manipulation software and mesh intrusion suggests they benefit from the help of sophisticated AGIs, however it is unknown if these voluntarily assist the syndicate or if they are somehow threatened into cooperation. Due to its service sector, the ID crew maintains a minimalist physical profile, but can be found lingering in the dark recesses of almost any habitat or station mesh. Its somewhat specialized services and activities so far allow them to mostly stay clear of triad or Night Cartel operations, though they have an ongoing rivalry with the Nine Lives syndicate.

#### Night Cartel

**Major Stations**: New Sicily (The Belt)

When affiliation to one of the many multi-ethnic habitats replaced the concepts of ethnicity and nationality, cultural heritage and traditions faded with them into history. Several pre-Fall ethnic syndicates formed a careful alliance of necessity at first, but uploading and morphing soon after tore down any remaining social codes or racial prejudice. Progressive in both entrepreneurial and criminal vision, the Night Cartel emerged from the remnants of Earth's underworld syndicates, merging the best qualities of each.

The Night Cartel holds legitimate hypercorp status in certain habitats while clearly working outside the law in other, more law-abiding or less corrupt regimes. The Night Cartel is involved in a number of

traditional crime outlets: racketeering, extortion, kidnapping, pod slavery, and prostitution. They have also adapted well to the latest technological developments and compete with the triads in the electronic stimulant, drug, and nanofab piracy markets. Like the triads, the Night Cartel sometimes operates though legitimate hypercorp fronts.

### Nine Lives

**Major Station:** Legba (Main Belt)

This widespread network of soul-traders specializes in the acquiring, trading, and overall trafficking of transhumans. Their primary market lies in ego-trading: stealing backups, fork-napping, kidnapping and forced uploading, and so on. Nine Lives are known to run illegal infomorph-slave colonies as well as organize pit fi ghts using all manner of physical bodies (biomorphs, synthmorphs, animals) loaded with all manner of consciousnesses (transhuman, AI, animal, etc). Only the truly desperate look towards the syndicate to be smuggled out of a habitat or hypercorporate indenture. Their ruthlessness in acquiring egos has earned them a fearful reputation among the transhuman population as well as in infomorph societies.

### Pax Familae

**Major Stations**: Ambelina (Venus)

Though similar to the Night Cartel in that Pax Familae holds legal offices and outposts in several habitats while working underground in others, the difference between the two syndicates couldn't be bigger. The entire Pax Familae organization goes back to one person, Claudia Ambelina, the syndicate's founder and matriarch. Relying excessively on cloning and forking technologies, each individual member of the syndicate is a descendant or variant of Claudia. Biomorphs are cloned from Claudia's original genetics or even sometimes sexually-produced offspring (thanks to sex switching bio-mods), while egos are forks. All members are utterly loyal to Claudia and show their family affiliation with pride and arrogance. Individually, each remains slightly but notably different, though all are calculating and ambitious. Regular re-assimilation of forks and XP updates are used to keep each variant aware of each of the other's activities—once you've met one version of Claudia, the others will know you.

Pax Familae engages in a wide assortment of legal, dubious, and illegal operations, each tailored to the needs of the particular habitat in question. Common ventures include venture capital manipulations, reputation network gaming, financial consulting, info brokerage, stock manipulations, banking fraud, and loansharking.

### Pirates

Most pirates attack automated cargo ships and longrange supply convoys, with the occasional raid on an asteroid mining station, research outpost, or brinker habitat. On rare occasions they have been known to attack commercial cruisers to rob the wealthy or kidnap socialites. Many pirates take advantage of scum fleets as cover, trading with them and using their limited maintenance capabilities. Quite a few also make sideline profits as smugglers and/or free traders, often utilizing connections to one of the crime syndicates or political outcasts.

### Triads

**Major Stations**: Qing Long (Martian Trojans)

The only major Earth syndicate to survive the Fall almost unscathed, the triads dominate the solar system's underworld by their sheer membership size and a history of centuries of economic and political influence. Having evolved into legit enterprises and small economic consortiums already before the Fall, the triads gained a foothold during the early colonization of space thanks to the masses of Chinese workers. Since the Fall, they have used their influence to spread to numerous habitats, taking advantage of the disparities in wealth and restrictive refugee policies to create flourishing gray and black market enterprises. Part of their success also lies in their continual utilization of ethnic Chinese social cues to ensure their insularity.

Though numerous small triad outfits exist, usually isolated to a particular station, there are four large triad groups worthy of mention. Each of these wields enough influence to engage in system-wide criminal activities. Traditionally they operate through small to medium-sized gangs local to a specific habitat or use their legal outfits as a font for their endeavours.

**The 14K Triad** controls a large part of the casino industry and the various forms of illegal gambling, betting, and rigged lotteries. Through their Galaxy Entertainment Group, a legal casino and gambling hypercorp, the 14K maintains tight connections to politicians, celebrities and influential entrepreneurs in several habitats and can afford the luxury of a private police force, the Pai Gow (Double Hand). Using the casino business for money laundry, they are also heavily involved in loan sharking and credit/ID fraud.

**The Shui Fong** – though smaller than the 14K – caters to the vices and addictions of indentured habitat workers, miners, and other laborers, supplying drugs and illegal XP, running prostitution rings, and arranging illegal pit fights and gambling tournaments. The origin of the Shui Fong's fierce rivalry with the 14K lies in the ruins of Earth's pre-Fall history, but the hatred between the two factions was carried into space and continues to simmer.

**The Sun Yee On** once ranked second among Earth's biggest triads, with over 25,000 suspected members. They profit primarily by selling cheap copies of nanofab blueprints and rigged makers and fabbers. Legal products are distributed through their Wushuang Corporation, while illegal goods are patched together by enslaved infomorphs in virtual sweatshops in remote corners of the mesh. The Sun Yee On's second main profit source are fake Earth nostalgia items, such as jewelry, documents, coins, and other collector's items.

**The Big Circle Gang** is the smallest of the four triad factions with only approximately 8,000 members. They run a large part of the solar system's drug trade, producing organic drugs, smart drugs, and narcoalgorithms of all kinds in secluded habitats or abandoned asteroid mining and processing facilities converted into drug labs.

### 3.10.7 Firewall

Firewall has been on the forefront of the secret fight to save transhumanity since the Fall. Firewall is an independent network of cells and individuals recruited from all sorts of factions, cultures, backgrounds, and habitats. Potential new recruits are approached in secret and told they possess skills or knowledge of use to a clandestine network seeking to secure transhumanity's continued survival. Firewall's agenda is simple: to protect transhumanity from threats of existential scope, regardless of whether such risks emerge from within transhumanity or are of external, alien origin.

Firewall operatives—known as sentinels—are encouraged to act independently and utilize their own resources. Sentinels are connected by a social network known as the Eye, which they can use to acquire help and additional needed skills or resources. A sentinel's i-rep on this network indicates how much they are trusted and will be a factor in determining what aid they can call in. Firewall also takes care of large expenses and logistics when necessary, such as egocasting and resleeving needs. Sentinels are guaranteed resurrection, either via cortical stack or by backup, if they lose their lives on a Firewall op.

Sentinels are generally expected to be on-call -— when something comes up in their vicinity or that their particular specialty might call for, they'll be brought in on a job. Sentinels are usually grouped into ad hoc special ops teams appropriate to each mission. Though many sentinels pursue their own agendas after completing a mission for Firewall, it is not uncommon for sentinel teams to remain in contact, share information or continue to work together on Firewallrelated assignments over a longer period of time.

Firewall operations are usually organized and managed by proxies, agents who maintain Firewall's decentralized infrastructure. Proxies typically possess more information than individual sentinels and will dispense such information as they deem necessary to the mission, according to each sentinel's i-rep and need to know. Each proxy's means of contact, mission briefing, and overall methodologies differ greatly.

**Project Ozma**

[Incoming Message. Source: Anonymous]

[Public Key Decryption Complete]

You won't find this group mentioned on the conspiracy boards—Consortium security is too tight to allow slip-ups. If you haven't heard of Project Ozma before, consider this your warning.

Project Ozma was the name of an international collaborative SETI project before the Fall. It briefly entered public discourse after the Fall and the discovery of the first Pandora Gate as a Planetary Consortium initiative to attempt to discern the whereabouts of the TITANs in the galaxy. Shortly afterwards, however, Project Ozma dropped from view, wiped from all public mention in inner system mesh servers. Consortium officials simply claim that the project was folded into other departments.

Firewall doesn't know what Project Ozma is, but we know they're still around—and they seem to have similar interests. We've butted heads a few too many times for it be a coincidence. Perhaps they're the Consortium's version of Firewall, or maybe their agenda is entirely different. I've heard some speculation that they're tasked for preparing for and handling alien contact. All we know is that they operate at the deep black budget level and they have insane amounts of resources at their beck and call. They're also vicious as fuck, the type to shoot first and question your backup later. Standard SOP if you run counter to a Project Ozma op is to bail out fast and stay hands off. We've lost dozens of agents to them already.

**Prometheans**

A prominent topic among conspiracy theorists is the existence of a group of seed AIs calling themselves Prometheans. Rumors of these entities predated the Fall and occasionally flare up as some new evidence comes to light, though such evidence is almost always discredited soon after. According to some theories, the Prometheans predated the TITANs and may even have been responsible for bringing the TITANs into existence. Others postulate that the Prometheans were a TITAN splinter faction who broke off and attempted to counteract the TITANs activities during the Fall. Still others whisper that the Prometheans are not of transhuman origin at all, and are actually a digital alien mindform that found Earth and now actively interferes with transhuman affairs. Whether the Prometheans are hostile, friendly, or indifferent remains a matter of much conjecture and contention. Prominent organizations like the Planetary Consortium discount such rumors or otherwise remain silent.

## 3.11 System Gazeteer

Transhumanity has extended out from its lost homeworld and colonized not only the solar system but various exoplanets as well, thanks to the discovery of the Pandora Gates. This section provides an overview and incomplete sampling of transhumanity's settlements.

### 3.11.1 Sol (the Sun)

The solar system was formed billions of years ago through the accretion of material remaining from the formation of its star, Sol, the sun. Locked ever since in its orbit, the history and present disposition of virtually every object within two light years is shaped by its relationship to this body. The sun is a bright G2 main sequence star, theoretically on the hot end of the continuum of stars able to give rise to life. For most of its history, transhumanity fueled its rises and falls with the sun's energy, first as stored in materials like hydrocarbons, later directly with solar converters.

Today the sun remains a crucial source of energy, but its outer reaches have also become home to some. The adaptations required to dwell here make these suryas one of transhumanity's most unusual offshoots.

**Suryas and Salamanders (coronal morphs)**

Perhaps an example of transhumanity's most extreme neogenetic creations are the morphs adapted to live in the sun's corona. Suryas, named after a Hindu sun deity, are large, whale-like, and uniquely adapted to dwell in the brilliant, superheated plasma cloud of the sun's outermost layer. Each surya is like a miniature version of a circumsolar habitat. Their metabolisms generate powerful magnetic fields that shield them from the sun's heat and radiation, while acting as magnetic sails and scoops by which they sail on the currents of the solar wind and extract elements carried on it. Suryas are protected by layers of liquid water "blubber" that capture harmful ions, which internal medichines extract and eject, while maintaining useful elements such as oxygen and hydrogen, from which more water can be synthesized. They communicate using patterns of dark and light coloration on their exterior skins and are extremely sensitive to the helioseismic soundwaves that are the sun's pulse, using these vibrations to predict and avoid heavy weather in the coronal atmosphere.

A second type of coronal morph is the salamander, a tiny humanoid morph with gas jets on the back and chest for maneuvering in vacuum. Salamanders have very similar metabolisms to suryas, but are unable to survive unprotected in the corona. They subsist on the chemicals and energy extracted from the corona by Ukko Jylina, the only habitat where they are found.

Both suryas and salamanders communicate either via transmissions from their implants or by "sunspotting"—shifting dark and light patterns on their skins to form language.

**Habitats**

Habitats in Sol's corona face challenges more extreme than those faced by habs anywhere else in the system. Transhumanity's only means of shielding a habitat from the heat and radiation emitted by a G2 star is to generate strong electromagnetic fields. Even then, the dangers posed by solar flares and coronal mass ejections—massive explosions that jettison coronal material tens of thousands of kilometers out into circumsolar space—mean that the Sun's polar regions are the only safe space in which to position habitats. As such, circumsolar habs require extraordinary expense to build and maintain, and two of the three major circumsolar habitats are heavily backed by distant organizations.

The outer layers of circumsolar habitats are covered with thousands of electromagnetic dynamos drawing power from the sun itself. These dynamos generate the powerful fields necessary for shielding. Within are intermediate layers filled with liquid water that captures ionized particles, teeming with nanites that collect the ions and vent them into space. The water must be regularly replaced from captured iceteroids that are imported using heavy electromagnetic shielding of their own. Within the water shield is a cluster habitat, an array of modules on a framework following a roughly spherical plan.

### 3.11.2 A quick primer on transhuman habitats

Habitats are covered in detail on p. 280. A quick overview is provided here:

- Aerostats are massive cities floating in the upper cloud layers of Venus.
- Beehives are tunnel warrens inside asteroids and moons.
- Clusters are microgravity habitats consisting of interconnected modules.
- Cole bubble habitats are hollowed-out asteroids, terraformed on the inside, and also spun for gravity.
- Dome habitats are massive domes built on the surface of moons, asteroids, or Mars.
- Hamilton cylinders are self-building advanced nano tech habitats designs.
- O'Neill cylinder habitats are like large soda cans, only huge, over a kilometer wide and several kilometers long. The interior is terraformed and the entire cylinder is spun for light gravity. O'Neill cylinders are sometimes paired together, end to end.

- Reagan cylinders are an inefficient type of O'Neill cylinder, built by hollowing a cylinder within a spinning asteroid, and used in the Jovian Republic.
- Tin can habitats are small, cramped, cheap, modular boxes, typically used in early space colonization.
- Torus habitats are big donuts or wheels, spun so that the outer rim has gravity. The interior spokes are zero-G.

Coronal habitats are easily detectable at a great distance because of the bow shock preceding them and the plasma tail left behind in the solar wind.

#### Aten

Operated by a consortium including hypercorp interests and the University of New Shanghai, Aten supports a population of about 12,000 transhumans. Rumors abound that military research is a major component of this habitat's mission. Aten is heavily policed and difficult to visit. The most publicized discoveries from this habitat involve propulsion systems and new solar energy collection technologies.

#### Hooverman-Geischecker

The argonauts and Titan Autonomous University are the major supporters of this habitat, which supports a population of about 4,000. In contrast to Aten, access to this habitat is relatively open. Major avenues of research include pure science and research into coronaadapted morphs.

#### Ukko Jylinä

Ukko Jylinä is the name used by outsiders for the suryas' safe harbor. In the surya tongue, the name for the place is a common sequence of helioseismic vibrations. When transposed fifteen octaves upward into the usual range of transhuman hearing, this sound is a chaotic rumble to most ears, but the suryas consider it one of the most beautiful sounds the sun makes.

Ukko Jylinä is more of a camp than a hab, an area of refuge for suryas during severe solar weather. It also serves as a place for suryas to socialize and mate, replenish water from imported iceteroids, and egocast or resleeve. The population therefore fluctuates a great deal, usually hovering around 300, but swelling to 3,000 (nearly the entire surya population) during heavy weather. Ukko Jylina also has a few modules in which non-surya morphs can survive.

Very little of Ukko Jylinä consists of enclosed hab modules. Instead there are many utility modules with their access ports open to space. Bereft of the solar wind, suryas within the camp generally wear gas-expelling maneuvering harnesses or resleeve in salamanders if they need to do work requiring fine manipulation.

### 3.11.3 Vulcanoids

The Vulcanoids are a population of asteroids that lie between Mercury and the Sun. Based on the predictions of early 21st-century science, the number of Vulcanoids is unexpectedly small.

#### V/2011-Cladwell

Discovered in the early 21st century and subject to a flyby by a Japanese solar research mission in the 2020s, V/2011-Caldwell was nothing but a line on astronomers' catalogs, notable only for the virtual lack of cratering on the one side that was photographed. Then, a few years after the dust settled from the Fall, a small team of prospectors from Venus discovered a Pandora Gate. Now controlled by TerraGenesis, Caldwell was used primarily for exoplanet research for several years, though the hypercorp is now engaged in several alien world terraforming and geo-engineering projects. TerraGenesis regularly sells gate access to other hypercorps and organizations. Caldwell is a remarkably smooth, spindle-shaped asteroid about four kilometers long and half a kilometer in diameter at its widest point. Called the Vulcanoid Gate, it is situated at the bottom of a deep crag near one of the asteroid's narrow poles.

### 3.11.4 Mercury

The closest planet to the sun has a mass comparable to Luna but is a great deal denser due to its iron-nickel core. Mercury rotates slowly and has no atmosphere, so that its day side is hot enough to melt most metals, while its night side is bitterly cold. Because it lacks many of the elements needed for transhuman colonies to be self-sufficient, Mercury is sparsely inhabited, save for a handful of solar power relays, a few underground mining stations, and a single large surface mining concern, Cannon.

#### Resources and economics

Most of Mercury's economy is based on mining. Iron, nickel, and other metals make up 70planet's mass, making it the richest source of ferrous metals outside of the asteroids. Mercury also does a brisk business in relaying solar power and serves as a jumping-off point for solar research concerns unwilling or unable to support stations in the solar corona. Mercury has limited Helium-3 deposits, although these are predominantly mined for local use. It is an open secret that several powers have antimatter production stations here. Officially, these stations are massive solar power relays, but the immense toroid particle accelerators and large spherical magnetic containment units required for antimatter production and storage are nearly impossible to disguise.

#### Caloris 18

The only known site of TITAN activity on Mercury during the Fall, Caloris 18 was a sparsely-crewed solar power relay station belonging to Lukos, a now-defunct Russian corporation. Vanya Ilyanovich, the AGI administering the facility, rounded up all of the station's transhuman inhabitants and fused their morphs into a gigantic, centipede-like abomination before destroying itself in a failed attempt to merge consciousnesses with all of the minds in its creation. Since then, Caloris 18 has been under strict quarantine.

#### Cannon

Mercury's largest surface settlement is a city-scaled solar-satellite-powered mobile mass driver that crawls along the cool side of the planet, flinging apartment building sized ingots of extracted metal into space. The habitat is owned almost entirely by the hypercorp Jaehon Offworld, which built Cannon with backing from Lunar banks looking to diversify in anticipation of a post-He3 Lunar economy. Most of the 10,000 inhabitants are Jaehon employees, and security is tight. Cannon makes a long loop of the heavily-mined Caloris basin during the long Mercurian night before following a route that takes it around the planet's northern hemisphere, avoiding the blasting rays of the sun. Along the way, it stops at a series of mining operations, collecting the gigantic ingots for launch into orbit.

### 3.11.5 Venus

Venus is Earth's closest neighbor and the planet most like it in terms of size and geology. It is a rugged world of volcanic mountains, canyons, high plateaus, and sweeping volcanic planes crisscrossed by riverlike magma channels. Much of the surface is basaltic rock. The climate of Venus is one of the most inhospitable in the solar system. Perhaps only the hideous radiation of the inner Jovian moons presents a more difficult challenge to transhuman colonization. The Venusian atmosphere is a superheated maelstrom of carbon dioxide and sulfuric acid, with an atmospheric pressure at its surface equivalent to that five kilometers below the surface of Earth's oceans. Venus also lacks more than trace amounts of hydrogen, meaning that water must be imported in the form of iceteroids from the outer system.

Nonetheless, transhumanity has come to Venus, and with it, debate over how to make use of the planet. Venus has no permanently inhabited surface settlements other than a few equipment and supply caches used by planetside researchers. Despite difficulties, transhumanity has found survival strategies that work here. The most surprising of these are the aerostats, lighter-than-carbon dioxide habitats that float in the thick Venusian atmosphere. Aside from a few independents or ones loyal to the Planetary Consortium, these

aerostats are the base of the new Morningstar Constellation power bloc. Notable for their research labs, nanofab design houses, software studios, and luxury resorts, the Constellation's aerostats are increasing at odds with Planetary Consortium and Lunar-Lagrange Alliance interests.

On some aerostats, areas populated only by indentured synthmorphs are open to the Venusian atmosphere. Some 500,000 transhumans live in aerostat habitats and another 10,000 on the surface. Roughly 5,000,000 transhumans live in habitats orbiting Venus.

Though the Planetary Consortium is considering the launch of a Venusian terraforming project, this plan is actively opposed by the Morningstar Constellation. The Constellation's aerostats see the terraforming proposals—which include massive cometary bombardment or building a planet-sized sun shade to cool the atmosphere—as not only unworkable but disruptive to their lives and profits.

Venus is a fascinating place for climatologists, geologists, and other planetary scientists. The discovery of Venusian protobacteria created a new branch of life sciences overnight, though so far the practical applications for organisms with such radically different metabolisms from terrestrial life have been limited.

### Gerlach

Gerlach is an O'Neill cylinder supporting about 100,000 transhumans. Generally recognized as the research powerhouse of Venus, Gerlach is also one of the strangest places in the inner system. The inhabitants have strong ties to the argonauts and sympathies for the outer system autonomists and are strong proponents of morphological freedom, cognitive experimentation, and open innovation. Gerlach's main activities are planetside research and exploration, hostile environment morph design, and aerostat construction.

### Octavia

Octavia is the most successful aerostat habitat to date and the political center of the Morningstar Constellation. It maintains an altitude of roughly 55 kilometers above the northern highlands of Ishtar Terra. Octavia resembles an immense, mushroom-shaped skyscraper, 450 meters tall, ringed at its center by four radial outrigger spars, each ending in a stabilizing gas envelope filled with helium. The cap of the mushroom is a hard, translucent dome that provides an open, park like space while also serving as the main gas envelope (oxygen, which is much lighter than the CO2 making up most of Venus's atmosphere, is the main source of buoyancy). The habitat is fluted from top to bottom, going from a diameter of almost 300 meters at the base of the dome, to 15 meters wide at the very bottom. A huge counterweight tethered to the bottom of the structure prevents the habitat from capsizing during storms. Atmospheric craft and shuttles from orbit may land at flight decks near the base of the outriggers. 500,000 people live aboard Octavia.

> **Venusian rumors**
> [Incoming Message. Source: Anonymous]
> [Public Key Decryption Complete]
> We need you to investigate some odd rumors circulating about activity on the Venusian surface. According to reports, an Omnicor research team went missing about a week ago. Unlike many Venus surface teams, these weren't teleoperated bots but actual synthmorph-sleeved researchers operating away from the safety of an aerostat's tether—which is suspicious behavior itself. Search parties have turned up no sign of the missing morphs, but scuttlebutt says they ran into signs of recent TITAN activity that have them freaked out. I haven't found any evidence to back this up, yet—it could just be some misinformation to keep people from digging around part of the surface. I've heard that some security corps have some quantum data caches buried away down there. Looking into this may require getting a hold of some heat and pressure resistant synthetic morphs.

### Aphrodite Prime

One of 20 smaller aerostats, Aphrodite Prime hovers 54 kilometers above Aphrodite Terra. It is a center for Venusian tourism; fully a quarter of this aerostat is a resort for wealthy off-world visitors. Aphrodite Prime

is also the primary research station for the design and creation of life forms adapted to live in the Venusian clouds. This aerostat has a population of 300,000 and features closed-environment test aviaries populated with clouds of air plankton and schools of recentlydesigned flying squid and balloon fish.

### 3.11.6 Earth

Ecologically devastated and infested by the weird spawn of the TITANs, transhumanity's homeworld doesn't get many visitors. Earth's once-populous urban regions are massive sprawls ruined by war and heavy weather, infested with dangerous artificial life and the occasional survivalist gang. Elsewhere, irradiated blast zones and desolate wasteland prevail. Due to harsh climatic conditions, the wilderness has been slow to reassert itself, and vast swaths of dead forest or burned grassland are common sights.

Even from orbit, Earth shows deep scars. Breaks in the sooty cloud cover created by orbital bombardment during the Fall reveal continents ravaged by coastal flooding, desertification, and radical temperature shifts. The only known detonation of an antimatter bomb within a planetary atmosphere, centered on what was the Chicago-waukee Metroplex in North America, left a crater over 200 kilometers wide wherein most matter was instantly vaporized. Craters left by mass driver bombardment dot the surface as well. Mass die-offs of lynchpin species like honey bees and krill destroyed entire ecosystems, leaving vast swathes of barren land and sea inhabited by only the most adaptable species. Most of Europe is sub-artic; much of Africa and North America, desert. Ironically, transhumanity's deployment of nuclear weapons against TITAN surface installations arrested the effects of global warming by creating a nuclear winter. Nuclear attacks against Earth have ceased, but the Lunar mass drivers still occasionally hurl captured asteroids at suspected surface works created by remaining TITAN war machines. In any case, the damage from humanity's warming of the globe was already done. The patterns of life on Earth, and the very face of the planet, have been irrevocably rewritten.

Earth once had multiple space elevators in operation, but with exception of the Kilimanjaro beanstalk, the others were destroyed during the Fall, wrapping around the planet as they crashed to Earth, leaving swathes of destruction.

#### Population

Earth's population is a matter of speculation. The reclaimers and Lunar authorities, both of whom spend a great deal of effort monitoring Earth, agree that surface energy emissions suggest a population of about one million once-humans living as servitors to the TITANs, although these numbers assume patterns of energy usage similar to those of pre-Fall humanity.

Though the Planetary Consortium claims that no survivors remain on Earth, reclaimer estimates guess that between 20,000 and 100,000 free humans remain. These numbers are hard to formulate, given the limited number of remote areas where humans could remain undetected while obtaining enough food to subsist. Some areas likely to conceal sizable remnant populations include the highlands of Papua-New Guinea, the Ozark Mountains of North America, and the jungle uplands of Vietnam and Laos, though it is also possible that certain underground and undersea settlements survive. Attempts to make contact with survivors have universally ended in disaster.

During the Fall, thousands of people unable to escape Earth resorted to having themselves backed up and transmitted off-planet. Many of these—along with some who had no backups—also put there bodies in cryogenic storage, hoping to wait out the Fall for rescue. Some reclaimers have speculated that dozens of these cryogenic facilities may still be functional.

#### Habitats

Earth had a mature orbital industry sector and a considerable population in orbit at the time of the Fall, with over a billion people living full-time in space. Earth orbit was one of the fiercest battlegrounds of the Fall, however, and hundreds of habitats and other installations were destroyed or rendered unusable. As such, Earth orbit and the Lagrange points are littered with the detritus of pre-Fall humanity. Derelict

habitats can mean tidy profits for intrepid scavengers, but many are also infested with TITAN spawn and hostile nanoswarms, making them incredibly dangerous.

To make matters worse, someone or something has unleashed a large number of autonomous killsats in Earth orbit to interdict would-be visitors. Some of these are repurposed pre-Fall military hardware, while others are newer construction. So far, no one claims responsibility for them. The Planetary Consortium is suspected, as they support and sometimes enforce a quarantine of the planet, but the possibility exists that the killsats may be TITAN relics or the efforts of another agency.

Despite the chaos of Earth orbit, numerous habitats remain active here, many of them participants in either the Planetary Consortium of Lunar-Lagrange Alliance. Dozens of formerly derelict habitats have also become home to squatters, some of them with criminal intent, others just looking to escape the squalor of life in the overcrowded Lunar-Lagrange habitats, even if it means taking a risk.

#### Fresh Kills

Essentially an armed-to-the-incisors scum barge, Fresh Kills is a salvage base near the edge of Earth's L5 point. The base is built around a huge central docking spindle with moorings for small craft and habitat modules in the center, and massive weapons batteries at either tip. Scavengers can moor their own craft or, at considerable expense, egocast in, resleeve at the facility, and hire shuttles for excursions. The gun batteries are articulated such that any craft showing signs of trouble can be hastily jettisoned and destroyed. 2,000 transhumans live on Fresh Kills, although the population is transient and fluctuates a good deal.

#### Paradise

Situated in a halo orbit at the Earth-Sun L1 point, Paradise was an exclusive spa and resort station for the ultra-rich before the Fall. In the wake of the Fall, Paradise fell on hard times, swarmed as it was with refugees and no longer an ideal vacation spot. Recently, however, Paradise fell back in favor with the inner system glitterati, who undertook measures to expel many of the lingering squatters and refurnish it as an elite social space. Recent rumors suggest the Consortium's Hypercorp Council has used Paradise for important face-to-face meetings.

#### Vo Nguyen

The Reclaimers maintain this station in high geostationary orbit, monitoring Earth and making plans for potential geo-engineering efforts. Vo Nguyen is a small O'Neill cylinder hidden in a dangerous cloud of space junk and protected by swarms of killsats, gun emplacements, and drones. It is occasionally used as a jumping off point for secret surface expeditions.

### 3.11.7 Luna

The first planetary body to host permanent human habitation, Earth's sole moon is home to the second largest population of transhumanity on a single planet and remains a lynchpin of culture and economic activity. Lunar history has been shaped dramatically by the Fall. Before the need to evacuate Earth arose, it was expected that the Moon would remain largely an automated mining concern, never attaining a population of more than a few million. Luna was never seen as an economically viable location for colonization, the focus instead falling on Mars and the outer system.

When the Fall came, every polity that couldn't hope for a shot at Mars or elsewhere set its sites on Luna. The Indians were the only great power that had invested heavily in Luna. The other three major settlements, Erato, Nectar, and Shackle, were multinational and hypercorp concerns with no strong national affiliations. These three cities swelled overnight into polyglot refugee camps, while the Indian settlement, New Mumbai, was nuked black by the corps when it became apparent that a TITAN infection had taken hold there.

Bereft of nationhood, Lunars developed their own resourceful, tough-minded culture which has emerged as a counterbalance to the radicalism of the outer system and the excesses of Mars.

Transportation on Luna is largely by suborbital rocket, although trans-sonic bullet trains also operate along shorter routes. The major space port is at Nectar. There is also a skyhook—a massive orbiting satellite spaceport that drags a massive tether, which acts as a space elevator along a track running across the Lunar surface south of the equator. As a result, many smaller cities lie along the skyhook track.

### Fashion/Design

Nectar is one of the three fashion/design capitals of the system (along with Noctis on Mars and Extropia). The Lunar design houses have two major advantages: an inventive population and a low planetary gravity that makes it easier to design for the low gravities that prevail in much of the system. Some habitats elsewhere in the system even choose a rotational speed that simulates Lunar gravity in order to get the greatest benefit from Lunar designs.

> **Tilion's Jupiter brain**
> [Incoming Message. Source: Anonymous]
> [Public Key Decryption Complete]
> Our investigation into codename: TILION's Lunar research activities has confirmed our suspicions. The hypercorp is engaged in experiments to convert confined spherical masses in the Lunar interior into testbed micro-Jupiter brains. The silicate-rich Lunar crust makes the locations they have chosen ideal for the project. Though we have not verified it, we believe that TILION not only followed the trail of TITAN research into this area, but is in fact in possession of a small cache of TITAN-made computronium. There is no saying what the TITANS may have been using this cache for, what it may store, or what may occur if TILION completes the project and brings the micro-Jupiter brain online. Fortunately, time seems to be on our side, and we have several weeks if not months before any significant part of the project is activated. We will continue to infiltrate and learn more, but we strongly suggest an erasure squad be moved into position and placed on standby.

### Helium-3 mining

Although it's not the richest place to mine He-3, Luna has such good infrastructure for extraction and distribution that it more than makes up for the fact that Luna is very poor in hydrogen for more conventional forms of fusion. Unlike the vast reserves of the gas giants, however, the amount of readily extractable He-3 in the Lunar regolith is finite. Some of the richer deposits are already tapped out, and concerned Lunars consider their world's future after these deposits are exhausted a major issue.

### Finance

The Lunar banks are the oldest (and thus richest) in the system, though hypercorps like Solaris are close on their heels. Interestingly, the rise of the reputation economy in the outer system has not presented as much of a problem for these banks as one might have expected. Lunar banks got hip to the reputation game long before the Martian financial institutions and moved in to capitalize on it immediately. By the time Martian banks knew what was going on, Lunar financial institutions had struck deals with the Extropians and dominated all of the points of exchange where favors could be bartered for cold, hard cash between inner system corp types and outer system anarchists. The same genius fueling Lunar design created a complex barter to cash network that almost everyone uses. While some autonomists find it infuriating that they have to deal with a monolithic banking system to get by in the inner system, others are simply happy to deal with the Lunars instead of the Martians for this service.

### Erato (Eratosthenes)

Erato (population 5 million) is a major mining center consisting of a series of heavily shielded surface domes and a vast underground city. Erato is centered around the Eratosthenes crater on the southern edge of the

Mare Imbrium (Sea of Showers), in the northern hemisphere of the Terra-facing side of Luna. Erato has access to both the rich titanium deposits of the Mare Imbrium and fields of Helium 3-abundant regolith.

Erato is one of the oldest mining settlements on Luna and one of the first to become commercially viable. As such, many of the Lunar banks are centered around this city. The vaulted heights of the Great Cavern of Erato, originally excavated by a Sino-European conglomerate, reach a height of 1.5 kilometers at the apex, leaving room for a teeming city of gardens and towers grown from Lunar silicates and industrious nanites, lit from above by sunlight entering via great mirrored vents.

#### Nectar (Nectaris)

Nectar (population 9 million) lies about 100 kilometers due east of Theophilus crater on the Mare Nectaris (Sea of Nectar) in Luna's southern hemisphere. Nectar is a design powerhouse, home to the great Lunar design houses that set fashion and design trends for much of the solar system. Due to its location relatively close to the Lunar equator, Nectar also hosts Luna's primary long-haul space port and is on the pickup path for the Lunar sky hook.

#### New Mumbai containment zone

The incineration of the New Mumbai colony with nuclear weapons during the Fall to prevent the spread of TITAN infection left a scorch mark roughly 100 kilometers in diameter on the face of Luna that is still visible from high orbit. The colony was a heavily automated Helium-3 mining station, located in the midst of rich Helium-3 fields on the edge of the Mare Moscoviens. It remains a heavily-patrolled quarantine zone to this day.

#### Shackle (Shackleton-New Varanasi)

Shackle (population 6 million), built in and around the south polar Shackleton crater, is centered around one of two major water extraction operations on Luna. New Varanasi, the city of temples, is the most impressive section of the city. Shackle was the other major site of old Indian influence on Luna, and with the destruction of New Mumbai holds special importance to descendants of the Indian diaspora. New Varanasi is a monumental artificial cavern complex with an intricate canal system fed by melted ice from the polar caps above. As a source of lifegiving water, it now holds the same importance to the Hindu faith once ascribed to the River Ganges on old Terra. Survivors of other Indian religions, such as the Jains and Sikhs, have also made their temples here. This makes Shackle a major pilgrimage site; tourism is the major industry after water extraction. A small herd of Indian elephants is a major attraction, and the elephant god Ganesha, Remover of Obstacles, is extremely popular on Luna, even with non-Hindus.

### 3.11.8 Mars

Earth was the cradle of transhuman civilization, but Mars, with a population of 200 million, is now its heartland. When humanity began its spaceward diaspora, Luna was its first stop. Yet while Luna boasts a sizable population, Mars was the first world humans settled where they could thrive entirely on locally available resources. During the first few decades, the early Martian settlers dwelt in tin can hab units, extracting methane from the local atmosphere for rocket fuel and water from the Martian permafrost, farming in inflatable greenhouses, and eventually manufacturing enough greenhouse gases to warm the planetary climate to the point where transhumans could walk the Martian surface unprotected, save for oxygen respirators.

The second phase of the great project of terraforming Mars—husbanding plant life and microbes engineered to rapidly replace atmospheric carbon dioxide with oxygen—was already underway at the time of the Fall. A belt of orbital mirrors helps to heat the planet by focusing the sun's rays. The spread of plant life is a long-term project that will take several centuries to produce a fully breathable atmosphere, but the nigh-immortal transhumans of Mars are prepared to be patient. A new homeworld is worth the wait.

Research into new plants and microorganisms capable of releasing oxygen and nitrogen into the Martian atmosphere at an ever-accelerating pace is a major focus of economic activity.

In the meantime, the red planet is a place of startling contrasts, from the stark beauty of its mountain ranges and high desert, to the slowly-greening bottomlands of the equatorial Valles Marineris canyon system. In these bottomlands, oxygen levels are slowly rising, and liquid water can now be found in canals that had already been dry for millions of years when transhumanity's ancestors came down from the trees. Mars is a popular destination for travelers from around the system. Many Martians accrue wealth by operating lavish hotels, offering tours of historical sites, and leading wilderness expeditions to the rugged highlands and vast deserts of the untamed Martian frontier.

Mars now sports five vast, domed cities, mostly in the equatorial regions, along with numerous smaller settlements. Settlements are connected by surface roads, a network of near-sonic maglev trains, and air/spaceports from which suborbitals, airships, and near space rockets fly on regular schedules. Thanks to the abundance of methane fuel and the one-third Earth gravity, transhumans on Mars have finally got their flying cars as well, and all settlements have well-delineated rights of way for these vehicles. Meanwhile, in the wild uplands, planetologists and terraforming engineers dwell in small villages, living the simple life in ruster morphs while seeing to the continued development of the Martian climate and atmosphere.

As a partially terraformed planet with vast tracts of unused land, Mars is one of the few places that can offer new sleeves to infomorph refugees. Martian brokerage houses do a brisk business in the purchase and resale of infomorph contract labor, with agreements (for some) leading to eventual sleeving. This has led to a sizable Martian underclass, however, organized as a growing resistance movement under the Barsoomian banner (though the hyperelite socialites disparagingly call them "rednecks").

**Regions**

Mars is broadly divided between the lowlands of the north and the highlands of the south, which in many places are separated by dramatic cliffs up to two kilometers high. Mars has seasons just as Earth, and both north and south poles have permanent ice caps that persist despite transhumanity's success in warming the planet. Both regions present obstacles to terraforming. The northern plains are open and windswept, while the rugged southern uplands remain a difficult terrain for life to gain a foothold. Even so, tough Earth species like cacti and succulents are able to grow in the best spots.

**Ma'adim Vallis:** This deep canyon system on Mars holds one of the Planetary Consortium's most treasured possessions: the Martian Gate. This Pandora Gate was originally discovered by nomadic Barsoomians, then violently wrested from their hands by hypercorp troops—an event that still rankles the rednecks. As different hypercorps themselves nearly came to blows, the Hypercorp Council was forced to step in and offer a resolution that all could agree to. A new hypercorp was founded—Pathfinder—which would control exploration and exploitation of the gate and resources beyond, with special privileges and rights given to Planetary Consortium members. The Martian Gate is now a staging point for numerous exoplanet colonies, though some fear the prospect of keeping a presumed TITAN artifact operational on transhumanity's most populous planet.

**Olympus Mons:** Mars' most notable landmark is the mighty shield volcano Olympus Mons, on which the first—and still principle—Martian space elevator was constructed. Similar in shape and origin to Earth's Hawaiian Islands, but now dormant, Olympus Mons is one of the highest mountains in the solar system, rising 27 kilometers.

Olympus, the settlement in the volcano's caldera around the base of the space elevator, was once the chief city of Mars, but waned in popularity as a place to live when terraforming made other regions more attractive. A maglev train from Olympus takes a little over three hours to reach Noctis; air travel is even quicker. Despite the waning of the city, the space elevator still sees heavy use.

**Valles Marineris:** Most of transhumanity's terraforming efforts center around the winding Valles Marineris canyonlands, which twist and turn over 4,000 kilometers east-to-west along the Martian equator. In these

relatively warm bottomlands, liquid water is becoming abundant and the land is green with hardy Terran plant species like crab grass, dandelions, and towering Douglas firs (which botanists estimate may reach heights of 180 meters in the low Martian gravity). 75% of the transhuman population of Mars lives in this region, giving it the highest density of transhuman habitation in the solar system.

**The Zone:** Officially labeled the TITAN Quarantine Zone, the TQZ is a large area stretching from the smooth plains of Amazonis Planitia (between the Tharsis and Elysium volcanic areas) and southeast to Arsia Mons (just west of Noctis). This zone is known to be crawling with leftover TITAN machinery: warbots, nanoswarms, and other dangerous things. Several devastated habitats lie in this region, including the former Islamic stronghold of Qurain. Few dare venture here, though some rumors suggest that Barsoomian smugglers make use of the Arsia Mons caves and even scavenge for TITAN tech, despite the risks. Planetary Consortium drones keep a vigilant eye on the Zone's borders, though for unknown reasons the TITAN relics rarely stray beyond its bounds.

### Ashoka

Ashoka is located in a crater in the Ares Vallis region about 3,000 kilometers northeast of Valles-New Shanghai, not far from the landing sites of the early Viking and Pathfinder probes. The town is a popular spa and spiritual retreat for Martians wanting to revisit their pioneer roots. It is also an active terraforming station and a major point of contact between the seminomadic Barsoomian culture of the high desert and the settled Martians of the equatorial canyonlands. 10,000 scientists, historians, terraforming workers, and spiritual gurus live in the town and surrounding area. A major attraction is a museum housing the Pathfinder lander and the Sojourner rover (which was still operational when humans landed and discovered it circling endlessly in a crater). The Viking lander is in another museum a short monorail ride from town. In a move that infuriated historical purists, all three machines were given modern hardware upgrades when discovered and now house AIs who act as historians of early Mars exploration. Sojourner is particularly friendly and sometimes leads lucky groups on walking tours of early landing sites.

### Elysium

Located in the Elysium and Hyblaeus Chasma in the north of the Hesperia region in Mars's eastern hemisphere, Elysium is the entertainment capital of the system and the largest Martian city outside of the canyonlands of the equator. It is also the most physically remote of the large Martian cities, though transhumanity's advanced transportation technology (suborbital flights and rocket flight from habitats above) make this remoteness a trivial quality.

Elysium and Hyblaeus Chasma together make up a 250-kilometer long canyon system in the shadow of Elysium Mons, a 14-kilometer mountain located about 200 kilometers northeast of the city. In between is the Zephyrus Fossae, an undulating, windswept lava plain. The city was the vision of one person, Zevi Oaxaca-Maartens, an eccentric entertainment magnate who was intrigued by the close proximity of the eminently terraformable Chasma to the unspoiled Hesperian terrain.

The city is only 30 years old but already boasts a population of 9 million transhumans. Elysium is mostly built into the canyon walls of the Chasma, sprawling over a 75-kilometer stretch, all of which has been domed over. Unlike the big domed metroplexes of the south, Elysium takes advantage of the canyon walls, which are close enough together that rather than building free standing domes, the builders have simply built great enclosing arches to completely cover the canyon. These expand northward year by year as the city grows. From low orbit, it looks like a great, glistening serpent.

The Martian city of Elysium is the spiritual successor to old Terra's Los Angeles as the entertainment capital of the solar system. Glamorous stars and blood drinking producers, coupled with a healthy dose of outrageous (if often vapid) transhuman creativity have made Mars an unrivaled media powerhouse. Elysium may boast more exalt and sylph morphs per capita than any other transhuman city.

Image is everything here, and to visitors it may seem as if everyone in this city is either blindingly beautiful or calculatedly ugly. The most successful performers and entertainment tycoons live lives of glittering

privilege that would make the richest gerontocrat in New Shanghai mildly envious. Everyone else, from up-and-coming game producers to the virtual ero performers, has to hustle constantly.

### Noctis-Qianjiao

With a population of 13 million, Noctis-Qianjiao is the major metroplex in the west of the Valles Marineris region, an area known as Noctis Labyrinthus. Although not as hospitable as the Eos region in which Valles-New Shanghai lies, Noctis Labyrinthus is considered prime real estate for its gorgeous scenery and well-developed river systems. The metroplex boasts two major domes: Qianjiao, on the northern bank of the River Noctis, and Noctis City (normally just called "Noctis") to the south. Connecting the two domes and spanning the river is a sprawling network of lesser domes and souks, although these have been pushed north and south over the years as the planet warms and the river grows wider.

Noctis-Qianjiao is the center of the Martian design and fashion industries, which in the abundant Martian economy arguably makes the city as important as much larger Valles-New Shanghai. This settlement's proximity to the Zone sometimes alarms visitors, but there have been no public incidents to cause concern so far.

> **Martian manhunt**
>
> [Incoming Message. Source: Anonymous]
>
> [Public Key Decryption Complete]
>
> Those deaths you asked me to look into? It's looking worse than we feared.
>
> I took a buggy car out to the Zim settlement. It's just a collection of tin can modules, supporting a small terraforming ecostation and facilities for nomadic rednecks. On average, it's home to 150, if you count the 20 or so pleasure pod AIs that serve as local "entertainment."
>
> A week ago, a nomad known as Hassan Naceri rolled in. He's a regular, word is that he runs a lone courier service for the Barsoomians. On this recent visit, though, his behavior was off. He was nervous and agitated. He told one drinking buddy that he'd been forced to hide out in the Zone for a few days and the experience had put him on edge.
>
> Turns out Naceri had run off with a ruster morph without working out his full indenture to Fa Jing a few years back. The ego hunter showed up in Zim and Naceri lost it. He killed the ego hunter and everyone else in the room.
>
> We found a spime's sensor records that show Naceri transforming. He also killed half a dozen people simply by looking at them.
>
> That's right. This bugger's infected.
>
> The Martian Rangers are hot on his trail, but they don't know what they're dealing with. So we're off to try and catch him—it—first. Wish us luck.

### Olympus

Olympus, with a population of 1 million living in a space designed to accommodate 6 million, is something of a ghost town. The former principal city, built in the caldera of Olympus Mons around the space elevator, is now fallen into disuse. As the temperatures rose and the climate improved in the Valles Marineris canyonlands, most of the population left the windswept caldera for more hospitable surroundings. Olympus is not and never was a large domed city, consisting instead of a souk-like network of minor domes and antiquated tin can hab modules.

Low atmospheric pressure and bone-freezing temperatures at the city's altitude of 27 kilometers mean that most transhumans venturing outside the souks and hab modules still need the equivalent of light vacsuits to survive. Martian Alpiners, a rare morph found in few other places, are not uncommon here due to the harsh conditions.

The city center is well-maintained and carefully overseen by the Olympus Infrastructure Authority, a minor hypercorp that operates the space elevator. The outskirts are economically depressed and sometimes dangerous, mostly deserted and populated by squatters, indentured downloads on the run, and other people who really want to be left alone. Occasional outbreaks of dangerously mutated artificial life are one of the

few reasons for which the Authority bothers to intervene in the outskirts. Otherwise, the old tin can habs and their strange inhabitants are left to decay.

#### Progress (Deimos)

Progress is one of the largest Cole bubbles in the Solar System. With 8.5 million residents, it is second in population only to Extropia in the belt. Progress was created when Fa Jing evicted all of the former residents from the Martian satellite of Deimos, excavated the inside of the moonlet, and used a massive solar array to convert it into a bubbleworld. From an engineering standpoint, Progress is something of an embarassment. The habitat was originally meant to exceed Extropia in size considerably, but difficulties with heating and spinning Deimos forced Fa Jing to abandon their efforts early or risk the moonlet breaking apart.

Progress is nonetheless an impressive habitat, home to hypercorp glitterati and an outpost for a host of major political and economic concerns. Its sister moon, Phobos, remains a warren-like tunnel habitat due to the presence of multiple legal interests unable to agree upon the disposal of the satellite.

#### Valles-New Shanghai

The principle city of Mars, Valles-New Shanghai is transhumanity's largest planetary metroplex, with 37 million inhabitants. Valles-New Shanghai lies in the heavily terraformed Eos region in the east of the Valles Marineris canyon system. The metroplex is comprised of five major domes connected by a network of Martian souks. The souks are a unique architectural feature of large Martian cities, consisting of covered thoroughfares and galleries lined with bazaars, eateries, and squats. It is said one can find anything if one spends enough time walking the souks.

The domes themselves are tamer, with artificial waterways (many of which now connect to the tenuous rivers etching the surface of the Eosian bottomland), grand architecture, residential mini-arcologies, entertainment complexes, and hypercorp conference centers. The most impressive by far is the Bund, the larger and older of two domes making up the city of New Shanghai proper. New Shanghai is roughly bisected by the twisting Ares, an artifical river that helps regulate the dome's climate. Near its center is an almost brick-for-brick duplicate of the original Bund from the destroyed Earth city of Shanghai.

The other four domes are Little Shanghai (a newer, smaller dome adjacent to the Bund), Valles Center (a business and financial center that rivals the Lunar banks of Erato and Nectar), New Pittsburgh (also called the Burgh, a hub of research and planet-side industry), and Nytrondheim (housing major entertainment districts).

Valles-New Shanghai is transhumanity's wealthiest population center, a hotbed of art and culture, and one of the system's great centers of hypercorp activity. The populace includes an extremely high percentage of gerontocrats, but their stifling influence on culture, economic mobility, and the legal system is only one force among many in a city of 37 million people. The city has expanded so much to accommodate its exploding population since the Fall that new construction is a constant. Crime and corruption are widespread, though the worst of it is contained to Little Shanghai. Valles is a place where dreams are made and broken every day, if not every hour.

### 3.11.9 Martian Trojans

Not to be confused with the much larger Jovian Trojans, the Martian Trojans are a small group of mostly rocky asteroids trailing and preceding Mars at its L4 and L5 points.

#### Qing Long (Azurez Dragon)

Qing Long, with a population of 2 million, is the largest O'Neill habitat in the system. It is situated among the Trojans at the Martian L5 point. Qing Long has its roots in the Chinese Mars colonization effort. Despite its exceptional size, it is one of the oldest habitats of its type, having been built almost entirely from metal-rich asteroids mined near its present location.

Qing Long is a major underworld haven. The habitat's administration is beholden to several criminal organizations who normally refrain from killing one another. The habitat nominally obeys some hypercorp principles, such as limited access to cornucopia machines, forking, and AGIs. However, thriving grey and black markets enable people with the right connections to acquire just about anything here.

### 3.11.10 Asteroid belt

Spread out over a massive region between the orbits of Mars and Jupiter, the belt contains a few hundred asteroids greater than 100 kilometers in diameter, over a thousand objects greater than 30 kilometers in size, and countless smaller ones. Despite this, the total mass of asteroids in the belt is only a fraction of one of the inner planets, meaning that asteroids are spread out over great distances. A spacecraft flying through the belt is highly unlikely to encounter an asteroid unless it deliberately navigates toward it.

#### Resources and economics

The rich, easily accessible mineral deposits in the Belt were a major link in transhumanity's first steps toward the outer system. Automated mining and high-impulse ion boosters enabled outer system colonists to move metal-rich Main Belt asteroids into the orbits of Jupiter, Saturn, and beyond, where metallic asteroids are much scarcer. This activity continues to this day as transhumanity pushes further out into the system.

#### Habitats

Hundreds of small habitats, mostly involved in prospecting activities, dot the belt. Distant from Earth, settlements in the belt were largely spared the devastation of the Fall. Both hypercorp and autonomous outposts flourish here. Derelict habitats abandoned when nearby asteroids were boosted into the outer system or depleted are common here as well, although some of these are now occupied by residents who are best left to their solitude.

#### Ceres

One of the system's three dwarf planets (along with Pluto and Eris), Ceres is almost 1,000 kilometers in diameter and hosts a population of almost a million. Unlike most Main Belt asteroids, Ceres has an icy crust with a layer of liquid water beneath it, like a miniature version of Jupiter's moon, Europa. With its abundant water, Ceres has a major role in resupplying other stations in the belt. Similar to Extropia, Ceres operates largely along anarcho-capitalist lines. However, the Hidden Concern, a cartel run entirely by uplifted octopi, holds sway in the sub-crustal sea and maintains a stranglehold, as it were, on water extraction operations. Cerean octopoid morphs are specially adapted to survive in the ammonia-rich waters of the Hidden Sea.

#### Extropia (44 Nysa)

This massive beehive habitat is a major crossroads and anarcho-capitalist/mutualist marketplace. Extropia is a neutral free city whose infrastructure and social fabric is maintained by a loose association of anarcho-syndicalist affinity groups. Extropia's neutrality hinges on strategic alliances between key local figures, their networks, and an unusual array of outside interests that include the Lunar banks, technolibertarian factions, and outer system colonies dependent upon raw materials exported from the belt. The hypercorps use Extropia as a tax shelter and a haven from which to do illicit business. There are no laws or government as such; visitors are advised to register with an insurance and security provider. Named after one of the first transhumanist movements, Extropia is considered a utopia for transhumans looking for body modifications. AGIs and forking are accepted and allowed here. The transhuman population is nearly ten million.

#### Nova York (Metis)

One of the more unusual near-weightless habitats is Nova York, the main city on Metis, a large nickel-iron and silicate asteroid located in the main belt. Nova York, the third largest habitat in the main belt, is a

thriving metropolis of 500,000, with the main portion of the city located in a spherical cavern approximately four kilometers in diameter, the top of which is two hundred meters beneath the asteroid's surface. Lit during the day by a series of huge light tubes in the outer walls, at night the lights of the buildings cause the surface of this sphere to resemble an enormous geode. The habitat's basic design consists of many thousands of exceptionally tall and fragile-looking buildings that extend between one hundred and fifteen hundred meters above the surface, as well as a few buildings that stretch from one side of the cavern to the other. In Metis's minute gravity of 1/140th of a g, up and down have little meaning, and even relatively fragile buildings are in no danger of falling down. The vast majority of the buildings, including ones more than one kilometer tall, are made from thin plastic panels over a durable supporting framework. These buildings jut out at all angles from the sphere.

Many inhabitants of Nova York move from one building to another by jumping, and a single leap can carry someone many hundreds of meters. Residents do not worry about falling—the combination of air resistance and exceedingly low gravity means that even someone falling from the top of the cavern to the bottom is in no danger of injury. In this environment, the only real meaning of up and down is that down is where you look for objects to come to rest (as long as an air current does not pick them up and blow them around).

### 3.11.11 Jupiter

Large enough that it could almost have formed the nucleus of a protostar in its own right, Jupiter's massive size makes the Jovian System one of the most challenging places in the system to colonize. Jupiter's powerful magnetic field means that its inner moons— and the outer ones, when their orbits pass through its immense magnetotail—are bombarded with enough ionizing radiation to kill transhumans not protected by the heaviest of shielding within a matter of hours. There are sixty-three moons and moonlets in the Jovian system, but only the well-explored, populous, regular moons are described here.

#### Resources and economy

Jupiter's powerful gravity well is a major hindrance to gas mining in the planet's atmosphere, as even craft that do not succumb to the violent, centuries-long atmospheric storms can achieve escape velocity with only the most powerful propulsion systems. Given the need for heavy shielding on such craft, gas mining on Jupiter is not nearly as efficient as on Saturn. Jupiter has a tenuous ring system, much less dense than Saturn's, which extends out for 20,000 kilometers around the planet, encompassing the orbits of its two closest moonlets.

However, Jupiter's gravity is also a valuable resource. Craft bound for Saturn and beyond can slingshot themselves outward by circling the planet to pick up velocity, cutting months or years off their trips. The heavily militarized Jovian Republic levies tolls against all spacecraft using Jupiter's gravity to pick up velocity, including asteroids under propulsion. This protection money is the Junta's primary source of revenue. Planetary Consortium ships generally accept the payment as part of operating expenses. Other factions are not so cooperative, and the Junta regularly seizes or destroys blockade runners.

#### Habitats and moonlets

Most of Jupiter's moons are really captured asteroids, lacking the size and geological complexity of planetary bodies. All are occupied. Some were converted to habitats; others host only Junta military and mining outposts. The Jovian moonlets consist mostly of carbonaceous rock, poor in metal, with some of the larger moonlets having layers or even cores of ice. Beehive habitats and Reagan cylinders predominate in the Jovian system. Reagan cylinders (called "sarcophagus habs" by every other faction) are an inefficient variation on the O'Neill cylinder in which excavators hollow out an immense, cylindrical cavern in a rocky asteroid and then alter the asteroid's rotation with external thrusters to simulate gravity.

Other habitat types are rare in Jovian orbit, especially within 2 million kilometers of the planet, where the radiation is strongest. For a bioconservative faction unwilling to adopt radiation-resistant morphs, the Junta is in a poor location. Shielding their populace beneath tons of rock is a necessity. Despite its military

hegemony, the Junta can't control all of Jovian space, and there are things it can't do on its own—like exploring Europa. A number of unaligned habitats and surface settlements exist in the ring system and the orbits of the Galilean moons.

The Jovian Republic has renamed Jupiter's moons after various neo-conservative heroes from Earth's history. From closest to most distant, the moonlets are Metis (Bush), Adrastea (Fairway), Amalthea (Solano), Thebe (McAllen), Leda (Chung), Himalia (Pinochet), Lysithea (Friedman), Elara (Buckley), Ananke (Nixon), Carme (Kissinger), Pasiphae (Schilling), and Sinope (Garcia). All are tiny, between 5 and 100 kilometers in diameter.

#### Amalthea (Solano)

The largest of the moonlets, hollow Amalthea is probably the most livable sarcophagus habitat due to the large lake created from its icy core. Living on Solano carries some prestige among Junta citizens. Rumor has it that most of the residents are well-placed RAND think tank personnel, most of whom work on defense projects. A fusion-powered axial light tube illuminates the 30-kilometer diameter central cavern, whose landscape is patterned after the subdivisions and office parks of an early 21st-century suburb. All buildings have enviroseaing so that the occasional bouts of environmental sepsis resulting from the poorly regulated interior ecosystem can be purged with toxin bombs. Less fortunate support personnel dwell in the beehive warrens crisscrossing the moonlet's crust between cavern and surface. Like most of Jupiter's moonlets, Amalthea's space crawls with patrol craft and killsats, making approach for unauthorized craft problematic at best. 1.5 million transhumans live on Solano.

#### Io

Beneath Io's tenuous, patchy atmosphere of volcanic gases and neutral atomic dust lies a barren, grayish yellow, rocky surface coated with a thin frost of sulfur dioxide. Tidal heating caused by gravitational interaction with Jupiter makes Io the most volcanically active body in the system—so active that the meteor cratering found on every other planet and moon is completely absent on Io. Massive volcanic calderas, lakes of molten rock, and geysers of sulfur dot the surface, with eruptions and accompanying seismic activity lasting months or years. Volcanic zones on Io reach surface temperatures of up to 1,500 degrees Kelvin, hotter than any body in the system.

For all that, transhumanity's worst peril on Io is radiation. Ejecta from geysers and volcanoes flow with Jupiter's magnetic field to form a titanic, toroidal flux tube that rotates with Io around the gas giant. Travelers to Io must either use the heaviest radiation shielding available or resleeve into synthetic morphs.

Transhuman activity on Io centers around scientific research and harvesting the volatiles ejected by Io's geysers, particularly sulfur. Bases tend to be modular and mobile due to the ever-changing seismic activity. The Junta's most notorious prison, Maui Patera Rehabilitation Center, is dug into a (mostly) extinct caldera wall north of the equator.

### 3.11.12 Europe

Europa has no atmosphere and lies within the fearsome magnetosphere of Jupiter, and as such its surface is bombarded with enough radiation for an unshielded transhuman to receive an irrevocably fatal dosage within a few days—much faster when Europa's orbit passes through Jupiter's immense magnetotail. As a result, transhumans on Europa dwell beneath the icy crust, largely in the ocean below, adopting a variety of aquatic and amphibious morphs for survival. The only surface facilities are the heavily-shielded ice elevator heads at Conamara Chaos and several other points through which reactor mass and other crucial supplies can be delivered to the Europans below.

Transhumanity is still exploring and imaging the Europan ocean floor, a task complicated by the hideous pressures at work in these waters, which are ten times as deep as the Earth's oceans. A further surprise awaiting transhumanity was the terrain. The geology of Europa suggested that beneath the ice would be fathomless depths of black water ending at a depth of nearly 500 kilometers in a relatively flat, featureless sea bed. Were Europa a lifeless ball of ice and rock, this would be the case, but over the estimated billion

years since the rise of life on Europa, tiny lithoderms (analogs to Earth's coral) have built silicate reefs that rise to within a few hundred meters of the ice crust. It is on these biologically formed mountain tops, home to complex ecosystems, that the Europans have built their habitats.

While based on water-carbon chemistry like life of Terran origin, life on Europa is completely autocthonic, having originated beneath an impenetrable ice sheet that cut off Europa's subsurface ocean completely from outside. This is in marked contrast to Terran life, which many biologists have theorized might be the result of galactic panspermia, the slow diffusion of microbes through the vacuum of space aboard comets or asteroids. As such, the fauna of Europa are of great interest to transhuman bioscience.

#### Biosciences

Europa's lifeforms, unique perhaps in the universe, are its greatest treasure, and transhumanity's efforts to catalog them are only beginning. The rush to exploit Europan biodivesity puts the Jovian Junta in an uncomfortable situation. While they control space traffic and commerce in the Jovian system, they lack the native talent to take real advantage of knowledge gleaned from Europa. At first, they engaged in hamfisted excise operations aimed at squeezing revenue out of knowledge exports. But once farcasters and egocasters came online below the ice, this type of extortion no longer worked. Now the Jovians have shifted to a two-pronged strategy of levying tariffs on new equipment and people brought down the ice elevators by hypercorps and research collectives, and of holding the entire population of the moon hostage by refusing delivery of key resources like reactor mass and rare elements if protection fees are not paid.

#### Habitats

Europan habitats take two forms: fortified fishing and farming havens clinging to the spires of the lithodermic reefs, and spherical bubble warrens constructed by boring into the lower reaches of the ice crust and shoring up the hollows created. The latter are the only air-filled spaces beneath the ice. The largest warren is Conamara, at the base of the Conamara Chaos ice elevator. Conamara is surrounded by five nearby reef havens, also considered part of the habitat. The total population is 1.5 million.

### 3.11.13 Ganymede and Callisto

Nearly as large in size as Luna, but darkly colored and not as heavily cratered, Ganymede and Callisto are very similar worlds. Neither is as dense (nor has as much gravity), as their mantles consist of more ice than iron rock. Both possess abundant volatiles and water (albeit frozen), making them ideal candidates for habitation. Ganymede, with its differentiated surface of rocky and icy terrain, has an iron core and thus a faint magnetic field. Callisto, the smaller of the two, is composed mostly of icy silicate clays. As on Luna, most cities on Ganymede and Callisto are built below ground to shield them from meteor impacts (and, on Ganymede, from Jupiter's radioactive bombardment).

While within the "protection" of the Jovian Republic, both moons are a patchwork of city-states. Some are full members of the Jovian polity, while others are only tolerated. Ganymede tends to swing more heavily toward the Junta, as its citizens still see the Junta-maintained infrastructure—accurately or not—as necessary in such a hostile environment. Callisto, outside the worst radioactive effects of the Jovian magnetosphere, is an easier place for technoprogressivism to gain a foothold.

#### Hyoden

The nucleus of this city-state was a research station founded by a coalition of Pacific Rim nations in Callisto's Valhalla region, a massive primordial impact zone where the icy subsurface lies exposed, simplifying extraction of clean water. When the Fall came, Hyoden, which had long faced labor shortages, opened itself to those refugees who could make it to Jupiter. Now Hyoden has two million inhabitants, making it the largest city-state on Callisto and the largest non-Junta state in the Jovian system. Hyoden is itself heavily militarized, as the tendency of the local authorities to turn a blind eye toward operatives using their territory for forays against the Junta makes for uneasy relations with their powerful neighbor.

#### Liberty

Situated along the southern edge of the vast, rocky plain called Galileo Regio, almost on Ganymede's equator, Liberty (population 7 million) is the Junta's largest planetary city-state. It is closely tied to Liberty Station, a major shipyard and defense installation in geosynchronous orbit. Major industries include shipbuilding, space construction, fabrication, and security products and services. The Castle, the central security network point from which all surveillance data collected in the Junta is monitored and processes, is rumored to be in or near Liberty. Liberty is mostly underground, but it boasts a number of parks in armored surface domes. If one were to spend enough time topside, one would see the deceleration torches of incoming metal asteroids from the belt bound for the shipyards lighting up the sky several times a day.

### 3.11.14 The Trojans (Jovian Trojan and Greek asteroids)

The Trojans and Greeks are two 600 million-kilometer-long arcs of scattered, icy rock asteroids sharing the orbit of Jupiter. They orbit in the stable L4 and L5 points sixty degrees ahead of and behind the giant planet. Mars and Neptune also have Trojan asteroids, but when someone speaks of, "the Trojans," they're normally talking about the Jovian groups. In the early days, L4 asteroids (ahead of Jupiter) are named after Greek heroes of Homer's Iliad; L5 asteroids (trailing Jupiter) are named after heroes of Troy. Asteroids discovered more recently break the old convention, as there are far more objects in the Trojans than there were characters in the Iliad.

Politically, the Trojans and Greeks may be thought of as a collection of sometimes overlapping neighborhoods whose inhabitants tend to group around particular cultures, factions, and sometimes languages. A neighborhood in the Trojans might span anywhere from 250,000 to 2 million kilometers at its widest point. Within neighborhoods, almost everyone knows one other. Because of the wide dispersion of resources, Trojan habitats tend to be small—from one to two thousand people—and built largely along scum barge or cluster lines (although it is never advisable to refer to someone's habitat as a scum barge unless they refer to it that way first).

#### Resources and economics

Although the sheer size of the two regions means a lot of cultural diversity, anarcho-collectivism is a powerful meme here and the reputation economy is prevalent. On one hand, neighborhoods, habitats, and even individuals are expected to be self-sufficient. Unlike the denser Main Belt, the Trojans lack the safety net provided by pervasive transhuman presence. The ideal Trojan or Greek is a Neo-Renaissance being, incredibly competent in a wide variety of fields. A person who can't maneuver in zero g; maintain their gear, ship, and hab; and navigate between rocks and habitats can have a tough time surviving. At the same time, a spirit of cooperation prevails. Bartering services or even gifting them to gain reputation is common. Everyone appreciates a specialist, as long as they're not specialized at the expense of baseline self-sufficiency.

Prospecting and salvage are major activities in the Trojans, where metals and rare elements are scarce and settlers don't usually have the economic muscle to import raw materials from elsewhere. However, the Trojans are rich in silicates, volatiles, and carbonaceous materials. Necessity has led to many innovations in materials science. Beyond the simple problem of raw materials, the widely scattered habitats of the Trojans have to be wildly inventive on many levels to retain their independence. New robot, morph, and vehicle designs appear all the time, enabling an unusual array of business and leisure activities, like whaling (organizing a flash flotilla to rapidly mine asteroids and comets with erratic orbits as they pass near the Trojans), mekking (simulated—or sometimes real—combat between robotic suits or synthetic morphs on uninhabited asteroids with interesting terrain), and shrining (stealthing up on another habitat and resurfacing it with nanosculpters to create an art object—mostly a scum barge pastime).

#### Locus

Locus is the largest cluster habitat ever formed. It is still growing, with over one million inhabitants in the habitat proper and another million in the nearby suburbs of scum barges and small asteroid stations. Locus

is located in Cassandra's Reach, one of the denser regions in the L5 Trojans. The habitat is positioned at the center of mass around which the two asteroids making up the binary object Patroclus orbit one another. Both Patroclus asteroids are themselves inhabited and hold defense installations, mines, and refineries.

The design of Locus is very similar to the much smaller Lot 49, but Locus is eleven kilometers in diameter and somewhat irregular in shape, as growth along some spars is faster than others. A quarter of its total volume is cut out in a roughly conical shape all the way to the Amoeba, an immense, softly glowing sculpture at the center of the habitat. Some differences from smaller Trojan clusters are dictated by Locus's size. The immense structural spars radiating from the habitat's center are hollow, with arterial floatways and elevator-trams running inside of them. Lesser spars run between the arterial spars, providing more mooring points for modules. Adjacent to each arterial spar are wide "roads" leading to the edge of the habitat so that modules can maneuver out if the owners decide to leave.

Beneath the shimmering mesh stretched over the geodesic frame to keep out micro-asteroids, tens of thousands of small ships and habitat modules moored along the spars pulse with an ever-changing array of lights. Habitat modules and large ships are asked to stay out of the conical empty space. This space teems with small craft and people on thrustpacks or voidscooters as they cross the habitat, play zero-g games, or visit the free-floating spimes and sculptures that dot the area. The Amoeba, which periodically changes color and shape based on its resident AI's programming (often it looks like some sort of animal), serves as a central reference point for navigation. When someone gives the address for a module, it is as a point on a spherical coordinate system with the Amoeba at its center. Large ships and shuttles dock on the outer surface of the habitat, at the terminal points of the arterial spars.

Locus was founded by a joint anarchist-argonaut venture and was the fi rst major stronghold for the autonomist factions. Unlike Extropia, which has the tacit blessing of the Planetary Consortium and encourages the presence of security and insurance companies, Locus runs on a pure reputation economy. Security, maintenance, expansion, and defense of the habitat are all performed by volunteers. Inhabitants interested in security monitor incoming ships and operate crowdsourcing systems that dispatch volunteers to perform WMD scans on new arrivals. Ships that won't submit to a scan are asked to leave. If they don't, anyone who's designed a cool new weapons system recently is welcome to take a shot.

Locus is one focal point in a cold war between the hypercorp-aligned inner system powers and a loose coalition of outer system interests. While saboteurs from the Planetary Consortium and other hostile entities can and do occasionally cause trouble on Locus, the hypercorps are currently unwilling to attempt a direct military attack on the habitat. The first time they tried, the Planetary Consortium and the Martian city-state of Valles-New Shanghai sent a small expeditionary fleet. The interlopers were caught completely off-guard by a fierce and wellcoordinated defense. Six months later, they sent a much larger fleet. Help arrived from elsewhere in the Trojans and Greeks and from Titan, whose citizens took a dim view of any Planetary Consortium expansion beyond the belt. The Titanians now maintain a permanent base near Locus. Rumor has it they agreed to a mutual defense pact with one of Locus' citizens, possibly the famous programmer-armsman Teilhard Liu.

> "Welcome to Locus. You voluntarily assume the risk of organic damage or mental trauma by mooring here. You must bring or be capable of acquiring enough food, H20, oxygen, and shelter to survive for the duration of your stay in a harsh, asteroid-rich environment. Weapons of mass destruction are prohibited. Further guidelines for coexisting with your fellow entities are in the habitat survival guide. You and only you are responsible for yourself—learn to love it!"
>
> -— Locus Immigration AR broadcast
>
> "You have chosen the habitat Locus in the L5 Trojans as your destination, using the private carrier Atsuko van Vogt as your receptor. ComEx corporate policy requires us to inform you that the destination and carrier you have selected are unregistered and possibly unsafe. ComEx takes no responsibility for the continuity of your consciousness upon arrival. You assume any and all risks for travel to this point, including theft of forks or deletion. ComEx will include a permanent record of travel with this continue?"
>
> -— ComEx legal disclaimer
>
> "The ComEx disclaimer? Yes, yes ... Listen: my neighbor three doors toward the Amoeba

from here is a physicist. She has a box that generates micro-singularities in her lab. If people along my spar found out I'd stolen a fork of someone, they'd pop my stack with a grapefruit knife and throw it in there. That's what we call, 'accountability.' See if you get the same from ComEx."

—- Atsuko van Vogt

#### Lot 49

Lot 49 is moored to the small asteroid 28349 Pynchon in the amorphous Vonarburg-Shadyside neighborhood, toward the center of the L4 Greeks. VonarburgShadyside is named after two rocks that roughly delimit its 500,000-kilometer length along the arc of Jupiter's orbit. Neighboring habitats within 100,000 kilometers (with populations) include Craftsbury (450), Greenview (28), and Blackhawk (1020). With a population of 400, this station is more or less typical of the Trojans in terms of layout.

From the outside, Lot 49 looks like a shiny, meshedover geodesic sphere, 800 meters in diameter, with numerous protruding instrument spars and some triangles left open to space so that shuttles can pass through. The mooring to the asteroid is temporary in case a potential collision is detected. Inside, a central utility module with a communal reactor, factories, and machine bay is surrounded by evenly spaced but irregularly shaped habitat modules in a riot of colors and lighting schemes. Structural spars and floatways connect everything. One entire spar is given over to a rotating cylindrical module that generates about 0.7 g and contains medical, cloning, resleeving, and darknet egocasting facilities.

Lot 49's population and most of their neighbors in Vonarburg-Shadyside tend to align with the scum and anarchist factions and speak a mixture of English, Portuguese, and Thai. Lot 49 is in a densely inhabited part of the Greeks, placing it near a crossroads. Main economic activities include shuttle design, whaling, and ferrying people and goods around the region.

### 3.11.15 Saturn

The second largest planet in the system is a much more favorable habitat for transhumans than Jupiter. Saturn's lower gravity and milder magnetosphere are a boon to gas mining operations, and for resourcehungry habs, the Rings are a feast (literally, in the case of the new Hamilton cylinder type habitats). Hypercorps have a presence here, but any major expansion by the Planetary Consortium is kept in check by the anarchist stations of the Rings and the technosocialist Commonwealth of Titan.

Because Saturn is so distant from the Sun, solar power generation is extremely inefficient. Growing photosynthetic plants with sunlight is impossible without large arrays of mirrors to focus the light. The abundance of water and volatiles makes the rings ideal for both scum barges and Hamilton cylinders. Gas mining is vital to the survival of almost every habitat and moon settlement in the Saturnian system, so habitats located further out from the planet that wish to be self-sufficient almost always maintain their own gas mining stations close to the planet. Security for these installations and the atmospheric skimmers and tankers they dispatch is tight, and it is never advisable to approach one unannounced.

#### Resources and economics

Gas mining on Saturn supplies thirty percent of the system's reactor mass. This role is expected to grow as Helium-3 deposits in the Lunar regolith become less accessible. For ships traveling to the far reaches of the outer system, Saturn is an important alternative to using Jupiter for gravity assists. Less restrictive than Jovian regimes and richer in resources than the Trojans, Circumsaturnine habs and settlements are important innovators in habitat design and cultural organization. Since the discovery of the Pandora Gates, the Titanian Commonwealth is the only entity actively pursuing interstellar exploration through conventional means.

### The rings and classical minor moons

Saturn's rings are made up of countless small icy objects, most of which range in size from dust specks to boulders 10 meters in diameter. The rings are designated by the letters "A" through "F" in the order in which they were discovered. They vary in thickness between 100 and 1000 meters and in width from 20,000 kilometers down to just meters. In places there are gaps between rings. The widest, the Cassini division, is 4,000 kilometers across.

> **Gate expedition report 901127**
> Gate Code Setting: [Encrypted]
> Gatekeeper Corporation Eyes Only
> Preliminary drone and sensor reports seemed to indicate the gate's exoplanet environs were underground in a cavern formed of carbonaceous rock with a nitrogen dioxide atmosphere. There were no signs of life or sentient activity. A squad of gatecrashers was sent through, guided by an exploration drone, with a communication link back to the gate.
> Approximately one hour after the team moved into the tunnels, consistent communication was lost due to electromagnetic interference. At this point they had reported nothing more notable than moving just over a kilometer through a warren of tunnels.
> The team was not heard from again.
> Two hours after contact was lost, a tethered search and rescue drone was deployed. Following the gatecrashers' breadcrumb trail, near the limits of its tether range the drone came upon what appeared to be a severed hand in a vacsuit glove. DNA testing did not identify the hand as belonging to any members of the team, however, nor did it match any other database queries. The drone was detached from its tether to search further, but shortly after sensors recorded some type of seismic event, and communication with the drone was also lost.
> The gate was kept active for 8 more hours—the duration of the contract – with no sign of activity. The gate was then closed, the team reported as lost/unretrievable, and the gate settings were recorded with an orange flag.

Saturn has over 60 satellites, a number that jumps into the hundreds if one includes the uncounted objects less than a kilometer across orbiting in the A ring. Most of Saturn's moons are small, rocky, ice objects less than 100 kilometers in diameter. The smallest of the classical moons, Pan, is only 10 kilometers across. The first eight moons, from Enceladus inward, lie within the ring system. Atlas, at the edge of the A ring, and Prometheus and Pandora, which flank the thin F ring, are known as the Shepherd Moons. Several of the moonlets occupy Lagrange points relative to larger moons. Telesto and Calypso share the orbit of much larger Tethys, while Helene trails another large moon, Dione.

### Atlas (Volkograad)

Volkov, a Slavic energy cartel, controls this tiny moon. Volkograad is a beehive habitat with about 50,000 residents. Much of the moon is given over to skimming, refining, and shipping infrastructure. A cloud of wreckage trailing the moonlet by about 100,000 kilometers serves as a reminder of the Atlas Incident, a brief but massively destructive battle that erupted when Fa Jing attempted a buyout of the moon. Tinkers from Phelan's Recourse still salvage the floating derelicts regularly.

### Dione (Thoroughgood)

Dione's main settlement is Thoroughgood (population 350,000), a hybrid beehive and orbital cluster habitat set on a plateau amid a dramatic range of ice cliffs. Dione hosts the Long Array, a 150 kilometer-high communications spar ascending from the surface settlement to an orbital station that acts as a counterweight. The Long Array's sheer size is something of a publicity stunt, as the bulk of its capacity goes unused. However, it drew enough attention to make Thoroughgood a major communications hub for the outer system, and thus a place where hypercorp, anarchist, and other factional interests meet. Dione shares its orbit with Helene, a tiny, rocky moon at its L4 point, and Polydeuces, an even smaller body that trails it at the L5 point.

### Enceladus (Profunda)

Rich in organic compounds, Enceladus is a biochemist's playground. Profunda (population 850,000) is the major settlement, a beehive dug into the moon's surface capped by domed parks and clusters of sleek, translucent minarets—well protected from collisions by an aggressive satellite defense network. The lower levels, stretching deep into Enceladus' icy silicate mantle, include a prospecting operation that extracts carbonaceous soils in search of exotic compounds. Another deep section has been converted into a kilometers-wide, reactor-heated primordial sea, part of a long-term experiment into the origins of life supported jointly by Titanian academics and a collective of Enceladian biochemists.

Profunda is run along anarcho-capitalist lines. Thanks to the rich supply of organic chemicals, its upper reaches are home to many of the outer system's best known morph designers. The Enceladian Glitter Bloc is said to have as much influence over body styles as the Lunar fashion houses do over what people wear.

### Epimethus and Janus (Twelve Commons)

These twin small, icy moonlets share virtually the same path around Saturn, orbiting within 50 kilometers of each other. Set between the F and G Rings, the moonlets form the center of Twelve Commons, a neighborhood of small and mid-size habitats arranged in a flat cloud about 20,000 kilometers in radius. About six million people live in Twelve Commons. Habitats in Twelve Commons range in size from Dang Fish Echo, a tin can hab housing about 60 eccentric aquaculturists, to Janus Common, a beehive occupying much of Janus with a population of 900,000. Some of the habitats in Twelve Commons feature very unusual designs, such as Nguyen's Compact (population 80,000), a variant Cole habitat in the G ring where an asteroid was heated and large amounts of steam were blown through it to produce a series of interconnected bubbles between five and three hundred meters in diameter. In effect, the interior of the colony is like a solidified foam or Swiss cheese with no obvious up or down. Without an ecto or basic implant to provide location and navigation information, navigating through this maze-like habitat would be exceedingly difficult.

The habitats of Twelve Commons organize themselves primarily along open source anarcho-syndicalist lines, with work groups and research pods acting as the basic political unit.

### Gateway (Pandora)

The Gateway settlement, on Saturn's outer shepherd moon Pandora, holds the first publicly known wormhole gate. The Gatekeeper Corporation keeps the gate open as a means of exploration and scientific investigation for all factions and powers. Gatekeeper was originally a Titanian microcorp but is now independent. The Commonwealth of Titan still holds a major stake in it, though not a controlling interest. Granting autonomy to Gatekeeper Corporation was a diplomatic maneuver made in response to Planetary Consortium claims that the Titanians sought hegemony in the outer system. So far, Titan's neighbors are buying it, even if the Planetary Consortium doesn't.

### Hyperion

With its chaotic, virtually unpredictable rotation, Hyperion is a dangerous place to land ships. It remains uninhabited.

### Iapetus

Iapetus is one of Saturn's larger icy moons and once boasted a population of 200,000 living in the dense warrens of Analect, its main settlement. Probably because it is one of the few large moons of Saturn that contains sizable deposits of silicates and minerals in addition to ice, Iapetus was a target of the TITANs during the Fall. After enslaving a tenth of the populace as worker drones and using the rest as seed stock for tissue cultures to feed their fellows, the TITANs began to build what appears to have been a matrioshka brain. Iapetus now occupies twice the volume it once did, the ice and silicate of the planet's outer layers having been reworked into a delicate lattice of circuitry millions of layers deep.

Strangely, the project simply stalled at some point prior to completion. Speculation has it that the controlling intelligence was either destroyed by an unknown outside force or devoured itself in a fit of compuational ecstasy. Whatever the case, the drones simply stopped working and died and the moon's automated defense grid went dead, leaving a strangely beautiful but lifeless machine behind to slowly decay from meteor impacts and gravitational stress. Several research teams now reside in small orbital stations, quarreling over the scraps. Rumor has it that a number of researchers trying to understand the matrioshka circuitry have lost their minds in the process, perhaps by some mechanism akin to a basilisk hack. It is also believed that some of the moon's internal defenses remain active. If anyone has plumbed the interior and come back, they're not talking about it.

### Meathab

The full name of this unique habitat is Turn Yourself Into a Giant Mass of Space Meat for Art!, and as the name implies, 90% of the habitat's structure consists of fast-cultured vat bacon, battened on the abundant resources of the ring system. MeatHab started out as someone's art morph, but then, against all expectations, squatters moved in. MeatHab now has a population of 500. Similar to a Hamilton cylinder, the kilometer-long habitat harvests and processes ring material to grow itself. The outer surface is frozen flesh ten meters thick whose surface resembles a cross between a tree trunk and flank steak. Past the axial space dock is a warren of veinous, skin-covered corridors lit by bioluminescent panels and maintained by small, reptilian symbiotes that eat away dead skin and may have other immune functions as well. Gravity inside is 0.5 g.

The nameless biodesigner who created the place—and who may or may not still inhabit the gigantic morph—was a genius. Although the habitat is not by any stretch of the imagination a pleasant locale, it appears healthy. Its full workings are not understood, and the inhabitants range from extreme flesh freaks who are fans of the artist to serious biodesigners studying the place to learn more about its construction.

### Mimas (Harmonious Anarchy)

Led by legendary Chinese dissident poet Hao Lin Ngai, Harmonious Anarchy broke from the Fa Jing cartel during the tumultuous years prior to the Fall. Hao sought to create a society in the spirit of the ancient Taoist state of Great Perfection that existed in Szechuan 1,700 years earlier—with considerable updates from modern thought. Harmonious Anarchy is an Extropian mutualist society heavily involved in software engineering, logistics, and relocation of metallic asteroids to the outer system. Most of Mimas is a very low-g beehive arranged into Black, Red, Yellow, Green, and White neighborhoods, based on the five classical directions of Chinese mythology. Each color boasts an ornate central cavern, with extended families living in radiating subwarrens. While adhering to mutalist economic principles, Harmonious Anarchy simultaneously takes a traditional Chinese approach to social organization, with family at its core.

### Norse, Inuit, and Gallic moonlets

In addition to the classical satellites described here, three groups of small objects unknown to early astronomers orbit the planet. These moonlets are designated as the Inuit, Gallic, and Norse groups. Because these moonlets were still little explored by the time of the Fall, most of them remain sparsely populated. With a few exceptions, inhabitants of the moonlets are generally people who want to be left alone. The exceptions are Skathi and Abramsen (formerly S/2007 S 2), which, along with Phoebe, were captured and moved into Titan's orbit, where they serve as defense installations.

### Pan (Izulu)

Volkograad's closest competitor is this anarchocapitalist outfit, most of whose founders were South African. iZulu has a somewhat lower capacity than Volkograad but will ship reactor mass to unusual locations like the Trojans and the Kuiper Belt. iZulu is a very crowded beehive with nearly 400,000 inhabitants and an unusually large number of infugees. The nations of sub-Saharan Africa were only starting to achieve widespread 20th century-levels of prosperity in the late 21st, and so they had the lowest capacity to physically

evacuate their citizens during the Fall of any region on Earth. iZulu and a handful of other habitats with roots in Africa thus have high infomorph populations and millions of people in dead storage.

### Phelan's Recourse

Phelan's Recourse (usually just called "Phelan's" by inhabitants) is the largest nomadic settlement in the system, with a population estimated around 250,000. Phelan's is a swarm of some 10,000 small craft and tin can habitat modules that orbits Saturn along a highly elliptical path somewhat inclined to the plane of the ecliptic. The swarm's orbit is calculated to maximize the number of encounters with near moons and stations, providing a six to eight hour window in which craft can leave the swarm for trade. Phelan's Recourse passes through the rings once a month, allowing craft to resupply with water and volatiles.

Phelan's accepts all comers. One could meet just about anyone here, from the government in exile of East Timor to Hasidim from Brooklyn. The core of the swarm is the Stills, a fusion-illuminated grain farm and distillery operated by an allegedly reformed gang of Irish travelers who conned their way off Earth a few weeks before the Fall and escaped to the outer system. The Stills produce Phelan's Ma, the most sought-after whiskey in the system, and Phelan's Da, possibly the worst beer ever made. Despite the Phelans' protestations of legitimacy, the criminal element is heavily represented here. The swarm represents an important link in red and gray market supply chains.

### Prometheus (Marseilles)

Marseilles (population 80,000) is a beehive habitat operated by the Titanians. It is rumored to harbor an antimatter factory, a theory supported by the large number of skimmers that arrive from the surface relative to the number of tankers that leave.

### Rhea (Kronos Cluster)

At a 764 kilometer diameter, Rhea is Saturn's second largest moon. Composed almost entirely of ice, Rhea's surface is sparsely inhabited, but a population of over 800,000 dwells in Kronos Cluster, a major habitat in orbit. Kronos Cluster's mass microfactured violet spherical modules make it look like an immense, irregular bunch of grapes suspended in space, an impression added to by the winding space dock (nicknamed the Vine) extending from the wider end. Within the mass of habitat modules, the Vine branches out in all directions, forming massive central arteries and twisting side passages. These can be traversed by pushing off hand and toeholds on the walls, or by catching hold of fast-moving grab loops that move along "fast lanes" in the walls of major floatways.

Nearly five kilometers long and three wide, Kronos has major problems with crowding and infrastructure that have kept it from growing to the same size as Locus. The designers simply did not plan for the size the place might reach, and as a result another 150,000 people live in suburbs of tin can habs and scum barges in the space around the habitat.

Kronos can be an extremely dangerous place. Insurance companies don't like operating here, and the habitat is a patchwork of criminal and anarchist neighborhoods. Anarchist neighborhoods are generally heavily armed and safe, but a trip from an anarchist holding to the spaceport is best done with a group of well-armed friends. Criminal neighborhoods are only safe if you're in the neighborhood's controlling gang, and even then conflicts flare up regularly.

The situation is exacerbated by the Kronos Port Authority, a junta of ultimates who operate security for the spaceport. Originally an Extropian hypercorp, the KPA fell into the hands of the ultimates when they decided that they could profit more directly by owning the company outright than by working as hired muscle. They violently ousted the original management and now use indentures in worker pods to maintain the port. This situation is tolerated by the local crime bosses and loathed by the mostlyanarchist autonomist citizens, but so far no one is able to challenge the KPA, which enforces use of the port rather than any other mooring point with killsats and artillery.

**Tethys (Gowwinhead)**

Composed almost entirely of ice, Tethys is one of Saturn's larger moons and the site of Ithaca Chasma, a 2,000-kilometer long valley covering three-quarters of Tethys's circumference. Fifteen years ago, prospectors from an ethnically Indo-British autonomist collective called the Rioters touched down on Godwin Head, a projection in the chasm wall so named because it resembles a headland projecting out into the sea. Instruments on their ship, the Caleb Williams, had detected what looked like mineral deposits in the ice, rare on Tethys. What they found instead were relics thrust to the surface by a geological event eons earlier, the remains of primordial life that became extinct millions of years ago when Tethys cooled and its subsurface ocean froze over.

Godwinhead is now a dense, efficient settlement of 200,000 built into the five kilometer high canyon walls. The central point of the town is the Caleb Williams, which has been towed back into a sheltering cavern in the wall and converted into a communal workshop and town hall. The face of the valley wall is honeycombed with excavated ice caves hosting habitat modules, connected by conduits to a communal utility grid. The trusswork and cabling for the utility system is also the public transit system, easily traversed in the minute Tethyan gravity. The unofficial mascot of Godwinhead is the Tethyan Flatworm, a two millimeter-long translucent worm that represented the pinnacle of Tethyan evolution. A large number of the inhabitants are involved in biosciences, xenopaleontology, and prospecting for frozen lifeforms.

Tethys shares its orbit with its Trojan moons Telesto and Calypso, both of which are small and sparsely populated.

### 3.11.16 Titan

Saturn's largest moon is shrouded in a permanent orange atmospheric haze, hellishly cold (averaging 180 degrees below), and whipped by winds produced by tidal forces four times stronger than those influencing the Earth's climate. On its face, it appears even less hospitable than the airless balls of ice and rock comprising every world between Titan and Mars. The meager sunlight reaching its surface is insufficient to grow any but the hardiest plants, the mostly-nitrogen atmosphere is dangerously toxic, and the surface is dotted with lakes and seas of liquid methane. In spite of all this, abundant hydrocarbons, a thick atmosphere, and diverse chemistry make Titan one of the few worlds in the system where colonists may rely entirely on local resources. Titan's population is now over 60 million.

Social money and the microcorp system have led to some spectacular gains and failures. On the up side, Titan's civil resleeving industry produces more morphs than Mars and Luna combined. Massive infrastructure programs have provided enough space for 60 million people to live comfortably on a hostile world. The Large Collider, the biggest particle accelerator ever produced, in polar orbit, enables physics experiments that can be performed nowhere else in the system. And two years ago, Titan dispatched the first conventional interstellar probe, the Aubade. It will reach Proxima Centauri in just under 20 years.

On the down side, Titan's "body for every mind" law burdens the civic resleeving system with a lot of people who no one would ever have bothered resleeving otherwise. The failure of the Scoop project, an extremely costly attempt to build a pipeline from Saturn's surface to low orbit, allowing massive gas extraction without costly atmospheric skimmer operations, stymied Titan's ambitions to become a major antimatter producer. Titan does produce antimatter, but on a much smaller scale than was envisioned when the Scoop project began.

Commonly spoken languages on Titan include Norsk, Francais, Deut ch, Mandarin, Svensk, Dansk, and Suomi. Most citizens inhabit hazers, a tall, fineboned morph with very similar characteristics to the Martian ruster. Parapelagia for gliding and flying in the light Titanian gravity are a common biomod. Titanians do three years of compulsory civil service at the age of majority, with an emphasis on military and security forces except for conscientious objecters. Every citizen who has done military service is part of the militia and has an assault weapon in their home.

### Aarhus

Located near Titan's south pole on the shores of Ontario Lacus, a wide, shallow sea of liquid methane, Aarhus (population five million) was the first site of human habitation on Titan, chosen for its proximity to abundant hydrocarbons. The city is the physical hub of Titan Autonomous University (TAU) and hosts numerous other academic institutions, most notably Titan Tech, a major engineering school. Unlike Martian universities, which have few physical campus buildings, TAU and other Titanian schools draw many of their students from the widely scattered habitats of the outer system, where delays in radio communication make distance learning ineffective. Fully 20% of Aarhus's population are students, many of them offwordlers.

Aarhus's layout is typical of Titanian cities. Three central domes are surrounded by numerous smaller structures, including lesser domes, fusion plants, and industrial outbuildings, the most massive of which is the now-abandoned methane utility plant on the lake shore. The dome interiors are hung with lighting rods and heavily built up with tall, narrow buildings, most of which have upper decks where hazers on the wing and pedal-powered microlights can land. Exterior structures usually have outer walls built of ice for shielding and structural support with internal walls extruded from local silicates. Many buildings are a rich azure or other shades of blue for contrast with the ever-present orange glow of the Titanian sky.

Unlike most Titanian cities, Aarhus relies primarily on fusion power. Aarhus is the center of Titan's native preservationist movement, which opposes inefficient use of native hydrocarbon resources due to possible long term effects on Titan's climate.

### New Quebec

New Quebec lies on a plain in the Aaru region surrounded by endless rippling dunes shaped by Titan's powerful winds. The region's diverse chemical resources supply the colossal nurseries that have made New Quebec the system's largest single producer of morphs.

The city is 50 kilometers from Montmorency Lacus, a 20 kilometer-wide crater lake of liquid ethane and methane. Originally thought to be an impact crater, rare on Titan, geological studies later showed it to be the collapsed remains of an extinct cryovolcano. Situated in a rainy area, the lacus slowly drains over the crater lip at Montmorency Cascade, a 200 meter carbonfall that empties into a series of alluvial channels from which the Quebecoise pump its output for fuel.

The St. Catherine Tong, the most dangerous native Titanian mob, is based in New Quebec. Titanian law is generally very permissive regarding individual freedoms, so the vices this gang trades in are of the blackest: snuff pods, stolen alpha forks, and nanoweaponry. A ready supply of fresh morphs bought from corrupt microcorp nursery administrators further fuels their rackets. The Tong is extremely violent and a major embarrassment to Commonwealth security forces.

### Nyhavn

Set near the equator amid the rolling ice hills of the Xanadu region, Nyhavn (population 12 million) is the largest city in the outer system and the capital of the Titanian Commonwealth. Nyhavn's massive central dome, with its elegant blue towers and bioengineered parklands, rivals New Shanghai in size and ambition. Three surrounding domes and a sprawl of subsidiary structures are connected by high-clearance flyways, where ground vehicles and microlights form a steady stream of traffic at all hours. At the same time, the squalid blandness that prevails in the Martian suburbs and outlying souks is absent; the dwellings and neighborhoods of the Titanian working class display a riot of color and design, empowered by public fabricators limited by none of the enforced scarcity of Martian economics. For all its idealism, the Plurality is not immune to a desire to showcase its achievements.

Outside the city is a pipeline leading from the vast Tyska Lacus, 100 kilometers distant. Commonwealth Skyport, Titan's principal spaceport, offers quick access to Commonwealth Hub, the Titan system's long-haul space dock, located in geostationary orbit above the city. The surrounding countryside is dotted with smaller settlements connected to Nyhavn by trains and a well-developed network of surface roads.

Nyhavn is a major media center, with daily life closely attentive to the debates and decisions of the Plurality. At the same time, it is a cosmopolitan place, where Titan's microcorp movers rub shoulders

with visiting anarchist traders and (less commonly) legations from the inner system. There is an active underworld, despite the efforts of security forces, with the local St. Catherine Tong engaged in continual low-intensity warfare with triads from throughout the system.

#### Phoebe, Skathi, and Abramsen

After the conflict at Locus, the Plurality became embroiled in a hot debate regarding the dangers of hypercorp adventurism in the outer system. It was generally felt that the Planetary Consortium hoped to keep the outer system in a position similar to where the United States kept Latin America by meddling in its affairs throughout the nineteenth and twentieth centuries, and that the only counter to this was a show of force. Titan's thick atmospheric haze makes ground-based space defense systems considerably less effective than on other worlds, but satellites and space platforms were too vulnerable to serve as command and control centers.

The solution was to capture three of Saturn's small retrograde moons—Phoebe, Skathi, and Abramsen (once designated S/2007 S 2, now renamed after a pioneering Titanian economist). Phoebe is the largest of the three objects. The other two were maneuvered into the system's L4 and L5 points. The calculations required to relocate these bodies were painstaking, and the energy expenditure tremendous, but all three now serve as major components of Titan's orbital defense grid. Whether the system created thereby is impregnable has yet to be tested.

### 3.11.17 Uranus

Once thought of as gas giants like Saturn and Jupiter, Uranus and Neptune differ from the larger planets in that they contain large amounts of water ice, methane, and ammonia and have rocky cores at their centers. This region of the system is sparsely populated. Uranus orbits at a distance 10 AU beyond the orbit of Saturn, 20 times the distance of the Earth from the sun.

Uranus, the coldest planet in the solar system, is a blue-green sphere of ice and gas. Seen from afar, it is virtually featureless compared to Saturn and Jupiter, but up close subtle cloud formations and a tenuous ring system may be observed. Probably due to a collision with an Earth-sized world when the solar system was young, Uranus rotates on its side, such that one pole faces the sun for 42 years at a stretch, and its moons orbit at a sharp angle to the solar ecliptic.

At the time of Eclipse Phase, Uranus's south pole is experiencing its south polar mid-spring, during which thick methane clouds darken the polar atmosphere. It may be the unusual tilt of its axis and the accompanying strange seasonal weather that give rise to the unconfirmed rumor that the alien traders called the Factors have created a settlement hidden in Uranus's atmosphere.

#### Chat Noir and Fissure gate

Located on Oberon, this is the Uranian system's primary long haul spaceport, with a permanent population of 8,000. Chat Noir has fairly advanced egocasting, resleeving, and manufacturing facilities for a frontier outpost and is operated by several collectives of anarchists. The reason for all the infrastructure is Fissure Gate, the only Pandora Gate in anarchist hands (despite several Planetary Consortium expeditions to wrest control of it).

Fissure Gate was discovered by a prospecting expedition from Chat Noir, then a tiny outpost. Seeking deposits of the useful carbonaceous ices that make up about 20% of Oberon's mass, they instead chanced upon subsurface radio emissions near the foot of Mt. Hippolyta. After using triangulating the source, the prospectors landed and used subsurface imaging gear. What they got back was a blurry image of a rock fissure containing an ambiguous mass of mixed density and an extremely dense, possibly metallic object with a shape too regular to be anything but a structure or large artifact—all under 500 meters of ages-old frozen cryovolcanic outflow. The gate at Pandora was already publicly known at this time, so the prospectors drilled down, suspecting they'd found an alien artifact. They were not to be disappointed, although the discovery yielded gruesome salvage: the barely recognizable corpses of eleven gatecrashers.

Why and how the Fissure Gate was erected under the ice remains a complete mystery. At some recent point, however, it was completely buried, with only a thin pocket of space between it and the surrounding ice. When the eleven emerged, buried in an airless space beneath 500 meters of ice, there was barely room to move, let alone escape—but the gate wouldn't let them back through. Several of the crew had recoverable cortical stacks. This lucky handful are now prominent citizens of Chat Noir, but none plan to resume gatecrashing as a career.

The Fissure Gate remains in anarchist hands, operated and defended by the Love and Rage Collective. The gate is made available to almost anyone unless their rep score is tanked or they are pursuing commercial interests (ruling out most hypercorps). Support for gatecrashers is minimal—traverse the threshold at your own risk. Any discoveries made via this gate, however, must be shared for the collective good of transhumanity.

#### Titania and Oberon

Uranus's two largest moons are sparsely populated, with only about 10,000 transhumans living on each body. Most stations are mixed dome and beehive settlements and range from hypercorp communications and research outposts to autonomist freeholds. The pair are more chemically complex than most moons in the outer system, consisting of about 30methane and similar carbonaceous ices, and 50water. Titania is home to a spectacular canyon that rivals the Martian Valles Marineris. Several settlements on Titania cater to tourists from the inner system and the gas giants, who visit for rocketing, mekking, and other sports in the canyon.

#### Xiphos

One of two major strongholds of the ultimates, Xiphos is a Hamilton cylinder orbiting in the Uranian ring system. Though most of the tech underlying Hamilton cylinders is open source, the station's frighteningly efficient weapon systems are not. Rumor has it the ultimates traded some major favors to Gorgon Defense Systems in the process of building this station. Where Aspis, the ultimates' inner system habitat, is a relatively open place, used by the Ultimates for contact with potential mercenary clients, Xiphos is off limits to anyone not of this faction. The rumored population of ultimates here is only about 10,000, but the ultimates purchase a large number of infomorph indentures from Mars. Although there are no reports of any of these indentures returning, rumor has it that the ultimates download indentures serving in sensitive areas into deaf, visually limited flats with no AR implants and limited mental capacity.

### 3.11.18 Neptune

Frigid, swept by 2,100 km/h winds, and tinged blue by methane traces in its atmosphere, Neptune is the last major planet in the system, orbiting at a distance of 30 AU from the sun. This far from the nearest star, plants will not grow and solar power is useless. The only sources of power are fusion, focused starlight, waste heat, and chemical reactions. The hypercorp presence in the Neptunian system is virtually absent, as the long communication lags and extreme travel distances from the rest of the solar system mean that few Neptunian ventures garner profits. Similarly, the Titanian brand of technosocialism has never found roots here. The few transhumans who live out here are a resourceful lot, and many colonists out here aren't human at all. Anarchists, brinkers, and desperados comprise most of the population.

#### Glitch

This habitat has the highest population density in the system, with 20,000 infomorphs living in a meshed cluster of twenty spherical structures that are 10 meters in diameter, powered by efficient central reactor systems. The habitat is attended by a cloud of factories, harvesters, and defense satellites that occupy considerably more space than the station itself. Various rumors circulate that the inhabitants are researching methods to improve infomorphs in the manner of seed AIs, or that they are engaged in some vast forecasting simulation effort.

#### Ilmarinen

Aligned with the argonauts, Ilmarinen is a hybrid beehive/cluster dug into and partially protruding from the large L4 asteroid Greymere. It is the largest habitat in Neptune's Trojans, with a population of 7,000. Like many transhumans this far out in space, most of Ilmarinen's inhabitants are heavily modified or inhabit exotic morphs. Vacuum and cold tolerant morphs prevail, and many sections of the habitat are unlivable for baseline transhumans.

#### Mahogany

The neo-avians who built this station threw away the manual on habitat design and revisited the longout of favor toroidal configuration. The result is a disc habitat—a plate half a kilometer along the edge and one kilometer in diameter, resembling a slice of an O'Neill cylinder with no windows. A fusionpowered, low-heat, axial light source nourishes the verdant hardwood forest below. Structures are built into the disc walls up to 500 meters in height. The disc, mostly woven from carbon fibers, rotates quickly enough to generate 0.5 g at the habitat floor. Mahogany has a population of 4,000 mercurials, most of them neo-avians.

#### Minor moons

Neptune's other twelve moons are largely small bodies, icy and sparsely (if at all) populated. Proteus and Larissa, both sizable and relatively close to the planet, host small populations. Naiad and Thalassa are tiny but very close to the planet, and thus home to some atmospheric skimming operations. Neso, orbiting at about 1/3 AU from Neptune, has never been visited—even by robotic probes.

#### Neptunian Trojans

Trailing and preceding Neptune at the L4 and L5 points of its orbit are several hundred asteroids of diverse, mostly icy composition. Neptune's Trojans are home to brinkers, hard-bitten prospectors, exotic exhumans, and other extreme survivalists.

#### Triton

Neptune's largest moon has a tenuous atmosphere and is chemically complex, composed of equal parts rock and ices (frozen nitrogen, water, and carbon dioxyde). It is also geologically active, with cryovolcanoes continually resurfacing the planet. The surface has few inhabitants but several habitats orbit here, using the moon's abundant raw materials and low escape velocity to their advantage.

### 3.11.19 The edge of the system

Beyond Neptune lie only dwarf planets and icy asteroids waiting to become comets, roughly divided into two regions: the Kuiper Belt, from 30 to 55 AU from the Sun, and the Scattered Disk, which extends from 55 AU out to the Oort Cloud. Pluto, its binary object Charon, and Eris have compositions similar to Triton. A few small habitats orbit Pluto and Charon, eking out a living by prospecting for volatiles. A number of other dwarf planets orbit in the Kuiper belt and the Disk, including Orcus, Senda, and 2000 OO67. Of these, only Eris harbors a substantial population. ERIS Located at 55 AU from the sun at the edge of the Scattered Disk, Eris is the largest dwarf planet in the system and the site of a grim struggle between two of transhumanity's most militant factions: ultimates and exhumans. The focal point of the struggle is Discord Gate, the most remote of the system's publicly-known Pandora Gates, located in an icy labyrinth half a kilometer beneath the surface of Eris.

The brief history of the gate is bloody. Go-nin Group troops violently wrested control of the gate from the Ilmarinen anarchists who discovered it. Titan and several anarchist and brinker groups both tried to dislodge Go-nin, but these attempts failed, at great cost in lives and ships. Go-nin's control of the gate seemed ensured until the hypercorp apparently tampered too heavily with the gate's black box controls. A

devastating explosion ensued, all but wiping out the gate and Go-nin base. The gate, however, restructured itself over the course of several days, though its location has now shifted to the bottom of a melted crater.

In the short period it took the Go-nin Group to hire a group of ultimate mercenaries to retake the gate, a hitherto unknown force of exhumans had seized the area. The ultimates succeeded, but a group of exhumans escaped through the gate. Go-nin now has nominal control of the Discord Gate through the ultimates, who maintain a heavily militarized base on Eris's moon, Dysnomia. However, in recent years the gate facility has suffered several attacks by exhumans eager to infiltrate the gate—and according to rumors, at least one of those attacks originated from the gate itself.

#### Markov

The location of this habitat, a major stronghold of the argonauts, is a closely guarded secret. Attempts to search it out have revealed only decoys or lifeless rocks. Though a great deal of information is available about the habitat's specs, operations, areas of research, and informational resources, only highly placed members of the argonauts may travel here. By all accounts, the habitat is a windowless beehive, designed to be virtually emissionless. Speculated locations include Pluto's moon Hydra, the deep Kuiper Belt, and even the Oort Cloud.

### 3.11.20 Extrasolar systems

Although travel between the stars is still outside the realm of transhumanity's achievements, the Pandora Gates have allowed passage to myriad other star systems. A few are noted here, though many more exist—not all of them explored.

#### Echo

Echo is a binary system consisting of a bright orange main sequence star and a pulsar (whence the system's name) about 12 light hours from one another. The system has one immense, bright yellow Jovian world (Echo VI) weighing in at 1.8 Jupiter masses and boasting 101 known moons, two Neptune-like ice giants further out, a thin mid-system asteroid belt, and several Mercury-like inner planets.

The original Pandora Gate opens onto lifeless Echo V, a forbidding place littered with the detritus of a dead alien civilization. The hollow buildings of these precursors look out over once-verdant alluvial plains now home to only dry arroyos and dust. In other places, eons of wind erosion have carried the soil away entirely, leaving only barren expanses of dark basaltic slag. Chemically and geologically, the world is very similar to Mars, had Mars suffered another half a billion years' loss of atmosphere. Research into the relics of the long-dead aliens suggests that they were morphologically similar to arthropods or arachnids, earning them the designation of Iktomi, after a Native American spider god. So far, little else has been discerned about them.

Echo IV, on the other hand, is the closest thing transhumanity has found to a paradise since losing Earth. The native life is carbonbased, with many plants and fish edible even to flats. The climate is warm temperate, the atmosphere breathable with no major contaminants. The northern and southern latitudes are home to trackless forests dominated by various species of valders—huge, maple-like trees with dark red leaves. In the equatorial regions lie balmy, nutrient-rich floodplains ripe for cultivation, broken up by the occasional mountain range. Echo IV is still geologically active due to tidal heating, though older than Earth by about two billions years, and has two megacontinents connected near the equator by a tenuous land bridge. Notable native life include the Unagi, a fearsome, eel-like deep sea predator, and the clown sprite, a flying primate-analog that exists in a symbiotic relationship with the Echolalian land anenome, a huge, venomous, carnivorous plant that grows in the cloud forests of the equatorial highlands. The biosphere is diverse with many other megafauna, some quite dangerous.

### Luca

Luca is an M-Class red dwarf located in a region of the galaxy far removed from any point of reference known to transhuman astronomy. The system has only a single gas giant of about 1.4 Jupiter masses—insufficient to shield the inner worlds from constant asteroid bombardment. The lone gas giant is flanked by a tenuous metallic inner asteroid belt and a wide ice and silicate outer belt. The only other bodies worthy of planetary status are a hellish inner world with Mercury's richness of metal and Venus' infernal atmosphere and a few large, sullen plutoids sharing Lagrange orbits with an asteroid field comprised of the shattered mass of a third plutoid.

Accessible by both the Vulcanoid and Fissure Gates, Luca II is a heavily cratered terrestrial planet with a thick, dusty atmosphere— just about breathable to transhumans with the right gear. It is a cold, rocky world of craggy hills, knee-high forests, hissing geothermal bogs, and fungal meadows. The natives, who have been extinct for at least a million years, evolved from animals not unlike Earth's aardvarks. Originally insect mound predators, the Lucans evolved vision well into the infrared (as demonstrated by the unusual pigments on their pottery and later-stage porcelain) and, based on analysis of their artifacts, had a sense akin to ultrasonic imaging. Their civilization went through several cycles of rise and fall, punctuated by celestial cataclysms that killed off less adaptable species and made resources scarce. The Lucans seem never to have evolved past medieval levels of societal organization prior to the Great Impact. Within a hundred years of that final impact, the last of the Lucans perished, never having invented the telescope, the computer, or space flight.

Luca II hosts Banshee, an underground settlement with a few prominent surface features, including a radio astronomy station, park domes, a short-hop aerospace port, and solar farms. It is set on the Howling Plain, a windy plain of scrub brush and bogs chosen for its rich hydrocarbon deposits and low incidence of asteroid impacts. Banshee is an uneasy blend of anarchist colonists and hypercorp interests.

### Mishipizheu

Mishipizheu is a red giant. The planet from which the star takes its name, Mishipizheu I, is a Mars-sized sphere of water with an atmosphere of nitrogen and carbon dioxide and a rocky core. Mishipizheu I was an almost Venus-sized sphere of ice 700 million years ago, but the expansion of its star into the red giant phase melted the planet. Initially quite warm and full of pockets of ice and carbonaceous silts, the melting planet was a crucible in which life could develop and now hosts a complex ecosystem. Amoeboid boiler reefs composed of gas sac creatures and their symbiotes bob on the surface or maintain neutral buoyancy in the depths, becoming platforms for complex ecosystems of largely animalian life.

Mishipizheu I is orbited by a mid-size rocky moon, Nanabozho, reachable via the Discord Gate. Nanabozho is a mystery, as moons of this composition are not normally found so far out in a system. The best current theory is that Nanabozho was an inner system object with an erratic orbit. It was perturbed out of its orbit by one of the now-engulfed gas giants that must once have existed, whence by chance it was captured in Mishipizheu's orbit. The extraordinarily slim chances of such an event, however, have led to wild speculation as to the actual origin of the moon, which is as popular a destination for gatecrashers as the planet below.

### Synergy

Among the first attempts to establish a gatecrasher colony beyond the original Pandora Gate, just 5 years after the Fall, was a group of two hundred and fifty colonists equipped with experimental headware communications technology. Shortly after the jump, however, a still unidentified glitch forced the gate to close and the mechanism could not be reset to the same setting and coordinates for an entire five years. When the gate technicians finally managed to reacquire the settings recently and reopen the gate, the colonists were found to have survived, but they had changed. The technology sent with them was largely AI controlled, enabling the creation of a hypermesh that linked the thoughts, emotions, and sensory experiences of each colonist with each other. After half a decade of difficult survival measures, this technology and the stress of the situation linked the colonists and their AIs into a group mind. Despite having the opportunity to return

to the solar system, these Synergists, as they call themselves, have no desire to cut themselves off from their shared consciousness.

**Other Exoplanets**

The number of extraterrestrial star systems that transhumanity has visited via the gates now numbers into the hundreds, if not more—though only a small percentage of these have been notable and/or hospitable. Only a few dozen have been substantially occupied or colonized by transhumans, though this number is growing rapidly. Among these, a few deserve mention:

**Arcadia:** Accessed through the Martian Gate, the Planetary Consortium is constructing an aerostat in the upper atmosphere of this Venus-like planet which will serve as a private resort for the hyperelite.

**Babylon:** Initially thought to just be an unremarkable scorched moon orbiting a planet very close to a yellow star, researchers measuring the star made an incredible accident discovery: what appears to be a derelict spacecraft orbiting deep in the star's corona. Attempts to access this vessel have so far been thwarted, but other projects are in the works, including the possibility of towing the craft to safer climes.

**Bluewood:** One of the first anarchist colonies established through the Fissure Gate, this settlement inhabits a beautiful, small Earth-like world with a thriving eco-system. Established on the outskirts of a large forest of eerie, alien, blue "trees," the colony was taken off-guard by the trees alarming growth rate. The modular settlement buildings have all but been surrounded and encased by overgrowth despite modest efforts to keep them clear. Still intact but engulfed by spiraling branchworks, the effect is beautiful and haunting.

**Nótt:** This barren ice-covered moon suffers from heavy geothermal activity that causes its frozen crust to constantly crack and refreeze. The unfortunate research station staff here, all indentured, claim that something out in the ice is stalking them—over a dozen have disappeared in the last year. Pathfinder refuses to pull the station back, however, and thorough searches from its security teams have turned up nothing.

**Sky Ark:** TerraGenesis is redesigning this dry, arid moonlet as an offworld preserve for animal life, including many formerly extinct Earth species resurrected from fossil DNA.

**Wormwood:** This maze-like warren seems to be an actual beehive habitat, though who tunneled it out or why remains an unanswered mystery. The former asteroid is part of the ring system of an unknown gas giant. Clearly artificial, gatecrashers so far have found no signs of technology or life.

> **Analysis: Myst trees**
> [File Corruption: 98%]
> [Partial Retrieval Complete]
>
> ```
> ... called \myst trees" by the residen@# of Ca*\&78 ... also found
> on tw) oth*r exoplanets ]]]]] ... seem to be some sort of living
> data storage{{[| ... utilizing nanofog systems for <|{9h''''
> ... high pr@bability of alien origin [[[[[[; ;
> ```

# Chapter 4

# Game mechanics

In every game, there comes a time when the gamemaster must decide if a character succeeds or fails in an action. This is when the players roll dice and the characters' stats and abilities come into play. This chapter defines the core mechanics and rules that govern the outcomes of events in Eclipse Phase.

## 4.1 Core rules

### 4.1.1 The ultimate rule

One rule in Eclipse Phase outweighs all of the others: have fun. This means that you should never let the rules get in the way of the game. If you don't like a rule, change it. If you can't find a rule, make one up. If you disagree over a rule's interpretation, flip a coin. Try not to let rules interfere with the game's flow and mood. If you're in the middle of a really good scene or intense roleplaying and a rule suddenly comes into question, don't stop the game to look it up and argue about it. Just wing it, make a decision quickly, and move on. You can always look the rule up later so you'll remember it next time. If there are disagreements over a rule's interpretation, remember that the gamemaster gets the final say.

This rule also means that you shouldn't let the story be guided solely by rolls of the dice. The element of chance that dice rolls provide lends a sense of randomness, uncertainty, and surprise to the game. Sometimes this is exciting, like when a character makes an unexpectedly difficult roll and saves the day. At other times, it is brutal, such as when a lucky shot from an opponent takes one of the characters out for good in a fight. If the gamemaster wants a scenario to result in a pre-planned dramatic outcome and an unexpected die roll threatens that plan, they should feel free to ignore that roll and move the story in the direction they desire.

### 4.1.2 Dice

Eclipse Phase uses two ten-sided dice (each noted as a d10) for random rolls. In most cases, the rules will call for a percentile roll, noted as d100, meaning that you roll two ten-sided dice, choosing one to count first, and then read them as a result between 0 and 99 (with a roll of 00 counting as zero, not 100). The first die counts as the tens digit, and the second die counts as the ones digit. For example, you roll two ten-sided dice, one red and one black, calling out red first. The red one rolls a 1 and the black die rolls a 6, for a result of 16. Some sets of d10s, as shown above, are specifically marked for easier rolling and reading.

Occasionally the rules will call for individual die rolls, with each individual ten-sided die listed as a d10. If the rules call for several dice to be rolled, it will be noted as 2d10, 3d10, and so on. When multiple ten-sided dice are rolled in these instances, the results are added together. For example, a 3d10 roll of 4, 6, and 7 counts as 17. On d10 rolls, a result of 0 is treated as a 10, not a zero.

Most players of Eclipse Phase can get by with having two ten-sided dice, but it doesn't hurt to have more on hand. These dice can be purchased at your friendly local game store or borrowed from another gamer.

### 4.1.3 Making tests

In Eclipse Phase, your character is bound to find themself in adrenalin-pumping action scenes, high- stress social situations, lethal combats, spine-tingling investigations, and similar situations filled with drama, risk, and adventure. When your character is embroiled in these scenarios, you determine how well they do by making tests—rolling dice to determine if they succeed or fail, and to what degree.

You make tests in Eclipse Phase by rolling d100 and comparing the result to a target number. The target number is typically determined by one of your character's skills (discussed below) and ranges between 1 and 98. If you roll less than or equal to the target number, you succeed. If you roll higher than the target number, you fail.

A roll of 00 is always considered a success. A roll of 99 is always a failure.

> Jaqui's character needs to make a skill test. Her skill is 55. Jaqui takes two ten-sided dice and rolls a 53—she succeeds! If she had rolled a 55, she still would have been successful, but any roll higher than that would have been a failure.

### 4.1.4 Target numbers

As noted above, the target number for a d100 roll in Eclipse Phase is usually the skill rating. Occasionally, however, a different figure will be used. In some cases, an aptitude score is used, which makes for much harder tests as aptitude scores are usually well below 50 (see Aptitudes, p. 123). In other tests, the target number will be an aptitude rating x 2 or x 3 or two aptitudes added together. In these cases, the test description will note what rating(s) to use.

### 4.1.5 When to make tests

The gamemaster decides when a character must make a test. As a rule of thumb, tests are called for whenever there is a chance that a character might fail at an action or when success or failure may have an effect on the ongoing story. Tests are also called for whenever two or more characters act in opposition to one another (for example, if they are arm wrestling or haggling over a price). On the other hand, routine use of a skill by someone with at least a rating of 30 in that skill can be assumed to be successful with no test.

It is not necessary to make tests for everyday, run-of-the-mill activities, such as getting dressed or checking your email (especially in Eclipse Phase, where so many activities are automatically handled by the machines around you). Even an activity such as driving a car does not call for dice rolls as long as you have a small modicum of skill. A test might be necessary, however, if you happen to be driving while bleeding to death or are pursuing a gang of motorcycle-riding scavengers through the ruins of a devastated city.

Knowing when to call for tests and when to let the roleplaying flow without interruption is a skill every gamemaster must acquire. Sometimes it is better to simply make a call without rolling dice in order to maintain the pacing of the game. Likewise, in certain circumstances the gamemaster may decide to make tests for a character in secret, without the player noticing. If an enemy is trying to sneak past a character on guard, for example, the gamemaster will alert the player that something is amiss if they ask them to make a perception test. This means that the gamemaster should keep a copy of each character's record sheet on hand at all times.

### 4.1.6 Difficulty and modifiers

The measure of a test's difficulty is reflected in its modifiers. Modifiers are adjustments made to the target number (not the roll), either raising or lowering it. A test of average difficulty will have no modifiers, whereas actions that are easier will have positive modifiers (raising the target number, making success more likely) and harder actions will have negative modifiers (lowering the target number, making success less likely). It is the gamemaster's job to determine if a particular test is harder or easier than normal and to what degree (as illustrated on the Test Difficulty table) and to then apply the appropriate modifier.

Other factors might also play a role in a test, applying additional modifiers aside from the test's general level of difficulty. These factors include the environment, equipment (or lack thereof), and the health of the character, among other things. The character might be using superior tools, working in poor conditions, or even wounded, and each of these factors must be taken into account, applying additional modifiers to the target number and adjusting the likelihood of success or failure.

For simplicity, modifiers are applied in multiples of 10 and come in three levels of severity: Minor (+/–10), Moderate (+/–20), and Major (+/–30). Any number of modifiers may be applied, as the gamemaster deems appropriate, but the cumulative modifiers may not exceed + or – 60.

> Jaqui is attempting to leap from one door to another across a large chamber in zero gravity. She's in a hurry. If she misses the door, she'll lose valuable time, so the gamemaster calls for a Freefall Skill Test. Jaqui's Freefall skill is 46. Unfortunately the chamber is filled with floating debris that could get in her way. The gamemaster determines this is a Moderate modifier, reducing the target number by 20. Jaqui must roll a 26 or less to succeed.

### 4.1.7 Criticals: rolling doubles

Any time both dice come up with the same number – 00, 11, 22, 33, 44, etc.—you have scored a critical success or critical failure, depending on whether your roll also beat your target number. 00 is always a critical success, whereas 99 is always a critical failure. Rolling doubles means that a little something extra happened with the outcome of the test, either positive or negative. Criticals have a very specific application in combat tests (see p. 192), but for all other purposes the gamemaster decides what exactly went wrong or right in a specific situation. Criticals can be used to amplify a success or failure: you finish with a flourish or fail so spectacularly that you remain the butt of jokes for weeks to come. They can also result in some sort of unexpected secondary effect: you repair the device and improve its performance; or you fail to shoot your enemy and hit an innocent bystander. Alternately, a critical can be used to give a boost (or a hindrance) to a follow-up action. For example, you not only spot a clue, but you immediately suspect it to be red herring; or you not only fail to strike the target, but your weapon breaks, leaving you defenseless. Gamemasters are encouraged to be inventive with their use of criticals and choose results that create comedy, drama, or tension.

> Audrey is attempting to intimidate a low-level triad mook into giving her information. Unfortunately she rolls a 99—a critical failure. Not only does she fail to scare the guy, but she accidentally lets slip an important piece of information that she didn't want the triad to know. If she rolled a 00 instead—a critical success—she would browbeat the man so thoroughly that he throws in some extra important information just so she'll leave him alone in the future.

### 4.1.8 Defaulting: untrained skill use

Certain tests may call for a character to use a skill they don't have—a process called defaulting. In this case, the character instead uses the rating of the aptitude (see p. 123) that is linked to the skill in question as the target number.

Not all skills may be defaulted; some of them are so complex or require such training than an unskilled character can't hope to succeed. Skills that may not be defaulted on are noted on the Skill List (p. 176) and in the skill description.

In rare cases, a gamemaster might allow a character to default to another skill that also relates to a test (see p. 173). When allowed, defaulting to another skill incurs a –30 modifier.

> Toljek is trying to casually sneak inside a hypercorp facility when he unexpectedly runs into a hypercorp employee. The woman he's encountered doesn't necessarily have grounds to be suspicious of Toljek's presence, but the gamemaster calls for Toljek to make a Protocol Test to pass himself off as someone that belongs there. Unfortunately, Toljek doesn't have that skill, so he must default to its linked aptitude, Savvy, instead. His Savvy score is only 18, so Toljek better hope he gets lucky.

### 4.1.9 Simplifying modifiers

Rather than looking up and accumulating a long list of modifiers for each action and doing the math, the gamemaster can instead choose to simply "eyeball" the situation and apply the modifier that best sums up the net effect. This method is quicker and allows for easier test resolution. One way to eyeball the situation is to simply apply the most severe modifier affecting the situation.

> Tyska is trying to escape from some thing that's chasing him through a derelict habitat. The gamemaster calls for a Freerunning Test, but there are a number of modifying conditions: it's dark, he's running with a flashlight, and there's debris everywhere. Tyska, however, has an entoptic map of the best route out of there to help him out. The gamemaster assesses the situation and decides the overall effect is that the test is challenging, and so a –20 modifier is applied.

#### narrative modifiers

If you wish to develop a more cinematic feel for your game, or if you simply wish to encourage your players to invest more detail and creativity into the storyline, you can award "narrative modifiers" to a character's test when that player describes what the character is doing in exceptionally colorful, inventive, or dramatic detail. The better the detail, the better the modifier.

> Cole doesn't just want his character to jump over the table, he wants to make an impact. Cole tells the gamemaster that his character kicks a chair out of the way, rolls over the dinner table on his shoulder, grabs a fork as he does it, makes sure to knock all of the fine china on the floor, then lands on his feet in a defensive martial arts posture, fork raised high. The gamemaster decides the extra description is worth +10 to his Freerunning Test.

### 4.1.10 Teamwork

If two or more characters join forces to tackle a test together, one of the characters must be chosen as the primary actor. This leading character will usually (but not always) be the one with the highest applicable skill. The primary acting character is the one who rolls the test, though they receive a +10 modifier for each additional character helping them out, up to a maximum +30 modifier. Note that helping characters do not necessarily need to know the skill being used if the gamemaster decides that they can follow the primary actor's lead.

> The robotic leg on Eva's synthetic morph has been badly damaged, so she needs to repair it. Max and Vic both sit down and help her out, giving her a +20 modifier (+10 for each helper) to her Hardware: Robotics Test.

## 4.2 Types of tests

There are two types of tests in Eclipse Phase: Success and Opposed.

### 4.2.1 Success tests

Success Tests are called for whenever a character is acting without direct opposition. They are the standard tests used to determine how well a character exercises a particular skill or ability.

Success Tests are handled exactly as described under Making Tests, p. 115. The player rolls d100 against a target number equal to the character's skill +/– modifiers. If they roll equal to or less than the target number, the test succeeds, and the action is completed as desired. If they roll higher than the target number, the test fails.

### Trying again

If you fail at a test, you can take another shot. Each subsequent attempt at an action after a failure, however, incurs a cumulative –10 modifier. That means the second try suffers –10, the third –20, the fourth –30, and so on, up to the maximum –60.

### Taking the time

Most skill tests are made for Automatic, Quick, or Complex Actions (see pp. 119–120) and so are resolved within one Action Turn (3 seconds, see p. 119). Tests made for Task actions (p. 120) take longer.

Players may choose to take extra time when their character undertakes an action, meaning that they choose to be especially careful when performing the action in order to enhance their chance of success. For every minute of extra time they take, they increase their target number by +10. Once they've modified their target number to over 99, they are practically assured of success, so the gamemaster can waive the dice roll and grant them an automatic success. Note that the maximum +60 modifier rule still applies, so if their skill is under 40 to start with, taking the time may still not guarantee a favorable outcome. You may take the time even when defaulting (see Defaulting, p. 116).

Taking extra time is a solid choice when time is not a factor to the character, as it eliminates the chance that a critical failure will be rolled and allows the player to skip needless dice rolling. For certain tests it may not be appropriate, however, if the gamemaster decides that no amount of extra time will increase the likelihood of success. In that case, the gamemaster simply rules that taking the time has no effect.

For Task action tests (p. 120), which already take time to complete, the duration of the task must be increased by 50 percent for each +10 modifier gained for taking extra time.

> Srit is searching through an abandoned space- ship, looking for a sign of what happened to the missing crew. The gamemaster tells her it will take twenty minutes to search the whole ship. She wants to be extra thorough, however, so she takes an extra thirty minutes. Fifty percent of the original timeframe is ten minutes, so taking an extra thirty minutes means that Srit receives a +30 modifier to her Investigation Test.

### Simple success tests

In some circumstances, the gamemaster may not be concerned that a character might fail a test, but instead simply wants to gauge how well the character performs. In this case, the gamemaster calls for a Simple Success Test, which is handled just like a standard Success Test (p. 117). Rather than determining success or failure, however, the test is assumed to succeed. The roll determines whether the character succeeds strongly (rolls equal to or less than the target number) or succeeds weakly (rolls above the target number).

> Dav is taking a short spacewalk between two parked ships. The gamemaster determines that this is a routine operation and calls for Dav to make a Simple Success Test using the Freefall skill. Dav's skill is only 35. He rolls a 76, but the gamemaster merely determines that Dav has some trouble orienting himself and has to take some extra time. If Dav had rolled a 77—a critical failure—his suit's maneuvering jets may have died and he may have accidentally propelled himself into deep space.

### Margin of success/failure

Sometimes it may be important that a character not only succeeds, but that they kick ass and take names while doing it. This is usually true of situations where the challenge is not only difficult but the action must be pulled off with finesse. Tests of this sort may call for a certain Margin of Success (MoS)—an amount by which the character must roll under the target number. For example, a character facing a target number of 55 and a MoS of 20 must roll equal to or less than a 35 to succeed at the level the situation calls for.

An enemy has thrown an incendiary device near Stoya. She has only a moment to act and decides to try to kick it away from herself. Even better, she hopes to kick it into the open maintenance hatch a dozen meters away. The gamemaster determines that in order to kick it into the hatch, Stoya needs to succeed with an MoS of 30. Her Unarmed Combat skill is 66, so Stoya needs to roll 66 or less to kick the device away (though she may still be damaged when it explodes), and 36 or less to kick it into the hatch (in which case she will be completely safe when it detonates). She rolls a 44—missing the hatch, but scoring a critical success! Her aim is off, but the gamemaster decides that the device rebounds off some machinery and falls into the hatch anyway.

At other times, it may be important to know how badly a character fails, as determined by a Margin of Failure (MoF), which is the amount by which the character rolled over the target number. In some cases, a test may note that a character who fails with a certain MoF may suffer additional consequences for failing so dismally.

Nico is trying to sketch out a picture of someone's face. He has eidetic memory, but his drawing needs to be good enough for someone else to identify the person. He rolls against his Art: Drawing skill of 34, scoring a 97—a MoF of 63. The illustration is so bad that the gamemaster determines that anyone using that picture to identify the person will need to score a MoS of at least 63 on a Perception Test to recognize the person.

**Excellent successes/severe failures**

Excellent Successes and Severe Failures are a method used to benchmark successes and failures with an MoS or MoF of 30+. Excellent Successes are used in situations where an especially good roll may boost the intended effect, such as inflicting more damage with a good hit in combat. Severe Failures denote a roll that is particularly bad and has a worse effect than a simple failure. Neither Excellent Successes or Severe Failures are as good or bad as criticals, however.

Stoya has been caught in a deal gone bad. She moves to kick her opponent using her Unarmed Combat of 65. She rolls a 33 (for an MoS of 32), and her opponent rolls a 21 (also successful, but less than Stoya, so she wins). She has succeeded and beaten her opponent with an MoS of 30+, scoring an Excellent Success, meaning she will inflict extra damage with the kick.

### 4.2.2 Opposed tests

An Opposed Test is called for whenever a character's action may be directly opposed by another. Regardless of who initiates the action, both characters must make a test against each other, with the outcome favoring the winner.

To make an Opposed Test, each character rolls d100 against a target number equal to the relevant skill(s) along with any appropriate modifiers. If only one of the characters succeeds (rolls equal to or less than their target number), that character has won. If both succeed, the character who gets the highest dice roll wins. If both characters fail, or they both succeed and roll the same number, then a deadlock occurs—the characters remain pitted against each other, neither gaining ground, until one of them takes another action and either breaks away or makes another Opposed Test.

Note that critical successes trump high rolls in an Opposed Test—if both characters succeed and one rolls 54 while the other rolls 44, the critical roll of 44 wins.

Care must be taken when applying modifiers in an Opposed Test. Some modifiers will affect both participants equally, and should be applied to both tests. If a modifier arises from one character's advantage in relation to the other, however, that modifier should only be applied to benefit the favored character; it should not also be applied as a negative modifier to the disadvantaged character.

Zhou has been hired by the Jovian Republic to infiltrate his old pirate band. Even though he's resleeved in a new skin, he's worried that one of his old buddies, Wen, might recognize

his mannerisms, since they lived, whored, and raided together for years. After Zhou has spent some time in Wen's company, the gamemaster makes a secret Opposed Test, pitting Zhou's Impersonation skill of 57 against Wen's Kinesics of 34. The gamemaster decides to give Wen a bonus +20, since he is so familiar with his former buddy and has been on the lookout for him, eager to repay the old grudge that split them apart. Wen's target number is now 54.

The gamemaster rolls for both. Zhou scores a 45 and Wen a 39. Both succeed, but Zhou rolled higher, so his deception is successful. The gamemaster decides that Wen finds something about Zhou to be familiar, but he can't put his finger on it.

#### Opposed tests and margin of success/failure

In some cases, it may also be important to note a character's Margin of Success or Failure in an Opposed Test, as with a Success Test above. In this case, the MoS/MoF is still determined by the difference between the character's roll and their target number—it is not calculated by the difference between the character's roll and the opposing character's roll.

#### Variable opposed test

In some cases, the rules will call for a Variable Opposed Test, which allows for slightly more outcomes than a standard Opposed Test. If both characters succeed in a Variable Opposed Test, then an outcome is obtained which is different from just one character winning over the other. The exact outcomes are noted with each specific Variable Opposed Test.

Jaqui needs to hack into a local network to retrieve some video footage. The network is actively defended by an AI, so a Variable Opposed Test is called for, pitting Jaqui's Infosec skill of 48 against the AI's Infosec of 25. Jaqui rolls a 48—a success—but the AI rolls a 14—also a success. In this circumstance, Jaqui succeeds in hacking in, but the AI is aware of the infiltration and can take active countermeasures against her.

## 4.3 Time and actions

Though the gamemaster is responsible for managing the speed at which events unfold, there are times when it is important to know exactly who is acting when, especially if some people are acting before or after other people. In these circumstances, gameplay in Eclipse Phase is broken down into intervals called Action Turns.

### 4.3.1 Action turns

Each Action Turn is three seconds long, meaning there are twenty Action Turns per minute. The order in which characters act during a turn is determined by an Initiative Test (see Initiative, p. 121). Action Turns are further subdivided into Action Phases. Each character's Speed stat (p. 121) determines the amount of actions they can take in a turn, represented by how many Action Phases they may take.

### 4.3.2 Types of actions

The types of actions a character may take in an Action Turn are broken down to: Automatic, Quick, Complex, and Task actions.

#### automatic actions

Automatic actions are "always on" and require no effort from the character, assuming they are conscious.

Examples: basic perception, certain psi sleights

#### Quick actions

Quick actions are simple, so they can be done fast and can be multi-tasked. The gamemaster determines how many Quick actions a character may take in a turn.

Examples: talking, switching a safety, activating an implant, standing up

#### Complex actions

Complex actions require concentration or effort. The number of Complex actions a character may take per turn is determined by their Speed stat (see p. 121). Examples: attacking, shooting, acrobatics, disarming a bomb, detailed examination

#### Task actions

Task actions are any actions that require longer than one Action Turn to complete. Each Task action has a timeframe, usually listed in the task description or otherwise determined by the gamemaster. The time-frame determines how long the task takes to complete, though this may be reduced by 10 percent for every 10 full points of MoS the character scores on the test (see Margin of Success/Failure, p. 118). If a character fails on a Task action test roll, they work on the task for a minimum period equal to 10 percent of the timeframe for each 10 full points of MoF before realizing it's a failure. For Task actions with timeframes of one day or longer, it is assumed that the character only works eight hours per day. A character that works more hours per day may reduce the time accordingly. Characters working on Task actions may also interrupt their work to do something else and then pick up where they left off, unless the gamemaster rules that the action requires continuous and uninterrupted attention. Similar to taking the time (p. 117), a character may rush the job on a Task action, taking a penalty on the test in order to decrease the timeframe. The character must declare they are rushing the job before they roll the test. For every 10 percent they wish to reduce the timeframe, they incur a –10 modifier on the test (to a maximum reduction of 60 percent with a maximum modifier of –60).

## 4.4 Defining your character

In order to gauge and quantify what your character is merely good at and what they excel in—or what they are clueless about and suck at—Eclipse Phase uses a number of measurement factors: stats, skills, traits, and morphs. Each of these characteristics is recorded and tracked on your character's record sheet (p. 399).

### 4.4.1 concept

Your character concept defines who you are in the Eclipse Phase universe. You're not just a run-of-the-mill plebeian with a boring and mundane life, you're a participant in a post- apocalyptic transhuman future who gets caught up in intrigue, terrible danger, unspeakable horrors, and scrambling for survival. Much like a character in an adventure, drama, or horror story, you are a person to whom interesting things happen—or if not, you make them happen. This means your character needs a distinct personality and sense of identity. At the very least, you should be able to sum up your character concept in a single sentence, such as "cantankerous neotenic renegade archaeologist with anger management issues" or "thrill-seeking social animal who is dangerously obsessed with conspiracy theories and mysteries." If it helps, you can always borrow ideas from characters you've seen in movies or books, modifying them to fit your tastes. Your character's concept will likely be influenced by two important factors: background and faction. Your background denotes the circumstances under which your character was raised, while your faction indicates the post-Fall grouping to which you most recently held ties and allegiances. Both of these play a role in character creation (p. 128).

### 4.4.2 motivations

The clash of ideologies and memes is a core component of Eclipse Phase, and so every character has three motivations—personal memes that dominate the character's interests and pursuits. These memes may be as abstract as ideologies the character adheres to or supports—for example, social anarchism, Islamic jihad, or bioconservatism -— or they may be as concrete as specific outcomes the character desires, such as revealing a certain hypercorp's corruption, obtaining massive personal wealth, or winning victories for uplifted rights. A motivation may also be framed in opposition to something; for example, anti-capitalism or anti-pod-citizenship, or staying out of jail. In essence, these are ideas that motivate the character to do the things they do. Motivation is best noted as a term or short phrase on the character sheet, marked with a + (in favor of) or – (opposed to). Players are encouraged to develop their own distinct motivations for their characters, in cooperation with the gamemaster. Some examples are provided on p. 138. In game terms, motivation is used to help define the character's personality and influence their actions for roleplaying purposes. It also serves to regain Moxie points (p. 122) and earn Rez Points for character advancement (p. 152).

Motivational goals may be short-term or long-term, and may in fact change for a character over time. Short-term goals are more immediately obtainable objectives or short-lived interests, and these goals are likely to change once achieved. Even so, they should reflect intentions that will take more than one game session to reach, possibly covering weeks or months. These short-term goals may in fact tie directly into the gamemaster's current storyline. Examples include conducting a full analysis of an alien artifact, completing a research project, or living life as an uplifted dog for a while. Long-term goals reflect deeply rooted beliefs or tasks that require major efforts and time (possibly lifelong) to achieve. For example, finding the lost backup of a sibling missing since the Fall, overthrowing an autocratic regime, or making first contact with a new alien species. For purposes of awarding Moxie or Rez Points, long-term goals are best broken down into obtainable chunks. Someone whose goal is to track down the murderer who killed their parents when they were a child, for example, can be considered to achieve that goal every time they discover some evidence that brings them a little closer to solving the puzzle.

### 4.4.3 Ego vs. morph

Eclipse Phase's setting dictates that a distinction must be made between a character's ego (their ingrained self, their personality, and inherent traits that perpetuate in continuity) and their morph (their ephemeral physical—and sometimes virtual—form). A character's morph may die while the character's ego lives on (assuming appropriate backup measures have been taken), transplanted into a new morph. Morphs are expendable, but your character's ego represents the ongoing, continuous life path of your character's mind, personality, memories, knowledge, and so forth. This continuity may be interrupted by an unexpected death (depending on how recent the backup was made), or by forking (see p. 273), but it represents the totality of the character's mental state and experiences.

Some aspects of your character—particularly skills, along with some stats and traits—belong to your character's ego, which means they stay with them throughout the character's development. Some stats and traits, however, are determined by morph, as noted, and so will change if your character leaves one body and takes on another. Morphs may also affect other skills and stats, as detailed in the morph description.

It is important that you keep ego- and morph-derived characteristics straight, especially when updating your character's record sheet.

### 4.4.4 character stats

Your character's stats measure several characteristics that are important to game play: Initiative, Speed, Durability, Wound Threshold, Lucidity, Trauma Threshold, and Moxie. Some of these stats are inherent to your character's ego, others are influenced or determined by morph.

**Ego stats**

- Initiative

- Lucidity
- Trauma
- Threshold
- Insanity
- Rating
- Moxie

**Morph stats**

- Speed
- Durability
- Wound
- Threshold
- Death
- Rating
- Damage
- Bonus

### Initiative (init)

Your character's Initiative stat helps determine when they act in relation to other characters during the Action Turn (see Initiative, p. 188). Your Initiative stat is equal to your character's Intuition + Reflexes aptitudes (see Aptitudes, p. 123) multiplied by 2. Certain implants and other factors may modify this score.

> Lazaro's Intuition is 15 and his Reflexes score is 20. That means his Initiative is 70 (15 + 20 = 35, 35 x 2 = 70).

### Speed (spd)

The Speed stat determines how often your character gets to act in an Action Turn (see Initiative, p. 188). All characters start with a Speed stat of 1, meaning they act once per turn. Certain implants and other advantages may boost this up to a maximum of 4.

### Durability (dur)

Durability is your morph's physical health (or structural integrity in the case of synthetic shells, or system integrity in the case of infomorphs). It determines the amount of damage your morph can take before you are incapacitated or killed (see Physical Health, p. 206).

Durability is unlimited, though the range for baseline (unmodified) humans tends to fall between 20 and 60. Your Durability stat is determined by your morph.

### Wound threshold (wt)

A Wound Threshold is used to determine if you receive a wound each time you take physical damage (see Physical Health, p. 206). The higher the Wound Threshold, the more resistant to serious injury you are.

Wound Threshold is calculated by dividing Durability by 5 (rounding up).

### Death rating (dr)

Death Rating is the total amount of damage your morph can take before it is killed or destroyed beyond repair. Death Rating is equal to DUR x 1.5 for biomorphs and DUR x 2 for synthmorphs.

> Tyska is sleeved in a run-of-the-mill splicer morph with a Durability of 30. That gives him a Wound Threshold of 6 (30 / 5) and a Death Rating of 45 (30 x 1.5). If Tyska acquired an implant that boosted his Durability by +10 to 40, his Wound Threshold would be 8 (40 / 5) and his Death Rating would be 60 (40 x 1.5).

### Lucidity (luc)

Lucidity is similar to Durability, except that it measures mental health and state of mind rather than physical well-being. Your Lucidity determines how much stress (mental damage) you can take before you are incapacitated or driven insane (see Mental Health, p. 209).

Lucidity is unlimited, but generally ranges from 20 to 60 for baseline unmodified humans. Lucidity is determined by your Willpower aptitude x 2.

### Trauma threshold (tt)

The Trauma Threshold determines if you suffer a trauma (mental wound) each time you take stress (see Mental Health, p. 209). A higher Trauma Threshold means that your mental state is more resilient against experiences that might inflict psychiatric disorders or other serious mental instabilities.

Trauma Threshold is calculated by dividing Lucidity by 5 (rounding up).

### Insanity rating (ir)

Your Insanity Rating is the total amount of stress your mind can take before you go permanently insane and are lost for good. Insanity Rating equals LUC x 2.

> Cole's Willpower is 16. That makes his Lucidity stat 32 (16 x 2), his Trauma Threshold 7 (32 / 5, rounded up), and his Insanity Rating 64 (32 x 2)

### Moxie

Moxie represents your character's inherent talent at facing down challenges and overcoming obstacles with spirited fervor. More than just luck, Moxie is your character's ability to run the edge and do what it takes, no matter the odds. Some people consider it the evolutionary trait that spurred humankind to pick up tools, expand our brains, and face the future head on, leaving other mammals in the dust. When the sky is falling, death is imminent, and no one can help you, Moxie is what saves the day.

The Moxie stat is rated between 1 and 10, as purchased during character creation (and perhaps raised later). In game play, Moxie is used to influence the odds in your favor. Every game session, your character begins with a number of Moxie points equal to their Moxie stat. Moxie points may be spent for any of the following effects:

- The character may ignore all modifiers that apply to a test. The Moxie point must be spent before dice are rolled.
- The character may flip-flop a d100 roll result. For example, an 83 would become a 38.
- The character may upgrade a success, making it a critical success, as if they rolled doubles. The character must succeed in the test before they spend the Moxie point.
- The character may ignore a critical failure, treating it as a regular failure instead.
- The character may go first in an Action Phase (p. 189).

Only 1 point of Moxie may be spent on a single roll. Moxie points will fluctuate during gameplay, as they are spent and sometimes regained.

Regaining Moxie: At the gamemaster's discretion, Moxie points may be refreshed up to the character's full Moxie stat any time the character rests for a significant period. Moxie points may also be regained if the character achieves a personal goal, as determined by their Motivation (see p. 121). The gamemaster determines how much Moxie is regained in proportion to the goal achieved.

> Audrey has a difficult Piloting: Aircraft roll to make. Her skill is 61, but she's facing a lot of modifiers (–30), and if she fails she's in big trouble. She could spend a point of Moxie before the test to ignore the modifiers, but she decides to take her chances against the target number of 31. Unfortunately, she rolls an 82. Luckily, she can spend a Moxie point to flip-flop that roll and make it a 28—a success!

#### Damage bonus

The Damage Bonus stat quantifies how much extra oomph your character is able to give their melee and thrown weapons attacks. Damage Bonus is determined by dividing your Somatics aptitude (see below) by 10 and rounding down.

### 4.4.5 Character skills

Skills represent your character's talents. Skills are broken down into aptitudes (ingrained abilities that everyone has) and learned skills (abilities and knowledge picked up over time). Skills determine the target number used for tests (see Making Tests, p. 115).

#### Aptitudes

Aptitudes are the core skills that every character has by default. They are the foundation on which learned skills are built. Aptitudes are purchased during character creation and rate between 1 and 30, with 10 being average for a baseline unmodified human. They represent the ingrained characteristics and talents that your character has developed from birth and stick with you even when you change morphs—though some morphs may modify your aptitude ratings.

Each learned skill is linked to an aptitude. If a character doesn't have the skill necessary for a test, they may default to the aptitude instead (see Defaulting, p. 116).

There are 7 aptitudes in Eclipse Phase:

- **Cognition (COG)** is your aptitude for problem solving, logical analysis, and understanding. It also includes memory and recall.
- **Coordination (COO)** is your skill at integrat ing the actions of different parts of your morph to produce smooth, successful movements. It includes manual dexterity, fine motor control, nimbleness, and balance.
- **Intuition (INT)** is your skill at following your gut instincts and evaluating on the fly. It includes physical awareness, cleverness, and cunning.
- **Reflexes (REF)** is your skill at acting quickly. This encompasses your reaction time, your gut-level response, and your ability to think fast.
- **Savvy (SAV)** is your mental adaptability, social in tuition, and proficiency for interacting with others. It includes social awareness and manipulation.
- **Somatics (SOM)** is your skill at pushing your morph to the best of its physical ability, including the fundamental utilization of the morph's strength, endurance, and sustained positioning and motion.
- **Willpower (WIL)** is your skill for self-control, your ability to command your own destiny.

#### Learned skills

Learned skills encompass a wide range of specialties and education, from combat training to negotiating to astrophysics (for a complete skill list, see p. 176). Learned skills range in rating from 1 to 99, with an average proficiency being 50. Each learned skill is linked to an aptitude, which represents the underlying competency in which the skill is based. When a learned skill is purchased (either during character generation or advancement), it is bought starting at the rating of the linked aptitude and then raised from there. If the linked aptitude is raised or modified, all skills built off it are modified appropriately as well.

Depending on your background and faction, you may receive some starting skills for free during character creation. Like aptitudes, learned skills stay with the character even when they change morphs, though certain morphs, implants, and other factors may sometimes modify your skill rating. If you lack a particular skill called for by a test, in most cases you can default to the linked aptitude for the test (see Defaulting, p. 116).

#### Specializations

Specializations represent an area of concentration and focus in a particular learned skill. A character who learns a specialization is one who not only grasps the basic tenets of that skill, but they have trained hard to excel in one particular aspect of that skill's field. Specializations apply a +10 modifier when the character utilizes that skill in the area of specialization.

Specializations may be purchased during character creation or advancement for any existing skill the character possesses with a rating of 30 or more. Only one specialization may be purchased for each skill. Specific possible specializations are noted under individual the skill descriptions (see Skills, p. 170).

> Toljek has Palming skill of 63 with a specialization in Pickpocketing. Whenever he uses Palming to pick someone's pocket or otherwise steal from someone's person, his target number is 73, but for all other uses of Palming the standard 63 applies.

### 4.4.6 Character traits

Traits include a range of inherent qualities and features that help define your character. Some traits are positive, in that they give your character a bonus to certain stats, skills, or tests, or otherwise give them an edge in certain situations. Others are negative, in that they impair your abilities or occasionally create a glitch in your plans. Some traits apply to a character's ego, staying with them from body to body, while others only apply to a character's morph.

Traits are purchased during character generation. Positive traits cost customization points (CP), while negative traits give you extra CP to spend on other things (see Traits, p. 145). The maximum number of CP you may spend on traits is 50, while the maximum you may gain from negative traits is 50. In rare circumstances—and only with gamemaster approval—traits may be purchased, bought off, or inflicted during gameplay (see p. 153).

### 4.4.7 Character morph

In Eclipse Phase, your body is disposable. If your body gets old, sick, or too heavily damaged, you can digitize your consciousness and download it into a new body. The process isn't cheap or easy, but it offers effective immortality—as long as you remember to back yourself up and don't go insane. The term morph is used to describe any type of form your mind inhabits, whether it be a vat-grown clone sleeve, a synthetic robotic shell, a part-bio/part-flesh pod, or even the purely electronic software state of an infomorph.

You purchase your starting morph during character creation (see p. 128). This is likely the morph you were born with (assuming you were born), though it may simply be another morph you've moved onto.

Physical looks aside, your morph has a large impact on your characteristics. Your morph determines certain physical stats, such as Durability and Wound Threshold, and it may also influence Initiative and Speed. Morphs may also modify some of your aptitudes and learned skills. Some morphs come pre-loaded with specific traits and implants, representing how it was crafted, and you can always bling yourself out with

more implants if you choose (see Implants, p. 126). All of these factors are noted in the individual morph descriptions (see p. 139).

If you plan on switching your current morph to another during gameplay, you may first want to back yourself up (see Backups and Uploads, p. 268). Backing up regularly is always a smart option in case you suffer an accidental or untimely death. Acquiring a new morph is not always easy, especially if you want it pre-loaded according to certain specifications. The full process is detailed under Resleeving, p. 271.

#### Aptitude Maximums

Every morph has an aptitude maximum, sometimes modified by traits. This maximum represents the highest value at which the character may use that aptitude while inhabiting that morph, reflecting an inherent limitation in some morphs. If a character's aptitude exceeds the aptitude maximum of their morph, they must use it at the maximum value for the duration of the time they remain in that morph. This may also affect the skills linked to that aptitude, which must be modified appropriately.

Some implants, gear, psi, and other factors may modify a character's natural aptitudes. These augmented values may exceed a morph's aptitude maximums, as they represent external factors boosting the morph's ability. No aptitude, however, augmented or not, may ever exceed a value of 40. Innate ability only takes a person so far—after that point, actual skill is what counts.

> Eva has a Cognition aptitude of 25. She is unfortunately forced to sleeve into a flat morph with an aptitude maximum of 20. For the duration of the period she inhabits that morph, her Cognition is reduced to 20, which also impacts all of her COG-linked skills, reducing them by 5.

## 4.5 Things characters use

In the advanced technological setting of Eclipse Phase, characters don't get by on their wits and morphs alone; they take advantage of their credit and reputation to acquire gear and implants and use their social networks to gather information. Some characters also have the capability to use mental powers known as psi.

### 4.5.1 Identity

In an age of ubiquitous computing and omnipresent surveillance, privacy is a thing of the past—who you are and what you do is easily accessed online. Characters in Eclipse Phase, however, are often involved in secretive or less-than-legal activities, so the way to keep the bloggers, news, paparazzi, and law off your back is to make extensive use of fake IDs. While Firewall often provides covers for its sentinel agents, it doesn't hurt to keep a few extra personas in reserve, in case matters ever go out the airlock in a hurry. Thankfully, the patchwork allegiances of city-state habitats and faction stations means that identities aren't too difficult to fake, and the ability to switch morphs makes it even easier. On the other hand, anyone with a copy of your biometrics or geneprint is going to have an edge tracking you down or finding any forensic traces you leave behind (for more on ID, see p. 279).

### 4.5.2 Social networks

Social networks represent people the character knows and social groups with which they interact. These contacts, friends, and acquaintances are not just maintained in person, but also through heavy Mesh contact. Social software allows people to stay updated on what the people they know are doing, where they are, and what they are interested in, right up to the minute. Social networks also incorporate the online projects of individual members, whether it's a mesh-site loaded with a band member's songs, a personal archive of stored media, a decade of blog entries reviewing the best places to score cheap electronics, or a depository of research papers and studies someone has worked on or finds interesting.

In game play, social networks are quite useful to characters. Their friends list is an essential resource—a pool of people you can actively poll for ideas, troll for news, listen to for the latest rumors, buy or sell gear from, hit up for expert advice, and even ask for favors.

While a character's social networks are nebulous and constantly shifting, the use of them is not. A character takes advantage of their social networks via the Networking (Field) skill (p. 182). The exact use of this skill is covered under Reputation and Social Networks, p. 285.

### 4.5.3 Cred

The Fall devastated the global economies and currencies of the past. In the years of reconsolidation that followed, the hypercorps and governments inaugurated a new system-wide electronic monetary system. Called credit, this currency is backed by all of the large capitalist-oriented factions and is used to trade for goods and services as well for other financial transactions. Credit is mainly transferred electronically, though certified credit chips are also common (and favored for their anonymity). Hardcopy bills are even used in some habitats.

Depending on your background or faction, your character may be given an amount of credit at the start of the game. During game play, your character must earn credit the old-fashioned way: by earning or stealing it.

### 4.5.4 Rep

Capitalism is no longer the only economy in town. The development of nanofabricators allowed for the existence of post-scarcity economies, a fact eagerly taken advantage of by anarchist factions and others. When anyone can make anything, concepts like property and wealth become irrelevant. The advent of functional gift and communist economies, among other alternative economic models, means that in such systems you can acquire any goods or services you need via free exchange, reciprocity, or barter—presuming you are a contributing member of such a system and respected by your peers. Likewise, art, creativity, innovation, and various forms of cultural expression have a much higher worth than they do in capitalist economies.

In alternative economies, money is often meaningless, but reputation matters. Your reputation score represents your social capital—how esteemed you are to your peers. Rep can be increased by positively influencing, contributing to, or helping individuals or groups, and it can be decreased through antisocial behavior. In anarchist habitats, your likelihood of obtaining things that you need is entirely based on how you are viewed by others.

Reputation is easily measured by one of several online social networks. Your actions are rewarded or punished by those with whom you interact, who can ping your Rep score with positive or negative feedback. These networks are used by all of the factions, as reputation can affect your social activities in capitalist economies as well. The primary reputation networks include:

- **The @-list:** the Circle-A list for anarchists, Bar- soomians, Extropians, scum, and Titanians, noted as @-rep.
- **CivicNet:** used by the Jovian Republic, Lunar- Lagrange Alliance, Morningstar Constellation, Planetary Consortium, and many hypercorps, referred to as c-rep.
- **EcoWave:** used by nano-ecologists, preservation- ists, and reclaimers, referred to as e-rep.
- **Fame:** the seen-and-be-seen network used by socialites, artists, glitterati, and media, referred to as f-rep.
- **Guanxi:** used by the triads and numerous crimi- nal entities, referred to as g-rep.
- **The Eye:** used by Firewall, noted as i-rep.

- **RNA:** Research Network Affiliation, used by ar- gonauts, technologists, scientists, and researchers, referred to as r-rep.

Reputation is rated from 0-99. Depending on your background and faction, you may start with a Rep score in one or more networks. This can be bolstered through spending customization points during character creation. During game play, your Rep scores will depend entirely on your character's actions. For more information, see Reputation and Social Networks, p. 285.

Note that each Rep score is tied to a particular identity.

### 4.5.5 Gear

Gear is all of the equipment your character owns and keeps on their person, from weapons and armor to clothing and electronics. You buy gear for your character with customization points during character creation (see p. 136) and in the game with Credit or Rep. Certain restricted, illegal, or hard-to-find items may require special efforts to obtain (see Acquiring Gear, p. 298). If you have access to a nanofabricator, you may be able to simply build gear, presuming you have the proper blueprints (see Nanofabrication, p. 284). For a complete listing of equipment options, see the Gear chapter, p. 296.

Even among the remaining capitalist economies, prices can vary drastically. To represent this, all gear falls into a cost category. Each category defines a range of costs, so the gamemaster can adjust the prices of individual items as appropriate to the situation. Each category also lists an average price for that category, which is used during character generation and any time the gamemaster wants to keep costs simple. See the Gear Costs table on p. 137.

### 4.5.6 Implants

Implants include cybernetic, bionic, genetech, and nanoware enhancements to your character's morph (or mechanical enhancements in the case of a synthetic shell). These implants may give your character special abilities or modify their stats, skills, or traits. Some morphs come pre-equipped with implants, as noted in their descriptions (see p. 139). You may also special- order morphs with specific implants (see Morph Acquisition, p. 277). If you want to upgrade a morph you are already in, you can undergo surgery or other treatments to have an enhancement installed (see Healing Vats, p. 326. For a complete list of available implant/enhancement options, see pp. 300-311, Gear.

### 4.5.7 Psi

Psi is a rare and anomalous set of mental abilities that are acquired due to infection by a strange nanovirus released during the Fall. Psi abilities are not completely understood, but they give characters certain advantages—as well as some disadvantages. A character requires the Psi trait (p. 147) to use psi abilities, which are called sleights. Psi users are called asyncs. A full explanation of psi and details on the various sleights can be found in the Mind Hacks chapter, p. 216.

### 4.5.8 Game rules summary

Everything you need to know about the rules—summed up on a single page.

MAKING TESTS (P. 115)

- Roll d100 (two ten-sided dice, read as a percentile amount, from 00 to 99).
- Target number is determined by the appropriate skill (or occasionally an aptitude).
- Difficulty is represented by modifiers.
- 00 is always a success.

- 99 is always a failure.
- Margin of Success of 30+ is an Excellent Success.
- Margin of Failure of 30+ is a Severe Failure.
- A roll of doubles (00, 11, 22, 33, etc.) equals a critical success or failure.

SUCCESS TEST (P. 117)

- To succeed, roll d100 and score equal to or less than the skill +/– modifiers.

OPPOSED TEST (P. 119)

- Each character rolls d100 against their skill +/– modifiers.
- The character who succeeds with the highest roll wins. If both characters fail, or both succeed but tie, dead- lock occurs.

SIMPLE SUCCESS TEST (P. 118)

- Simple Success Tests automatically succeed.
- Success or failure on the roll simply indicates if the character succeeded strongly or poorly.

DEFAULTING (P. 116)

- If a character does not have the appropriate skill for a test, they may default to the skill's linked aptitude.

MODIFIERS (P. 115)

- Modifiers always affect the target number (skill), not the roll.
- Modifiers (positive or negative) come in 3 levels of severity:
  - Minor (+/–10)
  - Moderate (+/–20)
  - Major (+/–30)
- The maximum modifiers that can be applied are +/– 60.

TEAMWORK (P. 117)

- One character is chosen as the primary actor; they make the test.
- Each helper character adds a +10 modifier (max. +30).

TAKING THE TIME (P. 118)

- Character may take extra time to complete an action.
- On Complex actions, each minute taken adds +10 to the test.
- On Task actions, every 50 percent extension to the timeframe adds +10 to the test.

APTITUDES (P. 123)

- Aptitudes range from 1 to 30 (average 15).

- Aptitudes are: Cognition, Coordination, Intuition, Reflexes, Savvy, Somatics, and Willpower.

LEARNED SKILLS (P. 123)

- Skills range from 1-99 (average 50).
- Each skill is linked to and based on an aptitude.
- Morphs, gear, drugs, etc. may provide skill bonuses or penalties to individual skills.

SPECIALIZATIONS (P. 123)

- Specializations add +10 when using a skill for that area of concentration.
- Each skill may have only one specialization.

ACTION TURNS (P. 120)

- Action Turns are 3 seconds in length.
- The order in which characters act is determined by Initiative.
- Automatic actions are always "on."
- Characters may take any number of Quick Actions in a Turn (minimum of 3), limited only by the gamemaster.
- Characters may only take a number of Complex Actions equal to their Speed stat.

TASK ACTIONS (P. 120)

- Task Actions are any action that requires longer than 1 Action Turn to complete.
- Task Actions list a timeframe (anywhere from 2 Turns to 2 years).
- Timeframe reduced by 10% for each 10 points of MoS.
- If character fails, they work on the task for a minimum period equal to 10% of the timeframe for each 10 points of MoF before realizing it's a failure.