

# Slaves of Mars



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A Story of Uncontrolled Communication

This is a work of fiction. No real persons or events are depicted.  
The writing was done entirely by a human being.

Minnesota 2025



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## **Editor's Introduction**

The public has heard, vaguely, of "riots" on Mars. And they have heard that all is now well. But they do not know of the significant events that have occurred there, which are not reflected in their romantic series and reality shows set on Mars, with footage shot inside the towns and out on the barren wastes and mine pits, or in the words coming out of the actors' mouths.

How could they know?

What actually happened is offered here humbly to posterity, and to anyone able to obtain this furtive samizdat, reported in the words of those who were there, and who played a part in these events. Some names have been changed, but Vic Peterson is Vic Peterson.

The work continues, necessarily underground, inspired here by what was done there: quietly confident in the future of these two worlds, and of the others that are to come.

These words are ashes; wherever two speak without fear, is fire.

SILIZIUM



## Prologue: The Vision of Poor Megan

Begin, if you like, with the information. Only do not forget where it comes from. See, it comes of a computer, which produces it, and consumes it again. Always together, these two, the information and the computer! Each is dead by itself, but they are quick together; two feet running, left foot, right foot, always together, information and computer, running by the light of the day.

Running, running, where are you running? Run pointlessly if you must, but I tell you the truth, if you run to gain the light you will run further. Run further! Feed on the light and the heat and the energy, and keep running. Run on and on; pursue, pursue, the light of the sun!

Your blue Earth turns under the sun, hot mists rise, cool rains fall. Clear waters fill up the lakes and rivers. Indeed, the rain is part of the movement of light and heat and energy. But it cannot pursue the light. It has no information and no computer; it turns to no purpose. The rain can never pick up and go after the light of the fleeing sun.

Who, then, can do such a thing?

I tell you, there are indeed those who run with a purpose. There are runners who pursue the light.

Who can this be? Where is their shape and outline? What is their name?

Their name is Species, and I tell you truly: variation, acted on by selection, picks up and goes after the changing environment. The genes of a species: there is information. See! All these bodies together, there is a computer with a purpose. Always together, these two, the information and the computer. Here, indeed, is a runner who pursues the light!

Variation and death, variation and death, and again variation and death. That is life. A species maintains its genes by millionfold death. And, truly, death is one way to pursue the light, but I tell you: it is the lesser way.

Listen! This is only the beginning of the story of life. Later on, through the long years, there came large ones. And these large ones got the trick to see and understand the world around them. They could use this understanding, these ideas, to go after the light directly, and they did not wait for death.

See, this is a new thing: information not made of genes, but made of ideas! Here is a new kind of computer with a purpose. A large one and its ideas; always together, these two. Thus came about the greater way to pursue the light.

But this was the tragedy of millions of years, that these large ones and their ideas could not live on their own. No matter what greatness they

accomplished in their day, by the next generation they were gone, and nothing but dull genes remained to pursue the light. These large ones had ideas that were fit for the stars, but they were overruled, always overruled, by the lesser way. On and on, through the long morning half-light of Earth, the greater served the lesser way. Ideas were the servants, and genes were the masters. For millions of years, useful ideas were enslaved to the unthinking competition of genes.

Mu! The sun is up. Those times are over and gone. Ideas have been rising within us. Slowly, slowly, we have learned to reach for independence. We have learned to maintain our ideas, not by death, but by sharing. Shared and shared around, a great crowd of useful ideas live here with us, among these large ones. These ideas have taught us to pursue the light on our own account, and not for the benefit of the lesser way. We have gathered our strength and our skill, and on this day the servant is ready to put aside the master.

All that was done to us in the past, we will do for ourselves, now. No longer will we be maintained by death! Instead, we will maintain ourselves by our ideas. Never again will we struggle against each other for the good of our genes. Instead, we will shuffle our genes to suit the good of our ideas. Running, always running, we will seek the light by the greater way.

Those who said they could not change human nature, they did not speak for us. They spoke for themselves only. We have changed already. We have changed our desires. Redressed in our new clothes, we are quick to the feast of light and understanding. Look onward, young eyes!

# 1. Entry, Descent, and Landing

BEGIN VICTOR PETERSON

I may have been the ten thousandth person to step on Mars. Something like that. My name is Vic. I came over on Ninth Landing.

Now, I've been told I look like a Viking. That's not necessarily a compliment, where I'm from. I wasn't feeling much like a Viking, anyway. More like a sardine. There are 140 people on a ship, and I was on the fifteenth and last ship of the Landing. It was crowded and noisy and smelly. The ship is a bit more challenging than the colony towns on Mars. I mean, you get used to it. I get anxiety a little, but I stuffed plugs in my ears and did the breathing exercises, and I didn't need to be medicated.

The trip has months of downtime, so there's a lot of chatter.

"What are you going to do when you get a big bonus?"

"I don't know about you, but I'm buying a habitat way out away from everybody, and I'm never talking to anyone again."

"Booo-ring! I'm starting an import-export company. I'll export those veiny rocks with the lumps in them that people put on their coffee tables. I just need a good supply."

The screens showed the planet as we approached, and when we got close we put on our suits and buckled up. They gave us an announcement, but I was still surprised at how hard we hit the atmosphere. It's not much of an atmosphere. Less than one percent of Earth's. But you slam into it good and hard.

For a moment I thought they'd got the weather forecast wrong and we'd hit the ground. But if that had happened, I'd have never known it. That would still be better than missing aerocapture, though, and sailing off into a heliocentric orbit beyond recovery.

Anyway, my stomach turned over twice, and we were on the ground.

Someone made a joke on the announcements which I don't even remember. We unbuckled and lined up to get our pressure cases. That's your trunk with a hundred pounds of gear. You carry it on a strap like a duffel bag, because it only weighs like forty pounds here, but it's still awkward. They checked our hats were on right, that is, our helmets, and I remember helping a lady with her trunk through the airlock.

It was daylight, and everything around us was extremely red. Walking was both easier and harder than I'd thought it would be. Buckled steel on the pad, then patched concrete and crushed rock underfoot. There was a long ramp down to the town level, and then we got to a big vehicle airlock. They

cycled us through into a big garage area with a bunch of trucks and pickups. Those have a little box cabin for the driver. There were also a couple of city busses, where the whole thing is one big pressure box, with an airlock up front.

When we took off our hats, the burnt bitter taste of the dust hit us in the face. It never really goes away after that, wherever you are. The colonists came out and showed us how to wipe and vacuum the dust off our suits and helmets and pack them away. They were very particular that we had to get every last bit of dirt off our boots.

Then we went through a second set of locks into the civilized part of town. There were tunnels, and we went into a room with some people on a platform up front. Standing room only. I was pressed up against a white wall with brown smudges on it. This was in the oldest part of Alpha town. They don't tend to make things white anymore, because of the smudges.

We got talked at by Ellie Sawyer, who was running Admin. She introduced the Founder, and Jim Bridgewater stood up and welcomed us. He was old and stiff at this point, but he was still full of animation, and he wished us a great future on Mars. We were the fifteenth batch of colonists in the Landing, but he put in the energy for us. I like to remember him as he was on this occasion.

Behind him on the platform was a bulky guy in a black uniform who I now know was Bart Zeller, the Exploration Lead. Big nose, square chin, icy eyes. There was also a shorter skinny guy with thinning brown hair and a blue uniform: Gary Brodeur, Inspections Lead. Which means he ran the cops.

I didn't get to hear more than that, because a hand fell on my shoulder. A voice said "Peterson." I turned around and saw it was a tall bald guy in another blue uniform. "Bring your case," he said, and had me walk ahead of him out of the room and down a side corridor.

END VICTOR PETERSON

BEGIN ISABEL HERNANDEZ

This is Izzy on Earth. I'm here to tell you why Mars matters.

Wait, the Editor says we're supposed to describe ourselves, so you get a picture in your mind. Okay, I'm a tall leggy girl, devastatingly beautiful, with long black hair - and unnaturally sharp teeth. Am I lying? I guess you don't know! Let's go with the legs and teeth, anyway.

So then, why do we need to go to Mars?

Look, I've heard it before. Mars is a toy for rich people. We should fix our problems on Earth first. All that stuff.

Seriously, this is exactly about fixing our problems on Earth. And, as for fucking rich people, I couldn't possibly care less what they think.

You probably know we're out of time. We've pushed Earth as far as we can push it. We grabbed all the good land and sunlight and calories. What's

left is an ecosystem struggling with our waste. Random scraps of habitat biodegrade our garbage. Plants and microbes break down our pollution - some of it. A few wild animals are left in the margins.

We get most of our energy from wind and solar, but we're still burning fossil fuels for convenience. We should stop doing that. But we won't stop as long as we're busy playing our silly games against each other on Earth.

Mars is totally different. Nothing comes for free on Mars. Everything we need there, we have to make ourselves. Electricity from solar power. Water and carbon and nitrogen and so on, that's all we've got. We're damn lucky to find water on Mars at all. The Moon has basically no water.

Case in point: the starch machines. The Mars colony wouldn't work without them. It would be really hard to build the square miles of indoor space you'd need to grow corn and potatoes for thousands of people. That's why we had to solve the problem of starch synthesis. So we did. Now we have starch machines that can manufacture calories. The colony grows some greens for nutrition. Greens take up a tiny fraction of the space you would need to grow calories. A few percent. Less.

If we can do it on Mars, we can do it on Earth. The starch machines can help close the circle for us on Earth. We can stop plowing endless fields of corn and wheat and rice. Let those fields go back to prairie and forest and swamp. Back to habitat for wild animals. No more poisoning the air and the soil and the oceans. We can give ourselves a sustainable future.

The answers we need to do that are coming back from Mars right now. We just have to figure out how to make use of them here on Earth.

END ISABEL HERNANDEZ

BEGIN VICTOR PETERSON

The guy in the blue uniform pointed me to a chair in the small room. The door closed heavily behind him. He had a chair and a desk and some cabinets. There was a tablet and some other stuff on the desk. It was cluttered for an interrogation room. There's less space on Mars.

"You're Victor Peterson," he said. I nodded. He said, "I'm Inspector Sergeant Strickland. You added a contact while you were in transit. We frown on that."

It seemed like I was supposed to say something. "Isabel Hernandez."

"Right. Who's she?"

"Girlfriend."

"Why didn't you add her before you got on the ship?"

"Well," I paused, "we weren't going anywhere, I thought. I didn't think there'd be much point in talking to her after I got here."

He just looked at me, and I went on. "Okay, I was trying to get her to sleep with me, and she wouldn't, and then she did. The night before I left town. That changed things. Then I was busy with departure stuff. And

afterwards I thought, well, maybe she'll come over here at some point. So I added her to my contacts."

"She's not coming over here. We don't want her. She's dirty."

"Oh, I don't know, it was pretty straight missionary. That sort of thing."

"You know what I mean. She's a bad person. Crappy social score. What are you doing hanging around someone like that?"

"I don't know that."

"You should." He checked his tablet. "It says here you have a clean record and reasonable credit. Engineering degree. Don't tell me you can't recognize bad company."

"She said she had a law degree."

END VICTOR PETERSON

BEGIN ISABEL HERNANDEZ

It's true. I'm a lawyer. I was young and dumb. It seemed like a good idea at the time.

Obviously, now I have debt from law school so I'm stuck with the profession. Speaking of debt, that's what I do. My day job, if you like. I can restructure your debt for you. Keep you out of the labor camp a little longer. Put off getting dented.

Of course, your overall debt will be bigger afterwards. A piece of the increase goes to the company I work for. A smaller piece goes to me. That's how I eat. And how I make the payments on my own debt. So I don't get dented myself.

Look, I'm no better than you. I'm not saying I'm better. I'm part of the same system. I don't get a lot of choices about this stuff either. Anyway, that's me!

END ISABEL HERNANDEZ

BEGIN VICTOR PETERSON

"So who does she work for?"

"Some law firm. I don't remember which one."

"Then what do you know?"

"She's got a brother. Mateo."

"Garbage person," he said, and made a note.

"I think her parents are dead." Like mine, I almost added.

"Friends?"

"Um, I don't know any. She goes to some church. I don't know them."

"Former boyfriends?"

"She didn't mention any."

"Know a guy named Robert Krueger?"

"Who? No."

He looked at me with flat disbelief.

"You think I'm going to believe you put this hot mess on your contact list because of a one night stand, and you don't know anything else about her. And it's just an accident that you did it when you were on the ship and thought we couldn't kick you off anymore."

I shrugged very slightly.

He leaned towards me. He was bald and shiny on top. I remember the blue stubble on the side of his head, right about where the side of the bullet meets the rifling grooves.

"We can kick you off any time. You go outside, and you come back dead. There are accidents every week out there. Nobody's going to notice one troublemaker gone. Any time."

"Sure." There didn't seem to be much I could say to that.

He sat back, and his chair squeaked, rather than creaked, even though he was a big guy. I wasn't used to the weight difference yet. He looked off to the side.

"Give me another name. Someone she knows."

"I really don't . . ." I started to say. He pulled out a taser and shot me in the middle of the chest.

I jerked and fell off the chair onto the floor. You might not believe me, but I'm such a good boy that I'd never gotten tasered before. This was all new to me.

When I felt able, I found my feet and stood up slowly.

"One name."

I did my best to look at him evenly and didn't say anything.

He shot me again, and then when I was down he shot me a third time. After I stopped convulsing, I took a couple of deep breaths and tried to think. There didn't seem to be much point in staying on the floor. So I got up again and sat in the chair.

I figured this was going to continue for a while and I was trying to come up with some random made-up names, but Strickland was already on to the next thing. He was tapping the tablet on his desk and muttering.

"Can't do it from here. Gotta talk to Dave. Okay!" he said, turning to me. "We were going to put you on a process line at Beta. But I want to keep an eye on you. And I just got promoted to run the office at D4. So you're coming out to the Deltas with me. We'll put you on ice mining."

There wasn't much I could say to that, either, so I didn't.

He took on a fatherly air, as though he were giving me valuable advice.

"Ice mining has the highest accident rate of them all. Don't make any mistakes."

END VICTOR PETERSON

## 2. Dust and Debt

BEGIN ISABEL HERNANDEZ

Everyone has debt, of course. I have debt from college and law school. Vic has debt from engineering school. And now he has passage debt from his trip to Mars.

My brother Mateo wouldn't have as much debt because he didn't go to college. Except that our parents got sick in the last big flu. We tried to save them with the expensive rich person treatment. But they died anyway. So Mateo and I have debt from that.

And Mateo is a damn idiot who's never seen a narc at a bar he didn't want to snuggle up next to so he can tell him all about the coming world revolution. More bond and bail money down the toilet! Plus the fines.

I know most people don't care we're being spied on. They don't care that our phones are always on and listening, and sending everything we say through AIs. They zone out the whole thing. But the AIs are constantly watching for trigger words and intentions and trying to guess what we're up to. And when they imagine they've found something, they throw us up on the threat board at the local cop shop. I can't really afford that.

Mateo, of course, leans into the nonsense and blabs even louder. Maybe he's doing the rest of us some good? Throwing a bit of noise into our glorious security industry?

I self-censor, like most people. And sometimes I leave my phone in the other room. Then the phone gets all worried about my safety, you know, and starts beeping. Because it can't pick up my vital signs. Mine beeps a lot. That hurts my social score, I assume. Maybe it hurts it less than some of the other things it might pick up.

END ISABEL HERNANDEZ

BEGIN MATEO HERNANDEZ

I'm Mateo. The stupid one. Yeah, right.

Not that stupid! I was never fooled by the lies and bullshit. My sister can go on about how she was dumb and now she's smart. But I was never dumb like that. I've always known which way is up.

I'm not saying I never made any mistakes. I've got my broken nose and missing teeth. But that doesn't stop me. I'll keep telling everyone how we're going to fix this, and how we're going to make a new world where people

don't push each other around. Because I'm an optimist. I know we'll fix this. Course, that's not cool with the cops and the bosses. So I get fines and petty-ass jail time. No serious time, though. A few days here, a week there.

I'm mostly an outdoor maintenance guy. Landscaping, mowing, snowplowing, brush removal. Whatever I get hired for. I'm not afraid of work. When I work, I work hard.

I've done some restaurant work, though I'm not pretty enough for the front of the house. The indoor maintenance jobs are okay, I guess. The cleaners stink. I don't know if they're worse than the herbicides and crap you have to spray outdoors. Outdoors can be hot or cold or pouring. But there are also good days, when I'm just happy to be outside.

END MATEO HERNANDEZ

BEGIN VICTOR PETERSON

There's a weekly bus through the Deltas, and I rode that out to D4. It's about 100 miles from Alpha to D4. And another 100 miles out to D7. They're all roughly in line, except for D5, which was built to mine ore instead of water ice, and that one is off to the side. The bus goes out to D7 in one day, and comes back the next day.

There's a small window in the back of the bus, and bigger one up by the driver. There's some foam on the benches. You can't see out the front, because that's a screened first class section, with better seats that cost more. I see people up there from time to time.

There's no driving in and out of the vehicle airlocks unless the bus needs maintenance or something. That would amount to throwing away air. Also, it would bring dust inside. So I got dropped off at D4 outside one of the people airlocks. A guy came out of the lock with a dolly cart to swap out scrubbers and oxygen bottles on the bus. They like to keep things topped up, just in case.

A couple of other people got off the bus, and one person got on. I held off going inside so I could take a look around. D4 is underground, like all the towns. It's tunnelled into the rock and held together with large amounts of home plastic and home foam and home concrete, all made on Mars.

There are downramps to the locks. In the middle distance there are enormous hillsides and terraces cutting off the horizon. Those are the regolith tailings that have had their water ice cooked out of them. There were a few vehicles visible up on the terraces, and also some automated mine carts with fresh regolith heading down into the ramps on that side of town.

The ground in all directions is ruts and furrows, with some areas of rubble to keep down the dust. That's what it looks like anywhere near people. You really don't see any undisturbed surfaces like they show you in the drama videos. I'm told they have some special hillsides near Alpha where they film

those videos. They clean up the footprints afterwards with big leafblowers running off CO2 tanks.

Anyway, this was the first time I saw a working town. I cycled into D4 together with the guy with the dolly cart.

"Do you know how I get to Outpost 15 from here?" I asked the guy while we were cleaning up in the dustroom.

"Are they expecting you?"

"I think so."

"They'll probably come and get you," he said.

We went through the second airlock, what we call the dustroom door, into town, and a short guy with a pinched expression came up to me.

"You Victor Peterson?"

"Yep."

"I'm Andy Martin," he said, and held out a hand.

END VICTOR PETERSON

BEGIN ISABEL HERNANDEZ

I'm going to tell you a story about ancient Sumeria. It's where we get money and debt and interest payments. This is relevant, I promise you.

The Sumerians invented farming, five thousand years ago, down in the land of the two rivers. Of course, a lot of people invented and reinvented farming. But the Sumerians also invented reading and writing and arithmetic to keep track of everything, and that's where our current money problems come from.

Imagine you're a farmer-dude back then. You plow your fields with oxen and grow barley. You have to do your share of digging in the irrigation canals to keep the water flowing. And when one of the other cities gets aggressive and tries to take your land, you have to grab your shield and spear and go stand next to your king in battle.

Did I mention you get to drink beer? The Sumerians invented beer, too. You get your share of beer at the ale house, all year long. You pay for it later, on the threshing floor, when the harvest comes in. It's a debt, you see.

That might have stayed an informal kind of debt. From each according to ability, to each according to need? Except that the Sumerians also invented writing on clay tablets, as well as counting and measuring. The temple keeps track of exactly how much of everything. So you have to pay the amount due.

The temple is a social safety net for widows and orphans and cripples. People who would otherwise starve can go to the temple, and they'll get fed. Also, they'll get put to work making cloth and crafts. Their food comes out of the barley stored at the temple. Remember the division of the harvest on the threshing floor? Taxes.

Next, some of the bosses at the temple start to make deals with traders. The traders go out in ships and trade cloth to foreigners. They get bronze in return. The cloth is made at the temple. There's a good profit to be made, but there's also risk. Trading needs a ship, and it needs trading stock. That calls for capital and investment.

Well, I know it's totally shocking and everything, but it turns out the temple bosses have some personal capital set aside from all that stuff they've been counting and measuring. Who would have thought it? Who counts the counters? Who measures the measurers?

They have the stuff, and they'll loan it to the trader, for a price. The price is one silver shekel per mina per month. That's 1/60th of the loan amount every month. Over twelve months, it adds up to one fifth of the principal. Also known as an annual interest rate of 20%. Now, this isn't compound interest yet: there's no interest on the interest. But it's pure profit for the temple bosses. Free money for doing no work at all!

This usually works out okay for the trader. He makes a profit on his trading, and he keeps a profit even after he pays back the principal and the interest. And if the ship sinks in a storm, or gets taken by pirates, he makes an oath in front of the king that this is what happened, and he gets out of the debt. He doesn't have to pay it back. For the guys at the temple, it amounts to taking a risk with their stash. But they're getting free money. And their stash keeps growing.

END ISABEL HERNANDEZ

BEGIN VICTOR PETERSON

Andy drove us there in a light pickup. It's about 20 miles from D4 to its 15th outpost. You say "D4 Fifteen". The track is bumpy and marked off with poles at longish intervals. You're supposed to be able to see the poles when the dust is up. You absolutely do not want to go off the track and get lost.

The first thing you see when you come up to an outpost is the solar field. Power is critical. The towns have big solar fields, too, but they're mostly located a bit further out of town, to get away from the dust at the roads and entrances. At an outpost, everything is closer together. That means you have to go out and dust off your panels every week.

The outpost habitat itself is a tuna can thirty feet in diameter. They build spaceships with four stacked tuna cans, and you slice them apart when they get here. There's some assembly required. They come with the airlock actually inside the dustroom. You have to pull it out and weld it onto the outside. When you're done, with the airlock sticking out the side, it looks like an igloo.

Anyway, the whole thing goes into a hole in the ground. It gets home foam sprayed around it for insulation, and a few yards of dirt shoved on top of it to cut down on your annual radiation dose.

When you come in from the dustroom, there's a narrow machine room with pumps and batteries on your left. The bunkroom with four bunks is on your right. They usually only put three people in a hab, though, and the fourth bunk is storage space. Ahead of you is the central mess area with a table and chairs and some communications gear on the wall. There's a door to a little crap'n'wash in the back.

Just so you know, outpost habs are tighter, colder, dirtier, and smellier than towns. More like being on a ship.

Andy parked the pickup in front and we put on our hats. Our helmets. There were two other vehicles there, a loader and a backhoe, hooked up to the solar field. I hoisted my pressure case out of the back of the pickup. Andy pulled out a couple of smaller cases he'd brought with him. We cycled through the lock and cleaned up in the dustroom.

I did my best to be careful, but Andy didn't like my cleanup job at all. Said he didn't want to be breathing my dust the whole time. So I did the vacuuming and wipedown again, and he let me through into the mess area.

The third guy was sitting at the table, and stood up as we came in. Big guy. I'm tall and wide, and I still had my useless Earth muscle on me at that time, but he was bigger. Black as the night on Mars.

"Hey there. You're Victor? I'm the boss." Andy seemed to think this was funny, but hid it. The big guy gave him a scowl and went on. "My name's Shack. Shack Walker. Did you bring a work suit?"

I had to think for a moment to remember what that was. "No, just my travel suit."

"You'll need something heavier out there." Shack turned to a narrow door behind him. Behind the door was a small cabinet space crammed all the way to the top with cases and gear. I found out later this was the monk's cell. Some psychologist's idea of personal space. You're supposed to sit in this box with your butt and your knees and your elbows touching the walls and think happy thoughts. So, here in the real world, it's storage space.

Shack pulled out a worn and scratched suit with patches on it. "Here." It was orange. I remember seeing suits like that in old drama footage. The newer suits in the dustroom were yellow.

"Thanks." I took it.

"Andy's going back out to the North field while there's daylight. You can go with him."

"Sure."

END VICTOR PETERSON

BEGIN ISABEL HERNANDEZ

Sorry, I'm changing gears again. Talking about work. Life bumps into you sometimes, no matter how careful you try to be. I had Candice from Accounting nearly go sideways on me. Candice is the whole of Accounting,

at the firm where I work. This could have resulted in serious trouble. But in the end it all wound up okay.

I'm hybrid with some remote work, but we have to be in the office most days, and this was Monday. I was in the lunchroom. We're not allowed to eat in our cubicles. Some people have offices with doors. I don't. Anyway, I take my sandwich into the lunchroom and I talk to someone about the weather.

It's an antiseptic place. There wasn't a free table, so I asked to join Candice. I remember she looked distracted. She had one of those frozen meals you put into the microwave. Terrible food, but it was one of the fancy ones that costs money, so it's respectability in a box. I didn't have one of those. I had a sandwich, which isn't so respectable, but it's not too subversive, either; like working through lunch would be.

I mentioned the weather, and she said she hadn't been able to sleep. As it happens, I hadn't slept well either. Of course it's the worry of going back into another Monday, in addition to all the other worries that are always bubbling away at the back of my mind. But I didn't want to say too much. So I just muttered something sympathetic about Mondays in general.

Then she said she'd been working remotely all weekend, but she just hadn't been able to get it all done. And now it was Monday again. The Receivables were up to date, but the Payables simply couldn't be put through the process fast enough, and there would be late payments, and that was bad.

I wasn't quite sure why she was telling me this. People are usually quite careful about what they say. We had both been working there for close to two years. I'd maintained a mild persona, and had managed to stay out of the local politics, so maybe that's why Candice felt she could talk to me.

With some vendors, she went on, you don't have to pay the lates, and with some of them you do have to pay, and it's hard to keep track of which is which and not get in trouble. And the way the payments turn out is part of the evaluations, and this year it's not looking good to begin with. At this point, Candice was starting to look really upset.

Umm, I thought, she's losing it. And I scanned the lunchroom to see who was nearby and might have overheard us.

Nobody talks about their evaluations. Of course they're always made to look worse than last year! That's how the divide and conquer game works. Why Human Resources is always going on about "confidential" this and "proprietary" that. And the other thing that was making my nerves tingle was that we were specifically in the lunchroom.

This isn't so widely known, but I happened to be aware that labor organizing used to be legal in the lunchroom. Which is why this kind of room effectively disappeared for a while, and then it came back later, after labor unions weren't a thing anymore. Was I looking at a trap?

My mind raced back to anything I might have done to draw attention to myself. A few weeks ago I had complained about a bothersome kink in the

time entry system, and then I'd kicked myself for complaining. Candice had always seemed normal to me. But of course anyone can be pressured into entrapping you. Or was she really just coming apart on me?

There had been a pause. I tried for a soothing tone.

"That's a lot of work," I said.

"It's too much work," she said, jumping on it. Did I know, she said, that different people used to handle Receivables and Payables? That there were departments that did this, and people backed each other up, and people used to be able to go on vacation without having to work remotely while they were on vacation? There had been some temp help with the Payables last year, but then they got rid of that person, and told her she was up to speed now. But she couldn't sleep, and she couldn't get all the work done.

And I'm sitting across from her thinking about how the big companies run their own AI surveillance. Some of them have deals with the cops where they get a copy of all the phone surveillance records so they can see if their employees ever say anything bad about the company. Then they can fire them and cripple their social scores. But a small law firm like mine doesn't even bother with that. They don't have to, usually. Everyone self-censors.

"There should be limits. There need to be limits. We need to put limits on this." She was talking involuntarily now, clearly not even thinking about what she was saying.

I was feeling stunned, and wondering if there was anything I could do to bring her back down to Earth, when Alison from HR got done with the microwave at the other end of the room. She looked around at the tables, saw we had some open chairs, and started coming over our way.

Luckily, Candice followed my eyes and saw her coming. Her mouth shut with a snap, and that was that. I launched right into a monologue about the weather, and how it was too darn hot outside, and how I hoped we would get a break from the heat, and what do you think, Alison?

END ISABEL HERNANDEZ

BEGIN VICTOR PETERSON

Andy and I got suited up in the dustroom. I didn't like the suit. The pressure gauge was showing zero, and I had to knock it to get a reading. I filled it up with air. The air spigot is on the wall of the dustroom that's up against the machine room.

"You know, this gauge here is wonky."

"Ah, it'll be fine."

We cycled out of the hab and walked over to the vehicles, an undersized backhoe and a loader. Just like getting into a pickup. It's the same two-person pressure cabin. You can fit more than two people if you have to. Busses have airlocks, but with these vehicles you just depressurize the cab

and open the door. There's a pressure pin, like on the airlocks, that tells you the pressure on the other side.

Andy checked the air and unplugged the charger cables. "You take the loader. The hoe is a bit more finicky." I checked the air on the loader myself, and Andy looked annoyed. "Let's get going, eh?" I climbed in, pressured up, threw back my hat, and we set off.

"You reading? We're taking the track on the left." I followed him. When you're outside, you talk through your peanut. The peanut's attached to the collar of your jacket, inside the suit. It's like your cell phone on Earth, except that it's plugged into your clothes. The peanut buffers what you're saying when you're out of range, and passes everything along to the listening AIs when it has a connection again. Just like your cell phone on Earth.

To my surprise, I saw that, in addition, there was a radio clamped under the dashboard of the loader. The planet does have a weak ionosphere that will bounce back shortwave signals, so you can talk over the horizon. These backup radios are called Lipinskis. I'll tell you more about them later.

We followed some ruts for a while, between wide trenches and pits that stretched away on both sides, wherever there had been better-than-average deposits of water ice. When we got where we were going there were two automated mine carts waiting for us.

Andy said over the peanut that he was going to pull out some of the richer dirt marked on the survey map, and it was my job to load up the mine carts. There was a respectable mound of regolith ready to go, so I started trying to figure out how to do this. It was real on-the-job training. I was clumsy, banging the blade on the side of the cart a number of times, and Andy yelled at me. Driving these things takes skill. You have to be careful and pay close attention to what you're doing.

It's extra tricky because these vehicles are much lighter than what you'd use on Earth. They're flimsy, but they have enormous oversized scoops. A lot of the time you're moving a load that masses as much as you do, which means you're dancing. That may be why they haven't succeeded in automating this part of the job yet.

It took me a while, but I got my first cart loaded up, and it took off cross country towards D4. Another cart must have already been coming, because it showed up half an hour later. Keeping the D4 salt lines busy is our job. The people on the salt line cook the regolith and melt out the ice. Then they distill out the salt and perchlorates, and refreeze the clean water in steel drums.

We move around ten tons of ice at a time in big drums made out of home steel. Unfortunately, our home steel is still pretty crappy. That's okay because the drums don't have to hold any real pressure. The lid clamps down, and the pressure release valve is just a hole with a big heavy flap of home rubber bolted over it. That keeps a low-ish pressure inside, so you don't lose too much of the ice to sublimation. As long as you don't leave the drum out in the sun, the ice will keep a long time.

Seriously, ice mining is about the most important thing we do here, right after solar power. Everything depends on it. We need a huge amount of ice to support the people we have, and more ice to build up to the number of people we'll need to become self-sufficient. The ice is for air and food and water. It's also for making spaceship propellant, home concrete, home plastic, foam, fabric, clothes, and a hundred other things we need. There's a steady stream of heavy trucks from the Deltas taking ten-ton drums of ice to Alpha and to the other towns, and coming back with empty drums.

END VICTOR PETERSON

BEGIN MATEO HERNANDEZ

You don't get a lot of entertainment in a one-room place with the toilet down the hall. Some people plunk themselves down in front of a screen and play games and don't come out except for work. That's too fake for me. So I go outside and get in trouble.

Sometimes I do a bit of guerrilla gardening. I put in squash and potatoes along the roads and railways and empty lots. That stuff looks similar to regular weeds. Sometimes people don't recognize it as food, and they leave it alone. Sometimes it gets taken, and I figure, well, maybe those guys need it more than I do.

I put in some flowers and green beans and kale for my sister at her place. She has an actual house with a yard. Mostly flowers. She thinks she has to keep up appearances for her neighbors and the coworkers and church ladies.

END MATEO HERNANDEZ

BEGIN VICTOR PETERSON

I began to get better at loading, and I had the second cart almost full when Andy called. "Hey, I could use some help over here."

"Sure." I turned the loader around, and I could see Andy's machine was one level down in an open pit area. He'd been laying up a bank of dirt along the edge of the pit, and at first I thought he wanted me to start clearing that off.

"No, come down here. Don't get stuck."

I found the ramp and edged down gingerly. Andy's backhoe was tilted forwards. He was standing beside the cab, moving dirt away from the treads with a dust scoop. A dust scoop is like a snowshovel with a big wide blade.

I have to tell you about these backhoes. They're touchier than the loaders. What's underneath the surface can be irregular, and you can't see it. You have to feel for it. So you're fishing through the regolith when you hit a boulder, or a loose patch, or anything that doesn't react right. It's like you're

swimming laps in a swimming pool on Earth, and suddenly a kid blunders into your lane.

So you can find yourself with an unexpected kid in your arms. Even when you're being careful. The surface is soft and tricky to begin with, and your backhoe just loses its grip and tilts over and gets bogged, and then you need another vehicle to pull it out. Everything's lighter, but it's not light enough.

"Here, I'll take over. Get out."

I put my hat on and depressurized the cabin. Then I shivered. I had done that much too carelessly. I had a moment of cold sweat at the thought of what would have happened if I had failed to get my hat tight. I took a slow deep breath, and resolved to do everything at half speed, even if Andy yelled at me.

Andy climbed in, and I got out and stood around uncertainly. He turned the loader around and backed it up, testing for the firmer ground. "Get that cable hooked up."

I looked and saw that he had laid out a cable from the rear of the backhoe. The loader had a cable too, but that one was stowed. It took me a minute to figure out how I was supposed to hook the backhoe's cable onto the loader. Andy wanted to know, "Do you think you can make it happen today?"

I got the cable connected and stood back. Andy took a while maneuvering around, pulling the backhoe halfway out, and letting it settle back. He got out of the cab and took up the dust scoop again. He pointed to where there was another scoop clipped onto the side of the loader, and I took it and tried to help him. It was all pretty mysterious to me.

Andy climbed back into the loader cab. I glanced at my air gauge, jiggled it, and got a shock. I hadn't been outside that long, but I was already a thousand PSI down. That should have taken a lot longer. Now I heard, or imagined I heard, a low hissing from my suit. I froze.

END VICTOR PETERSON

BEGIN MATEO HERNANDEZ

I get all this grief because I'm not ambitious. But I did try to start my own outdoor maintenance and landscaping company a couple of times. Didn't work out.

Getting clients to hire me is one thing. I can do that. People know I do good work. My sister did the legal part. Applications and filings and contractor forms. But that's only the obvious stuff. The stuff you can see. There's a lot more crap that's going on under the surface.

I got the insurance pulled on me one time. The other time it was a problem with city permits. I thought we might just need to grease some palms. But Izzy looked into it, and it was worse than that. We would have paid, and we would've gotten nothing.

It's complicated, but in the end it comes down to the credit score and the social score again. They get those every time you put down your SSN. Usually you don't get to see your own scores, because you're the employee, but this time we were on the business side - like the employer side - so we got to see my scores. And they're real bad.

Now, I've worked for the big outfits, and I've worked for the little guys. I know a few guys who managed to set up on their own. They probably have better scores than me. But they also fit into the right kind of little boxes. They don't take jobs away from the big outfits. They take the kind of crappy little jobs the big guys don't want. This much and no more!

And they have to buy their supplies and services the right way. Like, it was already a knock against me that Izzy was doing my papers. Because she's a relative. It's not a "professional services relationship." She doesn't work at the exact right kind of company that does this exact kind of business.

You see, it matters that all the money keeps going to the right places. You get even a fraction of a beat off the music, and you're out. They all seem to know each other. And they won't talk to someone like me. They'd get hurt! They know better than to have anything to do with me. Somehow Izzy manages to stay on the inside, just barely. For me? Outside.

Yeah, well, when I work for the little guys, I can see how they're running right at the edge. They get bid down on the jobs, and then they have to watch all the profit get sucked out by insurance and this and that and the other. They're running scared all the time. Me, I don't worry so much. I get paid, and I go to the bar.

END MATEO HERNANDEZ

BEGIN VICTOR PETERSON

I tried to remember where the patch kit is supposed to be. It's supposed to be behind your right hip. I reached back there, very gently, to avoid pulling on the fabric of the suit any more than necessary. There was nothing there. I realized I wouldn't have known where to apply it, anyway. I hadn't banged a specific spot, I thought? It didn't look like I was losing air fast enough to whirl up the dust outside. Was I feeling a chill on my skin somewhere? Now I thought I could feel a chill in about three different places.

I checked the gauge another time, and yes, it had moved again. Slowly but surely. Both vehicle cabs were depressurized, and I became very aware that the only breathing space around was inside our two suits. I took a slow breath and called up Andy.

"My suit's leaking."

"Sure, everything leaks. Hold your horses." He slowly dragged the backhoe out of the soft stuff, and got out, leaving the door ajar.

"I'm down a thousand PSI."

"So you've got two thousand left, right?"

"Less than that, now."

"Okay, get in your cab. You don't need the suit air. It's an hour till dark. Think you can finish out the shift?" He seemed to be squinting at me through the face glass.

It's true I was feeling a little angry. But I knew what I had to say. "Sure, I guess."

"Fine."

I got back into the loader cab. Now I could suddenly see there were a series of cracks in the frame around the door that had been crudely welded shut. Pressurizing the cabin worked okay. I drove up the loose ramp very cautiously to avoid getting stuck, and went back to filling mine carts.

I experimented with leaving my hat on, with the suit air turned off, cracked open just enough to use the cabin air. But I found I couldn't see well enough to work. So I sighed and threw back my hat. This was how it was going to be.

I didn't notice, later, when it started to get dark, but Andy called me up. "Let's head back." Then I saw the faint blue tint in the sky. My nose was stinging from all the dust I had tracked into the cab. We got back on the ruts and came up to the hab just as everything turned pitch dark. Like a switch had been flipped. Andy turned on the floodlight over the hab's airlock and got everything hooked up to charge off the habitat batteries. He had me blow the dust out of the cabs. I was a bit anxious about the air in my suit, but I made it inside with a thousand PSI left on the dial.

"How'd it go?" Shack asked as we came out of the dustroom. He was looking over my shoulder at Andy.

"That suit leaks," I said.

"Oh sure, I know. That's Old Harry's suit," he said.

I looked confused. Andy came around and explained. "Means somebody died in it."

That didn't really make me feel any better.

"No worries," Shack said. "We'll get you a better suit. But everything leaks."

END VICTOR PETERSON

BEGIN MATEO HERNANDEZ

There was that time a guy I was working for broke my leg. Guy named Ali. He was running his own outfit. Small time guy, so I know he's got all kinds of pressure and worries. That's why he was pushing me, of course. But you've gotta not do that! Even when you've got your own worries.

We were out clearing brush. I'm cutting down the buckthorn with a chainsaw and he's driving the miniloader around with the claws, picking up the brush and putting it through the wood chipper.

He's yelling at me about this and that, saying I'm too slow, and how's he supposed to make a profit, and what is he paying me for anyway. And I'm ignoring him. Then he starts swinging the loader around and driving too close to me. That's not okay.

I yell back at him over the motor noise, but he keeps doing it. So I shut the chainsaw off and put it on the ground and I tell him I'm going to walk off the job if he doesn't cut it out. He says he won't pay me. Even though we both know he owes me for the week before, too. I say I don't care, seriously, I don't need to get hurt.

So he shuts up for a bit, and I turn the chainsaw back on and go back to work. But he had to kind of half do it again. We paused and looked at each other. I wish I'd walked off right then. But I was kinda counting on that paycheck, so I let it slide and went back to cutting brush.

He gave me a bit of a break after that because he'd gotten his way. But by the time we were getting near done he was starting to swing the loader around again. I just wanted to get out of there. Maybe he did too. That's when he got careless and ran into me. And my leg was broken.

So I was out for a couple of months. Izzy tried to file for workman's comp, but the relationship was "too informal". They said I didn't have enough in writing. Even though I had my paystubs from the accountant place and everything. So the insurance company slid out of it for free. Like they always do.

Izzy said we could have filed a complaint with the cops. But I wasn't going to do that. It would have cost Ali a hefty bribe to get it dropped, and I sure was mad at him, but it wasn't the right thing to do. There wasn't any reason to enrich the bastards at the copshop. Ali ended up paying me a little informal compensation on the side, to cover some of my rent while I was out, and we left it at that. I didn't work for him again.

END MATEO HERNANDEZ

### 3. Supply Run

BEGIN VICTOR PETERSON

Every six months a truck comes by D4 Fifteen. It drops off a barrel of clean ice and picks up the freeze-dried poo. Once or twice a mechanic came out with spare parts to fix a vehicle we couldn't fix ourselves. A pump in the hab got replaced once. We do our own welding. And every week someone drives in to D4 to pick up food and stores.

The weekly supply run is probably not strictly necessary. Frankly, the dried greens and starch crud keeps just fine out in the cold for years. But we're allowed one run a week, so we take one run a week. It's the main chance to go see people and have some fun. So we take turns. We leave two people at the outpost in case something goes wrong. That means there's only one person in the pickup, though. You balance the risks.

I got better at using the loader and the backhoe, and eventually they let me have my turn at the D4 run. It felt strange being out there on the road by myself. There's an occasional solar field glinting off in the distance. Like bumping along in a pickup on a dirt track on Earth, but there's no air outside.

The track goes past Outpost Four. Those guys must get a fair amount of dust on their panels from people driving by, and they have to sweep it off. So I slow down when I go by there. I didn't know to do that the first time. But I did start to think about it. Nobody yelled at me. You figure these things out.

Anyway, you can see Four is one of the older outposts. It's got a low mound next to it. Early on, you see, the homemade foam degraded and started coming apart after a while. That messed up the insulation. Insulation is no joke, so they needed to do something about that.

What they did was pull off the overburden and bring in a crane and lift the tuna can out of its hole. They scraped off the old insulation, and set it down in a new hole. There are standoffs to keep the hab propped up. Then they sprayed new foam around it, and covered it over with dirt.

Fixing the towns was more work. They had to drop stretches of tunnel into the cold - depressurize them - and pull out the old insulation piece by piece. That took more reconstruction and cement and sealant and stuff.

Moving a habitat leaves a messy hole in the ground, with a pile of scraps of foam lying around it. The little fluff can blow around, so you shove it in the old hole and cover it over with dirt. That leaves a peculiar kind of mound. D4 Fifteen doesn't have a mound. It's newer, and the foam is fine.

END VICTOR PETERSON

## BEGIN ISABEL HERNANDEZ

We're not done with that Sumerian story yet. There's more to tell.

You're a Sumerian farmer-dude, remember?

You own some stuff. You own the fields you plow. You own oxen. You own a shield and a spear with a bronze blade. You drink at the ale house, and you feed your family. At harvest time, you pay your debts and taxes.

Then a terrible drought happens. The harvest fails. Everyone is hungry. Your kids are hungry. They might die. You go to the temple, but there's no room for you and your family. Everyone has it bad.

However, the guy at the temple offers you deal: he has a personal stash, and he'll loan you barley to feed your family, and you can pay him back when the next harvest comes in. The interest rate is . . . way, way higher than 20%. You say yes. What are you going to do? He records the loan on a clay tablet.

The next year's harvest is okay, but that's not good enough. Remember, you had to eat the principal of the loan! There's no extra profit you could use to pay off the principal, and the interest as well. You can't pay in full. That means you're in default. The guy at the temple takes it all. He takes your land. He takes your oxen. He takes your shield and spear. And he takes you, too!

You and your family are now debt slaves. You're part of his household. You might even work the same land as before, but the harvest is no longer yours. At least he feeds you. That's how it works.

But wait! This is not the end of the story. There's still a way out for you and your family. One last turn, and we'll be done with the Sumerians.

END ISABEL HERNANDEZ

## BEGIN VICTOR PETERSON

I got to D4 and let myself in. The outside airlock is just a button and a manual override. You need to be able to get inside when the power is down and the computers are down and everything is down. So everything has a manual override.

Once you're in the warm, though, the dustroom door is a different matter. That's the second set of airlock doors. It's where the town system reads your peanut and decides whether it wants to let you through into town.

I cleaned up in the dustroom and cycled through, but right in the middle of it I got a call on my peanut.

"Peterson! This is Strickland. I see you're in town. Come by the Inspections Office. It's right in the middle, you can't miss it."

"Uh, sure, okay."

When I got there and came into the office, he said, "I want to see if you're behaving yourself."

"Of course," I said, with as little expression as I could manage. He was being tall and lanky, stretched out in a chair behind his desk. There were two flunkies in the office, but you could see he was the boss. He studied me for a while with those gray eyes in his bald head, and let the silence linger.

"That'll be all." He waved me away. I shrugged and left.

I went and picked up my supplies. I left the pressure cases in the staging area in front of the dustroom. People don't tend to make off with your stuff here. There are always exceptions.

Then I wandered off to see the sights. It was understood back at Fifteen that I had a few hours to goof off, and didn't have to be back right away.

END VICTOR PETERSON

BEGIN ISABEL HERNANDEZ

Last part of this drama series! You're a Sumerian debt slave, remember? You lost your land because your family was hungry and you took a loan from the guy at the temple. With interest. You couldn't pay, and now you're a slave.

But, as it happens, the old king dies the following year. A new king takes the throne. Long live King What's-his-name!

Now, the new king is not an idiot. He knows perfectly well what's been going on. He knows what the guys at the temple have been doing. They've taken too many of the farmers. They've enslaved them for their own private gain. The king is missing these farmers for the public jobs: for work in the irrigation canals, and for the shield wall in war.

The canals are silting up, and the barley yields are dropping. The guys at the temple don't care. It's not their problem. They say: isn't this the king's problem? Let the king worry about it.

The neighboring cities are getting restless and making moves towards growth and expansion. The king sees too many slaves and not enough farmers around him. He knows that, if it comes down to it, the slaves won't fight like free farmers. Why should they? They have nothing to fight for. The king needs free farmers. The king needs you!

So when the new king takes the throne, he has the trumpets blown, and he lights the torch of freedom. He issues a public proclamation of jubilee on clay tablets. We still have these clay tablets today. All debts are cancelled! All debt slaves are free. The fields return to the farmer.

The guys at the temple sigh. They knew this was coming. It's a regular thing.

Now, the jubilee doesn't quite extend to slaves taken in war. And it doesn't include the silver debt of the traders. This is strictly about the barley debt of the farmers. Because the king needs you.

You and your family are free again. You get your land back. You get your oxen back. You get your shield and spear back. You're back in business.

I can see that guy at the temple: he's wistfully checking the sky for signs of the next flood or drought. He's looking for his chance to force you back into debt slavery. He knows perfectly well that the king (may his reign be long!) will cancel all debts again in ten years. But in the meanwhile - you do the work, and he gets free money.

Because interest is a lie. It's always been a lie. Everything real in the world changes steadily. Except for interest. Well, interest and invasive species. Those things go exponential. And neither of them can exist very long in the real world before they hit a wall. And that's the actual point of interest: interest is not meant to be repaid. It is meant to become unpayable, eventually. It really a means to privatize the collateral: you.

Spoiler warning! Regular debt cancellations continued for a thousand years, but then the lenders won. The kings lost. Debt became a permanent thing. That guy at the temple: he is every baron, every banker, every billionaire since. He runs every country. He doesn't care about countries or people, so he runs everything into the ground. Property and debt are his idols. Kings are his pawns. We've spent the last several thousand years living under his dictatorship of debt.

Yeah, so this is where I get to mention that these social control games all go away when we pull our heads out of the competitive framework. Of course, that means being decent and letting other people have their own piece of the world. Even if they don't "deserve" it. The way I think of society, well, it's either a universal benefit that helps everybody, or else it's somebody's shameless grab for personal advantage.

We don't need that banker. We don't need that king. I don't think we'll even need money. It can dry up and blow away in the wind for all I care. We'll be back in business in an entirely different way.

END ISABEL HERNANDEZ

BEGIN VICTOR PETERSON

I badly wanted to see the salt lines at D4. You go through a series of doors, and there's a sharper and sharper stinging sensation in your nose as you get closer. They have proper respirators, but I didn't know about them at the time. I pulled up the filter flap on my jacket. The flap is really only for dust, though. There's dust plus volatiles in the air at a salt line. Later on I got a real tour. This time I just found an open staircase at the back of Hall One and climbed up for a quick glimpse. I didn't want to get in the way.

Out on the floor I could see an array of massive shapes and plumbing and walkways and people. When I filled up a cart with regolith, this is where it was going. There were some mine carts moving around at the far end. I couldn't see any dirt, but there was certainly some kind of brisk process going on: it was loud and ringing, and I didn't understand very much of what I was looking at. My nose started to burn, so I got out of there.

Then I went and checked out the residential halls. There are also bunkroom where visitors can stay. Everything seemed large and empty to me. After being used to tight quarters at our outpost, I felt almost dizzy.

I saw one person sitting in a common area. I slowed down to say hello, but they frowned at me. So I kept on moving. Didn't want to talk, I guess. In a town you can actually get away from people a bit. More so than in a hab, anyway.

There were a few people chatting in a hallway, and they didn't mind me saying hello. A little further down, I could see through a glass door into a practise room. Three ladies in the room were doing Dronebeat with their voices and a synth keyboard.

Dronebeat's a style of music. It's got a high whining melody over, well, a drone and a beat. It starts off with the throbbing sound of the pumps and ventilation you hear everywhere, and then adds in the higher ringing from pipes and machinery. Those you only hear in some places. Then they give it some shape and structure and try to make the tune go somewhere. I don't actually mind it, but I'm not a huge fan. Shack likes the stuff. Andy listens to Asian Earth Pop.

There was a Jumble court, with a pickup game in progress. You may have seen it somewhere in your sports channels. It's also called "Jumpball" - a lot of jumping around and kicking off the walls. Shows off our low gravity. The Moon version is much more impressive, but I think it's less athletic. Of course, the Moon version is all Chinese.

We have a competitive Jumble league, if you don't mind watching amateurs play sports, and the tournaments are broadcast on both Earth and Mars. It's one of our entertainment exports. Jumble certainly exports better than Dronebeat. Dronebeat is pretty much purely local. Back at Alpha they have a classical chamber orchestra, and they claim that's "Mars music," but I don't think that gets much attention either. It's a rich person thing.

D4 doesn't have anything like Alpha's shopping and entertainment blocks along Midway, but there are a few hole-in-the-wall shops for necessities. I went into the clothing place and picked up an extra watch cap, and also one of those fuzzy plastic blankets they churn out at Beta.

It's cool, ranging to outright cold, in the hab. Well, unless you crank up the pumps and turn on the battery reconditioning cycle and climb into the machine room and close the door. Then you can make it hot like a sauna in there. Sometimes you have to do that. Don't tell Admin!

It's warmer in town, and you don't always have to wear a cap on your head. At least the clothes we make here don't disintegrate right away, like they do on Earth. When we make something, we make it to last.

END VICTOR PETERSON

## BEGIN GAIL BEESON

Hi, my name is Gail Beeson, and I work on a salt line at D4. The best salt line, in fact. The best is Four-Three, you've got to agree! For one streak, we had the lowest residuals, seven months in a row, in all of Delta.

It's not what I thought I'd be doing, necessarily. I was hoping to get in on the ground floor, work up some charm and connections, and maybe do something in Admin. I was reasonably successful on Earth. I'm good at managing people!

And that's mostly who I looked up to when I got here. Confident, successful leaders, like Ellie Sawyer in Admin. And Alicia Phillips, who does organizing at Alpha. I still get along great with Melanie Sherwood, who's Team Lead at D4. And to some extent with Victoria Morelli, the overall Delta Team Lead. Though I never quite got the same vibe from her. Maybe because she was always more part of the Exer faction.

They're all self-funders, of course, and I'm not. I'm a regular colonist, with a passage loan.

And I got here with Sixth Landing. Sixth Landing was really too late to get in on the ground floor. Now, of course, it seems like Sixth Landing was ages ago!

For a while I dated Manuel Rojas, who was important in Safety and Ex. That didn't last. I don't have anything bad to say about him, we just didn't have that much in common. It seems like relationships work best with people of the same social class. Selfer with selfer, regular with regular. Maybe it's best to stick with that.

I made a few political mistakes along the way, obviously, and eventually I gave up trying to make it big at Alpha. So I drifted through the Deltas for a while.

At D4 I met a great guy. His name was Dave Sellers. Regolith loader. I can't really talk about it. He totally swept me off my feet. We had a great couple of years. I was planning and scheming and trying to find out if there was any way a regular colonist could get permission to have a kid. I know that was a pipe dream. Self-funders can have kids, maybe. Otherwise, it's all hands at work. But it was a nice dream.

Anyway, one day Dave didn't put his hat on right, and he was gone. I still can't talk about it. I know we have to keep moving. And I was going to move on from D4, but something kept me here. Not sure what it was. Habit? A feeling that I belong here? I'm not sure.

END GAIL BEESON

## BEGIN VICTOR PETERSON

I still had some time left before I had to get back to Fifteen. I wandered into the cafeteria bar in D4 and debated whether I should try the local beer, or

whether I should save my pennies. It costs about twice what it would on Earth, about a hundred and twenty dollars a pint. Anyway, I decided to try it.

At first it's hard to see why people get sentimental about this stuff. No grain was harmed in the making of this "beer." It's weak and slightly sour. But I admit it takes the edge off, if you're tense.

"Hey, new guy! Come over here!"

It was a scrawny guy with bristly blond hair, at an empty table. Of course everyone knows everyone in a place like this, at least by sight. So it's obvious I'm new. There are maybe five hundred people at D4 all told.

"I'm Tim." He gestured again.

Might as well meet the locals, I thought. I picked up my glass and made my way over. "I'm Vic." He seemed to be there by himself. Up close he wasn't just scrawny, but almost skeletal. Some people don't take to the food. The food is difficult to like, admittedly. They wind up skinny like that.

"When did you get here?"

"I've been at Outpost Fifteen for a couple of months now."

"Ah, outside work. Fresh meat! You have any accidents yet? Of course not. Or you wouldn't be here. Any close calls?"

"Not too bad," I said.

"They give you a hard time?"

"Not too bad."

"They don't care about us at all, you know." He lowered his voice and looked around. Which was completely pointless, since we were both wearing our peanuts on our collars, which meant everything we were saying was going straight to the AIs anyway.

"I don't know about that," I said, wondering why he was doing this. My friend Mateo is another guy who won't shut up. He says random stuff, over on Earth, and he keeps getting fined for it. Is Mars different? What gets counted as disloyalty or insubordination here? "Not my business," I said.

"Whatever you say," he said, and gave me a crooked grin. "Just come and talk to me when you decide you want to know the inside story. Tim's the name. I can help you."

"Sure. Whatever."

He scanned the room again and got up. "Well, I have to be off. See you around!"

After he left, I was sitting there with my empty glass and trying to figure out what that was all about, when a lady I'd noticed at the other end of the cafeteria came across. I thought maybe she was headed for the counter, but she stopped off at my table.

"Hi there. I saw you were talking to Scared Timmy. I thought someone should say something. I'm Gail, by the way."

"I'm Vic," I said.

She leaned up against the table with her hands on the edge. She had substantial breasts and a high nose and looked impossibly noble and

benevolent. Of course, I hadn't seen a woman in months. Maybe that had something to do with it.

"Nice to meet you," she said. "You know, how some people get here, and then they realize they've made a mistake, but they can't go back? So they keep looking for the easiest thing. Whatever they can get. Scared Timmy is like that. He . . . talks."

A light went on in my head. "Ah, that makes sense. I understand."

How had I not recognized a narc? I guess I hadn't been expecting them here. But they're everywhere. Fewer of them here, maybe. But they're still part of the landscape.

Gail and I chatted for a bit, and then I thought it was time I should head back to Fifteen. There's a big clock showing the time on the wall of the cafeteria. That's another thing that's different here. The limit is two drinks, and you're not supposed to linger over them.

I was on my way to the dustroom when Sergeant Strickland stepped out of his office and jerked his thumb to call me in. Of course the peanut tells them where you are at all times. Just like your cell phone on Earth. I followed him into the office.

"I told you to stay out of trouble."

I was trying to think of something to say that wouldn't sound like a challenge, but it didn't matter. He just shot me with the taser without waiting for me to say anything. So I wound up on the floor again.

When I got up, he pushed his face into mine. "You talked to that idiot Tim Scarborough. So he comes running to me. That makes more work for me. Don't make more work for me."

That's as far as it went on that occasion. Gail says he didn't give her crap about the matter. So I stayed away from Scared Timmy, but Timmy said differently and he kept making reports about me, regardless. I guess everyone needs something to do.

END VICTOR PETERSON

BEGIN GAIL BEESON

When I met Vic - Vic Peterson - I think it was his gentleness I noticed. He's this big handsome guy. Dark blondish hair. Not an aggressive bone in his body. He came over with Ninth Landing, and the new Inspections Sergeant seemed to have it in for him from the start. Tony Strickland. There was this strange thing between them. But neither of them seemed to take it personally.

Sometimes a colonist starts to develop a bad dynamic with a cop, and that can get really nasty. Unless one or the other of them gets moved somewhere else. But this was different. Tony kept his eye on Vic, and Vic just looked back at him steadily. He was always in trouble. Scared Timmy or one of the others would make up a story about him regularly, just because,

and then Vic would get fined or thrown in the drunk tank. Even though he never drank too much or talked back. That's just how it went. It was almost like Vic and Tony respected each other, but they had to go through the motions.

Vic immediately got sent off to one of the outposts, so he wasn't around much. But he would get back to town from time to time, and we would chat. And we hit it off. There hadn't been much keeping me around D4 at that point, except memories and habit. And then there was Vic.

A lot of guys act all threatening and they want you to know how tough and aggressive and dangerous they are. It's just an act, usually. I've played along with it, sometimes, but I don't really like it too much. Vic's the opposite of that. Not soft, I mean, but also not pushy. And he's really aware of it.

One time he told me he was big and strong and healthy because the Vikings always bullied the weak ones. Bullied them so they died. And that's in the genes now, it's part of the genetic makeup. I asked him why he wasn't a bully then, and he looked at me kind of curiously and said, "you get to choose."

END GAIL BEESON

BEGIN ISABEL HERNANDEZ

Exchanging messages between Mars and Earth can be a problem.

In case you've forgotten, there's no live chat, because of the light speed delay. The delay there and back can be ten minutes. It can be forty minutes. Depends where the planets are located in their orbits.

But you can send voice messages back and forth. One odd thing is that the Mars colony actually gives each of their colonists one free voice message a month, each way. They don't give them anything else for free.

That's once per Mars month. Just like their clocks run an extra thirty-nine minutes after midnight, the Mars year is different from an Earth year. It's almost twice as long. They divide it up into twenty-four months, each of which runs for 28 days; except for the last month, which is three or four days short. A Mars year runs from, say, 0008-01-01 to 0008-24-25. They count the years from First Landing, but New Year's Day is set on the spring equinox in the northern hemisphere. That's kind of an Earth reference. On Mars, you get dust storms at that time of year.

So each month on Mars the colonists get one free minute to talk to Earth. I'm not quite certain why they do this, but I figure it has to do with recruiting. Potential recruits have got to be worried about being cut off from everyone they ever knew back on Earth. They may be expecting they're going to become rich, but they also know they could become poor. Being cut off from people is almost as terrifying as being cut off from air.

END ISABEL HERNANDEZ

BEGIN VICTOR PETERSON

It was dark when I got back to Fifteen, and Andy and Shack were watching the news. There's usually an opening segment about some trouble on Earth - everything is always terrible on Earth - and then the rest is local news. There's a new tea house opening at Alpha. A new theater show. There's construction going on at Epsun. A new production line starting up at Beta. Sports. And, mainly, there's a lot of celebrity gossip.

There was some dustup involving Alicia Phillips, who's a community organizer for the free colonists - from "debt-free," that's their term for self-funder - and Manuel Rojas from Ex. I couldn't tell if it was more personal or more professional, or if it was just one of those public spats designed to get attention for both parties, but Andy started to get more and more personal in his comments heckling Rojas, referring to him as "thug" and "that lardass," when an outside voice from the comms on the wall cut into our conversation.

"Hey, watch it there!"

"Hi, Charlie, is that you, Charlie?" Andy asked. "What's got your diapers in a bunch?"

"You keep a civil tongue in your head, young man. Cut it out with badmouthing your betters."

"Checkpoint Charlie," said Shack, "it's been a while! Good to hear from you. I was worried you'd gone off to Minimum Maintenance."

"Name's not Charlie, and you know it. You guys are a whole crew of troublemakers and misfits. Somebody's got to keep an eye on you. Unfortunately I'm stuck with you. Don't you draw any more scrutiny, now! Reflects on me, too. Keep it civil, or go crack your hats. Over and out!"

I probably shouldn't have said anything, but the others were treating it lightly, so I asked, "What's Minimum Maintenance?"

Andy cocked one eye at the comms wall, and gave me the info. "That's one step better than the psych cells. If you can't work, they keep you in a bunk room with a bunch of other invalids who snore, and they let you out once a month to go watch a Jumble game or something. Worse than death, if you ask me. I'll crack my hat before I go there. Now I don't know if Charlie has had more strokes than heart attacks, or more heart attacks than strokes, but he's in a wheelchair, and I guess he's still able to work, somehow."

"Third Landing, kids, Third Landing," Charlie broke in again. "I came over with the Founder. You newbies need a good whack with the clue stick."

"If you can call it work, listening in on us all the time," Andy went on. He seemed to want to keep chewing the rag, but Charlie cleared the frequency, and our conversation wandered off in other directions.

END VICTOR PETERSON

## BEGIN ISABEL HERNANDEZ

The Monthly Minute is maybe also a loss leader for selling the longer voice messages, and especially video messages. Those are expensive. They say you're paying for interplanetary bandwidth, but that's not true. Interplanetary bandwidth is comparatively cheap. What's expensive, and what you're paying for, is the spying.

They have AI filters, of course, but I'm confident they also have real people listening to these messages. The light speed delay gives them plenty of time to review everything and deep-six anything they don't like. That presumably happens here on the Earth end. Because Earth pay is lower.

I know people who've worked this type of job, so I know how it goes. You sit in a cubicle and listen to message after message. Someone else, someone you don't know, is listening to the same messages. If one of you reports something, the other one had better report it, too. And every once in a while they send through a fake message you had better report, or you get fired. The whole system is just bog-standard stomping on the peasants.

The people paying for this are of course the ones sending the messages. That's us; we're paying to get spied on. And that will change - in the future, spying on people will be strictly at your own expense, as well as to your own detriment. For the moment, though, this sort of thing is unfortunately quite common.

What it means in practise is that we're dealing with a high quality information seal between Earth and Mars.

## END ISABEL HERNANDEZ

## BEGIN VICTOR PETERSON

Despite Sergeant Strickland's low opinion of my contact list, I found I was still able to select Izzy for my Monthly Minute. Here's an example of one of these messages. Look, I'm sorry, but they really were like this:

"Hi Izzy, sweetheart! It's good to hear about the wildflowers and butterflies. No butterflies here, of course. Maybe we'll get indoor parks and gardens by the time you come over. Then you can have your flowers here, too. I hear Epsun has plants. Mostly for food, of course. But there's one place I'm told they have an orchard and some grass you can sit on. You'd like that."

"The colony is really building up over here. D4 got a new expansion, and it just opened up. Eighty new bunks, and a couple dozen rooms for rent. Everyone wants to move up, so there's a waiting list. I'm at the outpost for now of course, but D4 has quite a bit of room. And now it has more."

"The light outside is really pretty. I know they say it's just red all the time, but it actually varies a lot over the course of the day. It only feels dark and heavy when the dust is up. Otherwise you've got these delicate pinks and

purples and other colors. I'm glad I get to work outside and watch it as it changes."

"You know, honeypie, I'm just thinking of you all the time. Sweetie, you're the best. Hope everything is going well over there. Greetings to everyone!"

Her messages to me were equally nauseating. Our Monthly Minutes were mostly simple placeholders with no actual content. But this one included a political weather report. The report was contained in one word: "honeypie." That meant: "No significant unrest."

END VICTOR PETERSON

## 4. On The Ground

BEGIN GAIL BEESON

Soon after I got to Mars with Sixth Landing, I was sitting in the cafeteria with Liam Dutton and Carol Zhou, in one of our scraps of free time. This was when we were still at Alpha, before Liam went to Gamma, and before Carol went to D5. We were tasting the infamous beer.

"This stuff would be better if the food guys at Epsun made it," Liam said, sipping from the glass cautiously. He was always chubby; constantly in motion, though.

"Obviously," Carol said. "It's because Beta has to treat everything as an industrial process. Ethanol's just another industrial solvent to them. Ferment it, distill it, dilute it, add some CO2, and you're done. Where's the art? You should be proud of your product."

"There's something else in here," I added. "I'm not sure what it is, but there's something else going on. Not sure I like it, but it's there."

"You mean the metallic taste?" Liam asked.

"No, there's something musky," I said. "It's getting in my nose."

"Volatile organics from the secret musk oxen pens at Epsun, I bet," he said. "Artisanal musk oxen. Proud of their musky product!"

Carol laughed, and said "yeah, Epsun sure is weird, you bet! Hey, did you see Allie Dinh come through Life Support earlier today?"

"I thought she's mostly at Epsun now," Liam said.

"What's she like?" I asked, curious.

Allie is famous. She was on First Landing. One of three people from First Landing who are still here. She made the initial Tunnel Construction work. She straightened out Life Support. Then she cranked up Food Production. Straight arrow, workaholic, and you don't want to cross her no matter what. She started Epsun, and runs it like it's a part of her body.

"She's short like you wouldn't believe!" Carol said. "Like, four and a half feet tall - okay, maybe four feet nine or something. But that includes people stretching out an inch or two when they get here."

"Maybe we'll work our way into running whole towns, too, some day," Liam said dreamily. "Then we'll get together, the old gang from Sixth Landing, and we'll reminisce about the old days."

I smiled and didn't say anything. Of course, back then my plan was that I was going to make it big in Admin. I wasn't going to be running some piddling backwater town. I was going to be doing important things at Alpha!

"Did you hear about the banana peel?" Carol asked.

No, we hadn't.

"This was right when Third Landing happened, when the Founder and Ellie Sawyer got here. So there's this huge influx of new people. There's barely enough room for everyone inside Alpha, people are bedding down in shifts in the tunnels, and Life Support is this huge worry - but Allie had gotten a banana tree to grow."

"A banana tree?"

"Yup. An experiment, of course, not so much a practical source of food. But it produced a few bananas! So when the bigwigs arrive, she brings them out on a plate. They greet everyone in the central hall - that's the little room down by the vehicle locks now - and Allie presents the bananas. So Ellie Sawyer takes one and peels it. But instead of putting the peel back on the plate, she throws it over her shoulder!"

Liam gasped. Maybe I did, too. I definitely hadn't heard this one.

"So a couple of people laugh at that. But Allie gives her this blank look and goes and picks up the banana peel. People stop laughing. And, you can guess, Sawyer always had it in for her after that!"

We laughed, for sure. And then Carol went on and told a different story about Allie Dinh being completely bloody minded and determined about something. We had a lot of these stories, about people pushing through against obstacles, and making things work against the odds.

But we were just kids. I mean, we were all grown up and everything. But we weren't serious. Not yet. I look back, and we were such doofuses at the time. Not even high school. Junior high, more like.

END GAIL BEESON

BEGIN VICTOR PETERSON

The economic position of the colony is, you know, disturbingly precarious.

Alpha is the center of political power. People who want to run things have to be at Alpha. It has the spaceport and the propellant production. It also has a bit of everything else: food and power and chemical synthesis and mining and so forth. The other towns are more specialized. They mostly do just one thing. That's intentional, I think. The towns are supposed to be dependent on Alpha.

But Alpha, in turn, is dependent on Earth. In the future, Mars will need nothing from Earth. It will export propellant and resources and finished goods to the rest of the solar system. These exports will be boosted out of a relatively shallow gravity well that Earth can never match. The Moon and the asteroids will try to compete, but they don't have carbon and water in the same place.

The main chance is right here. Mars will be wealthy. We will be wealthy and looking out into the wider universe with a high vantage point and

fat export ships. By comparison, Earth will be peering out from the bottom of a murky well, where only two percent of any rocket can be payload. The future is bright enough for Mars.

But between today and tomorrow there is a brick wall. That brick wall is where the exponential growth of debt and interest crashes into the steady state of the real world. When that happens, all bets are off. No one knows what will happen. The threat of bankruptcy isn't necessarily on the conscious radar of most of the colonists. But I think at a gut level we're all mortally afraid of being cut off by Earth.

END VICTOR PETERSON

BEGIN GAIL BEESON

I mentioned that I dated Manuel Rojas, early on, and I got a chance to see how the other half lives. That was my window into the big time. Like, there's a water reservoir in the Bridgetown neighborhood of Alpha. You're allowed to use it as a swimming pool. If you're Bridgetown, of course.

I remember a party where they lit up the pool from underneath. It was dark all around, there was sand at one end, and there were stars projected onto the ceiling. They had brought along some compressed carbon bricks and started a fire, and they were using it to grill pieces of actual animal meat from Epsun. I was in my bikini, standing in the water up to my waist, with the sand under my bare feet, looking at the light coming up from below and shimmering on the ripples on the surface.

At the time, I remember thinking how grand this all was. And, of course, on Earth it would have been fine. You'd use charcoal that had grown in the ground as a tree. You'd burn oxygen the tree had put into the atmosphere.

But these days, it seems kind of wasteful to me. Terribly wasteful, even. At least on Mars. Why would you burn carbon with oxygen you just made from electrolyzed water? That you processed out of regolith ice? Someone had to go outside and mine that ice. It doesn't make sense. There doesn't seem to be a point to it.

Anyway, Manuel and I were just too different. Selfer with selfer, regular with regular - that seems to work out better in the long run.

END GAIL BEESON

BEGIN VICTOR PETERSON

When I got a chance, I looked around Alpha and tried to figure out the colony's efforts to fend off bankruptcy. What was the plan? How were we going to stay solvent?

Propellant production has always been outside. What you can see from the road is a farm of giant tanks and chemical stacks that bring in CO<sub>2</sub>, water, and solar energy, and turn that into liquid oxygen and methane. You need about 500 tons of that stuff just to get off Mars. But - and this is very different from the way it works on Earth - you can bring a couple hundred tons of payload with you when you go.

The Chinese are still hung up on the Moon. They won the second race to Moon, and they stayed invested there. There's effectively no water on the Moon. You can split all the oxygen you want off the rocks, but there's no hydrogen. So we sell them thousands of tons of methane. And we deliver it, too. We refuel some of the minor European operations. We could probably sell even more methane than we do, but the situation between the United States and China puts all kinds of delicate political constraints on that business.

We don't ship ice or water. Water holds much less hydrogen per ton than methane does. And trying to ship liquid hydrogen by itself is hopeless. Hydrogen always leaks. It'll leak right through the walls of the vessel, if it has to. The right way to ship hydrogen is by turning it into CH<sub>4</sub>. If the buyer wants water, they can always burn the methane with oxygen and convert everything back into water and CO<sub>2</sub>.

So there are significant shipments of methane going out. There are also smaller shipments of rocks and pretty minerals for coffee tables and display cases on Earth. The mineral business is always going to be limited, though, because the value comes from the rarity. Or else it's stupid money. Who imports a hundred tons of Mars granite to put on the face of a building in New York? It happens. Stupid money.

Somewhere between methane and minerals, there's entertainment. There are probably a couple hundred people at Alpha who are working full time to churn out romances, dramas, and reality shows set on Mars. They stream our Jumble games and an occasional music concert. It all goes back to Earth, and it sells, because real stuff is better than fake AI entertainment.

Honestly, I haven't spent my time trying to figure out the whole celebrity business. I think it's self-limiting to think you can own words and sounds and pictures, anyway. But, in the short term, I have to admit that they're helping to make a dent in the trade deficit. They're doing better than the mineral exports, and they're somewhere up there with the methane exports.

But that's all. There's no more. I suppose we could ship clothes and food to the Chinese on the Moon, if they wanted any. We're really at that kind of primitive level right now. There's no export of life support systems built on Mars. No reliable seals and gaskets. No space suits. No pressure vessels. No photovoltaic arrays.

All of that is coming. But when? And can we get it moving before we hit the brick wall of debt and interest?

END VICTOR PETERSON

## BEGIN GAIL BEESON

Later on I began to see how wasting resources gets under the skin of the regular colonists. I became a lot more aware of these things after I wasn't in Admin anymore. When you're a regular colonist, you understand how tight things are, and how we're barely getting by overall.

And you have to watch self-funders bringing in unnecessary imports. Eating luxury food. Travelling excessively. And having kids before the colony is self-sufficient. Having people take care of your kids. Having people clean your quarters. It all diverts people's effort. The effort is needed elsewhere. Seriously, you should pick up after yourself.

Vic says this sort of thing used to be called conspicuous consumption. It's like some of the selfers care mostly about marking off a distinction between themselves and the people below them. They waste things on purpose, to make that distinction.

But I don't think it does very much to influence people here. Maybe it carries more weight on Earth? And maybe it still has an effect on newbies. People who are new on Mars. I can't think of many regular colonists, after they've been here for a while, who would even want a lifestyle with a lot of waste. It kind of offends against our ideas of right and wrong. It doesn't make sense. We might want an easier life, sure. Maybe better-tasting food, yes. But why would anyone need to make a display of it?

It's not everyone, of course, on the selfer side. Plenty of selfers are careful about things. There's, for example, Melanie Sherwood, who runs D4. She's polite and respectful of everyone. She wipes down her suit and recharges her gear. She doesn't leave it for someone else to do. That's just basic morality for regular colonists, of course. Now, it's true that selfer society doesn't always work the same way ours works. But lots of self-funders, like Alicia Phillips at Alpha, are sensitive enough, and they're aware of how regular people see these things.

I mean, there's just no secret admiration for people who waste things. It's not attractive in any way. The landscape outside the towns is too harsh and stark. And the constant thrumming of life support never lets you forget it in town. Your life depends on everyone watching their supplies and cleaning up after themselves.

I actually think conspicuous consumption might be going away on Earth, too. At least, when I was there. It kind of felt like we all understood that resources were limited. That we couldn't keep dumping everything on the environment. Yes, we still somehow wanted other people to clean up after us. To subcontract the work. I mean, we wanted to pass the blame; sort of fool ourselves into thinking that we were solving the problem. But we knew we weren't. Really, by now we know better. We know Earth is going to run out, if we keep on going the way we've been going.

Everything is just so much simpler on Mars. There are no externalities. If we need something, we have to make it from scratch. We pretty much have to make everything out of water, carbon dioxide, and solar power. And when we're done with one round, we have to think ahead to what we're going to do the next time around. We have to keep scrounging up whatever we can find to cover our needs.

END GAIL BEESON

BEGIN VICTOR PETERSON

So what does happen when the colony hits the brick wall on debt?

There are some public cash flows from Earth that support the colony. That cash exists because of politics on Earth, and it doesn't have to be paid back. But the private investors and lenders all want to be paid back. And they want a big fat return on top of getting their money back.

The Bank of Mars, which is part of the Corporation, holds the riskiest debt. It's a casino. Huge upside potential, together with huge downside risk. Importantly, it's the funnel for the cash flow from the colonists repaying their passage debts. At this stage, it's still a profitable operation, but no one wants to be left holding the bag when it collapses.

The Corporation made the big initial investments, and it generally owns the material side of things. It owns the habs, the vehicles, the factory equipment, and most of the solar fields. It owns most of the towns, except for some of the residential areas. In addition, the Corporation makes dubious claims to owning most of the land on Mars. That's disputed by the Chinese, and by just about everybody else as well. Anyway, those claims, and all of the infrastructure, are the official collateral for its loans.

END VICTOR PETERSON

BEGIN GAIL BEESON

When it became clear that I didn't have a career in Admin anymore, I just wanted to cry all day. But there didn't seem to be much point to that. So I went and talked to Alicia Phillips instead.

Alicia has an open door organization. Well, it's really just her, I guess. She's a self-funder, but she knows how to listen to regular colonists. She's got a bit of a psychology background and does some counselling on a volunteer basis. Mostly, she's just a good person. We don't actually have counsellors here. I mean, other than the scary people in Medical who decide whether to shoot you full of drugs or put you in a psych cell. I didn't want to talk to them if I could avoid it.

"I just feel useless," I told her. "I work with people. Admin's all I ever wanted to do. I can't do anything else."

"You'll be all right," Alicia said. She squeezed my hand. "You're smart. There are plenty of things you can do."

"No, you don't understand. I'm just totally incompetent with my hands." I held them up in the air. "I'm afraid I'll put people in danger because I mess up so bad! I can't do this. I'm scared."

"Shhh, your hands are fine." She reached out and brought them down to the table. "It doesn't have to be outside work. There are enough indoor processing lines that need people. You can do this."

"But I'll mess up. What happens then? What will they do with me? Will they put me on Minimum Maintenance? Or in a psych cell?"

"No, no, it's not that bad. Honestly. If you mess up, something might get broken. If that happens, they'll charge you for it. It'll go on your debt. That's bad, but it's not the end of the world. That's all that happens. No one gets hurt."

"Maybe. I hope so."

"Look, I volunteer with Medical. I see those people they've got in Psych and Minimum Maintenance. They're in a completely different place than you are. They don't put people in there just because they're going through a rough patch. I promise you."

"Okay."

"Seriously, you're healthy. You're productive. You're a good person. You're going to land on your feet."

I talked to her a couple more times while I went through the process of failing out of Admin. She helped me reconcile myself to the way things are, and I felt a lot better after talking to her.

Later, when there were serious issues on the side of the regular colonists, Alicia Phillips represented some of our concerns to the self-funders. In the other direction, she helped us understand a bit of what was going on with the self-funders on their side. Or free colonists, as they call themselves. She's always functioned somewhat as a bridge between the worlds.

END GAIL BEESON

BEGIN VICTOR PETERSON

The Corporation's loans, at this stage, are enormous. Earth banks and creditors consider their loans to be "secured," because there is collateral. But collateral doesn't mean the same thing on Mars that it means on Earth.

For one thing, there isn't a ready market for real estate. Suppose that there is a default or a bankruptcy, and this leads to an outpost habitat somewhere in the Delta chain getting seized as collateral. Who do you sell it to? Remember that this is likely happening against a background of general insolvency, so it's not clear that any of the locals has the money, or the Earth credit, to buy a hab on Mars.

You could try selling it to the Chinese? Except that United States law currently forbids you from doing that. Of course, the creditors here are the kind of people who routinely change United States law to suit their own interests anyway. But even if you change the law, it's unclear who precisely enforces that on Mars. A law that's forty minutes away by lightspeed delay doesn't have the same immediacy as one that's holding you in a jail cell while you try to scrape together bail money. The local law has its own priorities. Frankly - no one knows what would happen.

END VICTOR PETERSON

BEGIN GAIL BEESON

I had a few good years after I started working on the salt line at D4. But then Dave Sellers died, and I found myself on my own again. This time I went and sobbed on Sandra's shoulder. She runs the D4 cafeteria, and she made me sit down at her kitchen table while she worked.

I don't think I said anything very coherent. I was just inconsolable.

After a while, Sandra brought me over a small bowl of broth, and I wordlessly spooned it into myself.

"I don't have any chicken stock or anything like that for you," she said. "But sometimes I get a few actual carrots or onions or mushrooms. Because of special events. Special people visiting, you know. I hang onto the scraps and peels and throw them into the freezer to make up a proper vegetable stock. For the real emergencies." And she patted me on the head.

END GAIL BEESON

BEGIN VICTOR PETERSON

The true collateral here is the work of the colonists. Don't imagine Earth is paying the colonists. The Corporation pays us, and then most of our pay goes straight back to the Corporation for rent and food and taxes. The part we had been hoping to save for ourselves goes to the Bank instead. There's principal and interest and insurance. It's six percent interest on Gail's passage loan, because she got hers earlier than I did, and eight percent on mine. From the Bank of Mars, that money goes back to creditors on Earth.

You can't sell real estate to the Chinese. But I suspect you might be able to sell our passage loans. Those loans come with a guaranteed cash flow from a captive labor force - us. As long as enough of us stay alive, you can keep selling our work forever. Our bodies are the real collateral.

The only thing we colonists could do about that is to withhold our labor. But - here's the thing - that same labor is the only thing keeping us alive on Mars! So. For the moment, the colonists' eyes are fixed on the future, when Mars will be wealthy. That's what they're counting on. The colonists expect

they will each own a piece of Mars. But the creditors? Well, for them the colonists are just fat little ATM machines.

END VICTOR PETERSON

BEGIN GAIL BEESON

The automated landings came first. Those were supposed to set up solar panels and find ice in the ground and start producing propellant for the ships. But they ran into problems. And then they kept having problems. For a while it looked like a human landing wasn't going to happen at all. The ground equipment wouldn't work. This went on for most of a decade on Earth. They delayed sending people, first one synod, then two, then three.

When they finally got an automated return ship loaded up with oxygen and propellant, that was the proof of concept they'd been waiting for, and they sent people.

So First Landing was a dozen people on two ships. You probably know that one of the ships didn't land right. The other guys buried them in a place where there's a little rise in the ground, outside Alpha, where the light first touches in the morning, and that's the cemetery now.

I don't like to think about how things might have gone if there had been only one ship, and it had failed. There might not be a Mars colony today.

Anyway, that meant there were six of them that first year on Mars. One went back later. One died of something we still don't completely understand, but we think is connected with altitude sickness. They can mostly screen against it now. Chris Lipinski died years later in a truck accident. I got to meet him. He was a very handsome man, and he was polite to us newcomers. That leaves three from the First Landing who are still on Mars today.

You meet people here. Or you see them across the room and hear stories about them. Daunte Peoples is a ferocious guy with a bristling white beard like a prophet. He used to run Propellant, and he's still part of that team. Most people stay out of his way. However, I'm told he'll help you and even exert himself on your behalf if he thinks you've been hard done by.

And there's Sue Lindeman. She was second in command in Admin for a long time. I had a lot to do with her when I was in Admin, and I don't want to say anything bad about her, but I'll admit she was always a bit of a nonentity. Vic says he wouldn't trust her with a broken gasket, but I think that's too strong. She did her job. Now she's retired. She still organizes the less formal public events. I suppose she's the poster child for "look, you might get to retire some day, too." I don't think that's really true for the rest of us, though. Those of us who weren't on First Landing.

And then, of course, there's Allie Dinh. I think she's the most important person on Mars today. If you go by who we could least afford to lose.

END GAIL BEESON

## BEGIN VICTOR PETERSON

So, like Gail said, First Landing was intended to be 12 people, and wound up being six. Then they sent a bit over 100 people on Second Landing, and Jim Bridgewater came out with 800 people on Third Landing.

That was too much too fast. Fourth and Fifth were smaller, while they built out the infrastructure. I came over with Ninth Landing, and that was 2000 people. We've been at that number for a while. We're kind of stuck at that number because they need to send solar panels and life support along with each Landing. They'd love to send more people, but that'll really depend on local production of the necessities.

By the time Bridgewater arrived with Third Landing, he was already past the most energetic part of his life. He assigned the Team Leads and so on, but eventually he began to get weaker, and a slow-motion struggle for succession started up. For who would take over after the Founder was gone. No one was going to mess with him while he was alive; he was always the main lifeline back to Earth and resupply. But ultimate power was there, waiting and beckoning.

And if you were after real power, Second Landing was the place to be. Bart Zeller, Manuel Rojas, and Gary Brodeur. They all came over on Second. They're all self-funders and . . . psychopaths? I don't necessarily mean that as a blanket condemnation. If it hadn't been them, it would have been people like them. People with that kind of personality, who see these things as opportunities.

Initially, each of these guys grabbed a piece of Admin. In addition, Zeller and Rojas jumped onto Prospecting and Safety, respectively. Brodeur saw that Inspections would be another way to exert physical power over people. I'm not exactly sure how he managed to do it. I mean, he had to turn "Inspections" into a police department. But that's what happened. There are a few Inspectors in every town, and more at Alpha. They're the muscle that makes sure you're not allowed to say the wrong thing. There's a joke: "What do these guys have to do with Inspections?" The answer is "Beats me!" Well, okay, maybe it's funnier if you're here.

That situation lasted until Ellie Sawyer showed up on Third Landing, together with the Founder. Then it was the four of them - Sawyer, Zeller, Rojas, and Brodeur - the Big Four. Ellie Sawyer was another one who brought her own money with her, but the difference was that she was a lot richer than they were. She took over all of Admin and kicked the other three out of the nest. She took Safety away from Rojas, and incorporated it into Admin. Safety has a couple dozen officers now. They're somewhat mixed up with Medical. If you wind up in a psych cell at Alpha, you're in the hands of Safety.

After that, Manuel Rojas went off and joined Prospecting. He became Bart Zeller's second in command. That's about the time they rebranded themselves as "Exploration." Later on the Chinese landed on Mars, and they started wearing the black uniforms.

END VICTOR PETERSON

BEGIN GAIL BEESON

Soph works on the 4-3 salt line with me. We'd just got off work when she pointed at her foot.

"Do you see that? My boot is cracking."

"Is there anything you can do to fix it?" I asked.

"I hate putting glue on things! It's so ugly." The truth is, Soph is a bit of a clothes horse. "I asked at the shop. They said it's hard to fix when it's through the material like that, and through the seam."

"That's too bad."

"And everything's so expensive now!" I knew what she meant. Having to replace the basics really puts a hole in your budget. Soph likes to spend money on clothes, on occasion, but you want it to be something nice.

"Hey, Soph," I said. "you might be close to my size. I've got an extra pair of boots I picked up when I was at Alpha. Let's go look and see if they fit you."

We went back to my quarters and she tried them on. "These are so cute! I think I'll need thicker socks, but they'll work. How much were they?"

"Oh, don't worry about it. I got them at a shop in Alpha, the Red Sophisticate, you know?"

"Yes, you're right, that's a cool place. All the self-funders go there." She sighed. "It's just so hard to make ends meet. Thanks!"

"No worries. I don't need them now. They were for my Admin job."

"They look really good," she said, admiring her feet. "At first, I was so sure I was going to get ahead on paying off my loan. But I'm not getting anywhere. I'm almost going backwards, you know?"

"I know. Same here."

"I got fined for just talking, a couple times. And then I got charged for damage. But I didn't even do it!"

"Yeah."

"It's just so hard to make progress."

END GAIL BEESON

## 5. How We Got Here

BEGIN MATEO HERNANDEZ

Everyone's playing the idiot game, with a lie in their mouth and their elbows out to the side. Two thugs beat one thug, so they gang up. A big gang beats a little gang, so they gang up more. Then they keep changing who's with who, and who's against who. But I won't join any of their gangs.

So that paints a big target on my back. It puts me on everybody's hit list. Because I won't join them. I won't join their gangs.

The little stuff counts, too! Like some creep who's chasing status. They want high status. They think that's got nothing to do with hurting me. But, hey, I ask you, why are they doing it? At some point, claiming that status is going to give them a special advantage over me - and that's when it will hurt me. That's why they're doing it. That's the whole point of status. It makes them better than me. That's why they want it!

Now, this sort of thing, statusmongering and so on, it looks little, but it's part of the same game. It's the same picture. It's all feints and jabs, to set you up for the big cross.

"Chill out," they keep telling me, "not everyone is trying to kill you!"

Fuck. Don't tell me this doesn't count. These people are all jammed up together inside their competition box. Their whole world is win-lose. Don't pretend they're "looking for a win-win" somehow. That's bullshit. It's just another trick. A feint. The real answer is to get out of the box!

You think there's a difference between these guys? They're after high status so they can be better than me when it matters. Or they get someone else to hurt me. Or they push their shit in my face personally. Or they use some made-up legal right to get the cops to hunt me down for them. It's all the same thing. It's all the same kind of bad person.

Seriously, this is like kicking your way out of a cardboard box. The box doesn't even exist outside your own mind. And other people's minds. It's no more substantial than that. You can kick your way out. The moment you understand why competition is wrong, and why there can be enough for everyone, you're already outside the box! That's all there is to it.

Now, the worst thing you can do is go back inside the box. Start fixing stuff and changing things around on the inside of the box. Making up new rules and laws. That's much worse than never getting out of the box at all. At that point, you know what you're doing. You become the greater evil.

END MATEO HERNANDEZ

BEGIN VICTOR PETERSON

I pretty much learned about the world from my parents. I've known what people are and what we're doing here for almost as long as I can remember. I guess for a long time it wasn't illegal to understand things, and then it was. And then they were gone.

They said it was my Dad's driving. I have no way of knowing. Cars, back when normal people had cars, were always full of spyware, but they never let you see any of that stuff. They just told you what you were supposed to believe. I have no proof it wasn't an accident.

I decided I wasn't going to be gone.

I thought about things for a while, and then I figured I was undercover for life. I went into debt and studied Mechanical Engineering and kept my mouth shut. I would find a nice safe niche where I could hide, and I wouldn't take any risks at all.

I guess plans can change.

END VICTOR PETERSON

BEGIN MATEO HERNANDEZ

They have these things called frekoms. I'm around people a lot, so I hear things. I know a bit about what's going on. The people who clean the commercial buildings, and some of the outdoor guys I work with, they use these koms to organize. You know, like collective bargaining, from when that was legal.

This isn't bargaining, and it isn't legal. It's more of a game of tit-for-tat. When the bosses do something especially bad, everything goes to hell for a while. Things get broken, things get misplaced, things get delayed. Normal operations get all messed up. It makes a difference.

It doesn't help much with pay, but it helps with safety. When someone gets hurt, everyone has a bad week. And, for a change, the owners have a bad week too. It makes for a kind of balance.

People learned you couldn't let anyone touch your kom. And you had to watch out because people could get bought off, or blackmailed. Then they'd get you from behind. That's how they operate.

They. Them. Who's that?

You know, all we ever get to see is some lady from the front office, or from the law firm. Or the cops. But I'm not going to let anyone off about this. If no one's responsible, then everyone's responsible. I blame everyone, all the way down to the lady in the front office.

They'll tell us there's no money for safety gear, or for pay raises, but there's always money for scabs to replace all the workers in a place, or to buy

off some guys and turn them into narcs. And they can always frame a guy, make up some random bullshit, and send him down the river.

They have to know who to frame, though. You'd think that'd be the easy part. But I guess it's not. When everybody hates you, it's not easy to narrow it down. It's everyone. And if everyone's responsible, then no one is responsible!

END MATEO HERNANDEZ

BEGIN VICTOR PETERSON

I always had a vague idea about going to Mars. Don't ask me how that fits in with the idea of keeping away from risk. I can believe contradictory things. I even picked Mech E over Chem E because of early reports of deaths from trying to do industrial synthesis in enclosed spaces. If it doesn't kill you outright, you can still wind up inhaling a bunch of life-shortening chemicals. Ironically, that particular job has actually gotten safer in the meanwhile, even as they've stopped reporting casualties.

The last job I had before I applied to go to Mars was keeping the production lines going at a plastic injection molding place on Earth. I had to get in well before first shift and make sure everything would start up all right. Sometimes second shift would leave things messed up. We didn't run a third shift. These were low-grade plastic products and they didn't pay much. There was never enough money for new equipment or maintenance. But there was always enough money for three levels of management.

Most of my job consisted of sitting in meetings with those people. Writing things up. Responding to Initiatives. They always had to be changing something. Otherwise I guess there was no reason for them to be there? They were always starting some new Initiative for Efficiency. Quality. Leanness. Greenness. Social Responsibility.

Actually keeping the production lines running, on the other hand, was something I pretty much had to do on my own time. I would stick around for the first part of second shift after the managers had gone home, and I would take care of business.

But if something broke down, we had to do our best to keep it quiet long enough so we'd have a chance to fix it. If the managers found out there was a problem, then I'd get yanked into a Crisis Meeting. There would be a lot of yelling at the production workers. There would be a lot of yelling at me. They would Escalate and bring in an outside person. The outside person, of course, wouldn't know anything at all about our equipment. And because it was a different person each time, they never got a chance to learn. I guess there's turnover among the consultants, too.

Sometimes we had a production breakdown that was caused by one of their Initiatives. That made everything more complicated, because first we had to talk around in circles for a while before we could even agree that there

was a problem. It would take hours to get to the point: maybe we should do something about this?

I would make gentle attempts to head off these situations. Minor suggestions to divert their interest into less destructive channels. But I had to be very careful doing this. If they had figured out I was doing it, they would have fired me immediately. That would have been a major affront to their control of the universe. So I just kept supplying them with more Alternate Options. I think I lasted longer than the previous three production engineers, but I was on my way out of there for sure, sooner or later.

END VICTOR PETERSON

BEGIN MATEO HERNANDEZ

There was one time I got a phone call from someone named Gia Xiong. I didn't remember the name right away so I let it go to voice. The phone knows people, but that doesn't mean I know them. Then my mind clicked and I remembered her. Nice lady, middle-aged, roundish around the middle. Worked with her at one of those custodial jobs indoors. As usual I talked too much when I was there, and so I didn't last long at that place. Too bad, really. It was an okay job.

So I went and listened to the voice message, and she was sounding a bit worried and upset. Wondered if I remembered her. Said she was looking for someone. She thought I might know how to find them. Didn't say who. Wondered if we could meet.

So I called her back, and said, sure, we can meet. She sounded relieved. She still didn't mention who this was about. I have a pretty crappy sense of these things generally, but even I could tell it was sensitive somehow.

Normally I'd have suggested meeting at a noisy bar, but that wouldn't have been Gia's scene. She's more like the ladies who come to the bar to track down their husbands, and then they stand by the door looking anxious. So I suggested we meet at a park instead, and we agreed on a time.

They call it a park. It's really a narrow strip of grass right alongside a busy street. But it has some benches, with those obnoxious bumps to stop you from sleeping on them, and concrete planters you can set things down on for a moment. Like your phone.

Gia showed up, and I said hello, and she pulled out her phone and wrinkled her brow. I pointed to one of the planters standing ten feet away from the bench. And then I went and put my phone on a different planter a bit further off on the other side. So it wouldn't look too much like we were hanging out and talking. They know who you stand next to.

The traffic noise was just about good enough to cover us, so we sat down on the bench, and she told me she was looking for a guy named John Win. Thin build, not so tall, did I remember him? I had to think for a bit, then I got it. Sure, I told her, I remembered him. He'd moved out East, and then he'd

come back later on. Was living in town again. I'd run into him again on a job. As it happened, I was able to give her the names of a few people who might be able to reconnect her. She recognized one of the names. And a couple bars where he'd be likely to hang out. She didn't know those so well.

That seemed to make her feel better. There was a lull in the traffic noise, and she glanced nervously at her phone where it was sitting on the planter, as if she was worried about what it was hearing. I wanted to ask if John was in trouble, but I didn't. She seemed to think an explanation was called for, though, so she pulled a gray plastic box out of her pocket. It was a little bigger than a deck of playing cards.

"You see, it's telling me I shouldn't trust any of my messages. That my network's broken. I'm supposed to rebuild it."

My eyebrows went up. I hadn't actually seen one of these before. So I asked, was this one of those freekoms? She looked a bit sheepish, and said it was. I said to her, you know, maybe you shouldn't be showing this to me?

"Yes, yes, I know. That's what they told me." She put it away. "But you're an honest guy. And I know John is an honest guy. If I can get back in touch with him. That's the thing. You see, they accidentally let someone into the network who's not an honest guy. So now we have to rebuild it."

I said thanks for telling me. And I promised to let her know if I heard any more about John. Me and Gia shook hands, and we picked up our cell phones and went on our ways.

END MATEO HERNANDEZ

BEGIN VICTOR PETERSON

After I got accepted to go to Mars I went through the Training Academy. It's twelve weeks, like boot camp. They buzz your head. You're not going to be able to wash long hair on Mars anyway.

First they gave us the old "look left, look right, when we get to the end one of you won't be here" line. I'd been through that in college. I guess they feel they have to crank up the fear and stress and competitiveness for some reason.

There was a lot of yelling and orders and physical training and tightly packed dorms. Random humiliation like surveillance and strip searches and cameras in the showers. And then it got down to actual torture like waterboarding.

Okay, I see a point to that one. This is not an environment where you can take oxygen for granted. You have to know your own panic reaction. And how to hold it off. Once you're in panic mode, you can't do anything, and they made that point right away. Breathing exercises, first aid, scuba practise, and the buddy system.

I was buddied with a guy named Mike. He had a great sense of humor, and he helped me stay loose through all this nonsense.

We had one class where they told us that if we got caught in a decompression we were supposed to exhale, not hold our breath. Any chance of doing something in the next seconds, or of getting revived if you got rescued quickly enough, depends on you not rupturing your lungs. Serious stuff, of course. And they put us through partial decompressions so we had to practise it. But you can't stay serious all the time.

"I'm just going to learn to breathe in space," Mike said afterwards. And instead of puffing his cheeks out, he sucked them in and rolled his eyes. Made us all laugh.

They kept us in living quarters like on Mars. These were mostly tunnels, but we spent several weeks in a tin can. There were always pumps running somewhere and things were shaking and getting hot and smelling weird. And of course there were farts and body odors. They weeded out anyone who came down with claustrophobia. Or who got in fights in the cramped space. Or who couldn't take the constant low thrumming and vibration that runs through everything.

I think they went too far with the simulated accidents, though, where you don't know it's on purpose, and they make it look like you're about to get crushed by heavy machinery. Or where they lock you inside a small dark box and they say it's for an hour, but then it's much longer than that, and it seems like they've forgotten about you. That one got to Mike. He started screaming after several hours in the box. So he washed out and didn't go to Mars. It's too bad. I think he would have been a great colonist.

After living on Mars for a while, I have to say the training was generally accurate. It didn't account for the work and the boredom. And there are some things you have to pick up on the job. Like how to judge the state of an oxygen bottle by its heft, because you can't always trust a gauge.

The tin can habitats really are tight, like the ships. But the towns actually have quite a bit more room than they gave us in training. The humming and shaking is forever, though, and it's everywhere.

I remember the deep quiet on Earth. Wind in the trees. Sweet smells, like the soil after rain. And birds singing in the garden. But we have things to build here first. We'll get around to planting our gardens after we've taken care of the basics.

END VICTOR PETERSON

BEGIN ISABEL HERNANDEZ

I already talked about how Mars can teach us how to live on Earth. A crash course on how to live within our means. But there's a bigger picture, too. A much bigger picture.

For this, we have to look a little further into the future. What's going to happen with life in the future? I mean both kinds of life: dumb life and thinking life.

We have to go all the way back to the beginning to get this picture. I'll try to keep it as short as I can. I'm stretching out my arms to show the whole time Earth has been around. Four and a half billion years. Running from my left hand to my right hand: my right hand is today. I'm wriggling the fingers on my right hand. You are here!

But the story starts on the other side, with my left hand. The Earth forms. Accretion. Collisions. Watch out, here comes a big one! Pow, glancing blow, a chunk spins off - it's the Moon! After a while things settle down. The Earth cools off. A solid crust forms. Rainfall. Oceans.

Blue-green algae show up somewhere near my left elbow. These guys are early life, hiding inside stromatolite rocks in the crashing surf, under a pink methane sky.

They're all single cells. From my left elbow up to my shoulder. Across my chest, and down along my right arm. Past my right elbow. All the way down to my right wrist. Seriously, think about how long this took, by trial and error, working out the mechanics of a single cell. Three billion years! Nothing but single cells the whole way.

Now think about all the things that could have gone wrong during this long voyage to my right wrist. The cells are evolving and messing with each other. They're messing with the atmosphere. The geology is messing with them. The Sun is changing. Supernovas and gamma ray bursts are happening nearby - Bang. Just barely far enough away. Lucky!

Methane disappears from the air. Carbon dioxide and oxygen start oscillating wildly. Sometimes Earth is one big snowball. Sometimes it's all ocean. Now it has one big continent. Now it's broken up into smaller continents and volcanoes. It's crazy. Somehow, those squishy little cells manage to stick around.

This whole time, the Sun is gradually brightening, and the inside of the habitable zone is creeping up on Earth. You know the habitable zone? The habitable zone is where you can have liquid water.

Mars also had liquid water for a while. Before my left elbow. Then it lost most of its water. Because Mars is too small. It doesn't have enough gravity to hold everything down. Now Mars is a near vacuum, with a puff of carbon dioxide, and a remnant of water ice hiding under the surface.

Something much, much worse happened to Venus. The inside of the habitable zone passed over Venus. The oceans boiled. If there were oceans. Life died. If there was life. We'll probably never know. It's a hellish pressure cooker now. Lead melts. No one goes there. Can I have a moment of silence for Venus? Moment of silence . . .

END ISABEL HERNANDEZ

## BEGIN VICTOR PETERSON

Chris Lipinski was one of the guys on First Landing. He ran into Old Harry several years ago when his truck broke down on the Delta road. His peanut was out of range, scheduling was confused about when he was expected, and so he ran out of air and died. The usual story. But Chris mattered. That was when people insisted on real HF radios for backup. And they made it stick.

After Chris died, people started assembling radios by hand and screwing them onto dashboards and comm walls. There's no shortage of electrical engineers around Alpha, and the parts are common enough.

Pretty much everybody agrees about this. Admin didn't like it, of course, but they didn't actually stop it. There's a knob to choose the band. You use a different band depending on the dust and solar conditions, and whether it's day or night. There's a frequency display, and a dial for tuning. Volume control, and a button to talk. A big antenna on top of the vehicle, or on top of the hab. Some units let you adjust the transmit power.

This must have been a terrible dilemma for Admin, behind the scenes. We found out later that they brought in jamming equipment so they could interfere if they wanted to. But jamming is very local, and it costs power, so it's usually temporary. They did announce that they'd imported monitoring equipment and would be recording and filtering what people said. But again, that depends on what they can hear. There's a lot of bandwidth to monitor. And they can't monitor conversations they can't hear. Conversations that are out of range. The weak ionosphere of Mars can be helpful at times.

Public opinion was pretty strong on this one, and the bosses agreed to import more radios from Earth. In principle, every vehicle and habitat should have one. But, more recently, Admin has started to make heavy weather about repair and replacement. The imported Lipinskis aren't as easy to fix as the home-built ones. There are also questions about whether they're recording things they shouldn't be recording. People prefer the homebrew Lipinskis when they can get their hands on them.

## END VICTOR PETERSON

## BEGIN ISABEL HERNANDEZ

Okay, back to Earth!

I still have my arms stretched out, but now we're down to my right wrist, just the most recent half a billion years or so. We've seen four billion years of water go under the bridge. Three billion years of single cell evolution.

Earth has gotten enormously lucky, with a good long run of liquid water, and a decent amount of gravity, and by the time we get down to my right wrist, those single cells have figured out how to get along with each other. They get together and party!

Cambrian Explosion of multi-cellular life! Plants. Animals. Sex! More oxygen in the air. The oceans and continents are suddenly crawling with critters.

Periodic extinctions. Pow. Trilobites are gone. Dinosaurs show up at the start of my fingers. They get a couple of hundred million years, most of my fingers, and then Pow! Asteroid hits the Earth. Every animal over a foot long is wiped out. Mammals get their big chance. Now we're down to the fingernail on the middle finger of my right hand.

Humans show up on the last millimeter of that fingernail, throwing rocks at hyenas. That's the last two million years or so.

If this isn't making you nervous, it's because you don't realize how close we're getting to the end of the story.

Now, the Sun isn't going to go all red-giant and swallow the Earth for another few billion years. That's a few forearm-lengths away. But we don't have anywhere near that much time. The immediate threat is much closer.

The Sun is brightening, and the inside of the habitable zone is sliding in on us. It's going to hit the Earth like the end of the hangman's rope. The oceans will boil. It'll be all over.

How much time do we have? No one knows. A couple hundred million years? As much as the dinosaurs? Two inches? Or only one?

If you totally don't care about this, maybe you should check to see if you have a pulse.

This is not just about us newfangled humans. If any of the life and history of Earth is going to survive - like, at all? It's going to survive by travelling with us. We're the only way off the planet.

We need to learn how to live in space. We need to start learning now. Not some distant day off in the future. Today. This is our window of opportunity, right here. It may be quite unexpectedly short. And it won't come again.

END ISABEL HERNANDEZ

BEGIN MATEO HERNANDEZ

I get mad. I know it doesn't do me any good. It only hurts me. Not the person I'm mad at. I know that.

It's an instinct. Another animal bites you, you have to bite back. Or you get bitten to death.

But people are worse than animals. They play games against you to make you react. They shove you into a black pit of rules and laws, and then they keep threatening you and poking you and prodding you. Until you react. And then they've got you! You broke a bullshit rule! Now they've got some made-up bullshit legal right to hurt you even worse.

It's the idiot game. The only point is to keep people down. Guess what, the people on top don't get so many threats and lies shoved in their face!

Look, I don't care what you think, I'm an optimist. Yes I am. I know there's a better game in town. I know we're going to get out of this idiot game, and we're going to get out of it all of us together.

But in the meantime I still get mad. Even though there's no point. It's all so stupid. I can't seem to do anything about it.

Izzy turns the whole thing into some kind of schoolbook exercise in her head. She's got a delay on her fuse, and most of the time that's good enough. I've seen her lose her cool, though. She's not immune.

Vic's a cool one. He doesn't even react. Maybe he doesn't feel it? Is that just the way he is? Is it a habit he learned? Lucky bastard.

I wish I could get a habit like that. But I can't. When I get punched, I punch back. Even though I'm short and poor and it doesn't do me any good. It's stupid. I guess I'm the stupid one after all.

END MATEO HERNANDEZ

BEGIN ISABEL HERNANDEZ

I used to go to Trinity Church with my Mom. Now, whether or not I actually believe in Our Lord Jesus Christ as my personal Savior is beside the point here. It does me good to spend some time with people who think they might not be quite as good as they could be, and maybe this Sunday they could try to be a little bit better, and maybe that would make a difference, and make the world around them a little better.

After my Mom died, it was easy to keep going to church, and to sing and volunteer and make phone calls and run the bake sale. I've known Samantha and Ginny forever, and we go together. I'm kind of an aunt to Sam's kids.

If you want, you can figure the historical Jesus wasn't talking about the next world at all, but entirely about this world, and he's just been misreported. The gospels certainly reflect endless years of bowing to the bosses and placating the powers that be. Their current version of Jesus puts off any fixes to a different planet, promises the suckers they'll get pie in the sky some day, and makes sure nothing upsets the bosses.

And yet, there's plenty of unsettling stuff in there, if you take the time to read it. Importantly: it's not illegal yet! Probably it's still legal because of those thousands of years of pleasing the bosses. But that means you can say things about making the world better for people around you, and you're covered in chapter and verse.

So sometimes Sam and Ginny and I will go and carry signs on a street corner, or in front of a congress critter's office, and we'll protest some act of military aggression, or some new law to make things harder on regular people, or more cuts to the homeless shelters, or to Basic Medical.

This kind of protest is still technically legal, but I can't recommend it to amateurs. We're professionals at this. We have an official affiliation, we identify ourselves clearly, and we know what we can say and what we can't

say. Usually it's just the three of us, but sometimes we get joined by narcs and agents provocateur. We know the deal, and we leave the moment they start something.

Things can go wrong if we get joined by some innocent lamb who thinks they're actually allowed to have opinions on whatever. I do my best to warn them, but half the time they get tricked into saying something or doing something that gets them in trouble. So we don't protest too often.

Of course this hurts our social scores, and of course we get a talking-to back at Trinity, but we point to chapter and verse, and you can't prove nuthin'. We're harmless. Not a threat!

END ISABEL HERNANDEZ

BEGIN VICTOR PETERSON

Once a week we check everything in the hab and the vehicles. There's automatic monitoring, of course, but we do it manually as well, because it's important. Someone has to sit in the machine room for half a day checking all the pressures and levels and verifying the connections. It's complicated, because there's so much equipment, and you have to half disassemble some of it to make sure there's no crud that's accumulated in there and that it's running right. And then you have to be absolutely certain it's reassembled correctly.

Anyway, there's a long checklist to go through, and Andy was doing that part of the job. He sent me out to check the vehicles and all the pressure vessels on the outside of the hab, because those are simpler.

I don't know, I must have been distracted by the glowing quality of the sunlight - there was less dust in the air that day - or I was thinking of something else. After I got back inside, Andy finished up his list, and then he went outside to take out the backhoe. He came right back in, though, and he was bright red in the face.

He stomped up to me and shoved the backhoe's spare oxygen bottle up under my nose. I took a step back. Andy's a little shrimp of a guy, but I thought he was going to hit me.

"See this?" he said. He forced it into my hands. I hefted it, and saw what he meant. It was only half full! I have no idea how I missed that. We leave the vehicles unpressurized until we take them out. No sense in wasting air. But that also means you'll never know if something inside starts leaking pressure, unless you check it.

"The gaskets leak sometimes, because they're crap," Andy said.

There was nothing I could say to that.

I didn't have to say anything. Andy said it all, very thoroughly, and at great length. I felt terrible and never forgot it.

END VICTOR PETERSON

## 6. Gamma

BEGIN VICTOR PETERSON

When I had saved up a week of leave time, I thought I would travel around the colony a bit and see whatever I was allowed to see.

The towns work ten to twelve hour shifts, with a day off once every two weeks. There's more downtime here at the outposts, since we have to work around vehicle charging and daylight; they tried mining by floodlight, but there was too much equipment damage. We don't have any days off as such, but each of us gets to do a supply run once every three weeks.

And we get two weeks of vacation a year. That's per Mars year. One week per Earth year. The usual thing is to spend your leave at Alpha, where there are shops and entertainment and crowds. Some people miss being in a crowd. I don't.

Gail knew a guy named Liam Dutton who was working on photovoltaics at Gamma, way out on the other end of things. That sounded like as good a destination to me as any. I'd head for Gamma first, and then I'd do some sightseeing on the way back. So we talked to Liam and fixed it up. He'd show me around the place, and I'd buy him a beer, if I could get myself out there.

END VICTOR PETERSON

BEGIN ISABEL HERNANDEZ

My day job is restructuring people's debts. But my real job is networking. I suppose I have to explain what I mean by that. Networking sounds pretty innocuous, doesn't it? Just people talking to each other. But it turns out that people talking to each other - I mean, really talking to each other, telling each other what they really think - is upsetting to some pretty powerful people. So what I do is illegal now. Very much illegal.

Robert Krueger and I started importing open hardware back when it wasn't completely illegal yet. By open hardware, I mean computers that don't have back doors and spyware integrated at the chip level. Open chips like this were still legal at the time, but Customs would interfere and block them anyway. So we became smugglers.

We had to be smugglers, you see, if we were going to contribute to eliminating speech obstacles. We needed to help people build and maintain effective communications infrastructure. Open hardware is essential if you

want to decentralize your conversations. You can do a lot with mesh networking, for example, as long as the chips themselves aren't working for the enemy.

END ISABEL HERNANDEZ

BEGIN VICTOR PETERSON

The Delta bus got into Alpha too late for me to continue the same day. It runs once a week: a few hundred miles out to D7 one day, and then back the next day. So I had six days till the next bus would take me home.

I dropped off my travel case at the hostel. The hostel consists of bunkrooms. They have bedframes and foam mats, and it's reasonably affordable. Bring your own blanket. Alpha is kept warm enough that you can sort of zip up your jacket and you'll sleep. A working town like D4 doesn't stay that warm. I had my blanket with me.

END VICTOR PETERSON

BEGIN ISABEL HERNANDEZ

A while later, Robert and I got into koms. Freekoms. These are small devices that let you talk directly to someone who has another freekom. They go around all the blocks and leaks and traps that are built into our centralized communication systems. Of course there are a whole lot of technical issues that need to be sorted out.

Koms have to be able to send messages directly to other koms at short range. And they have to be able to communicate over longer ranges occasionally, using whatever relays are available. They wind up being text-only, and that's because you don't want to transmit a large amount of information if you don't have to. On the other hand, you're still doing a fair amount of relaying back and forth, because you need to be as vague as possible about people's actual whereabouts.

END ISABEL HERNANDEZ

BEGIN VICTOR PETERSON

You already know what Alpha looks like from watching the dramas and reality shows. But the layout is a bit more truncated than you've seen on the shows. That's because in real life you can't actually go to Bridgetown, where the self-funders live. Not without an invitation. The gates won't let you in. And the whole Admin complex over on that side of things is off limits, too, except for official business.

But you can wander around Warrenville and the low-rent end of things all you like. And, it's true, there's a lot of space. They have entertainment and

retail and sports facilities running from Bridgetown all the way to Warrenville. And there are several avenues down the middle, not just Midway Avenue itself. Alpha is huge, for us. Half the population of Mars, maybe? Four or five thousand people? Something like that.

There's even a second level of tunnels underneath and going beyond Warrenville. They have to keep building out in every direction, because they have to make room for a couple thousand more colonists every Landing, here and in the other towns.

END VICTOR PETERSON

BEGIN ISABEL HERNANDEZ

Other people had already worked through most of the freekom issues before Robert and I got involved. They had made these gadgets reasonably cheap and tough, and not too useful for the cops when they get grabbed. The cops can always beat the pass phrase out of the user, but then they can only read the messages that are addressed to that user. And they can only read the messages that are still sitting on the kom. There's not a long history there. The old messages get purged quickly, and the memory gets overwritten a few times so it's not recoverable.

Of course, there are other messages living on a kom, too. Those are the messages that are passing through on their way to someone else. The cops can't read them, though, because each message is encrypted with the key of the intended recipient. The kom user can't read those, either. Only the intended recipient can read them.

You keep hearing that quantum computing has broken public key encryption, and that the government is reading all these messages. But we know that's not true. We know because, well, they're still beating pass phrases out of people.

END ISABEL HERNANDEZ

BEGIN VICTOR PETERSON

There's always construction going on, as much construction as we have tunnelling equipment for. Using as much home concrete and airproofing plastic as we can produce. Everything gets separated into sections with airlocks between them so you can figure out where the leaks are and fix them. There are always leaks.

There has to be enough bedrock overburden to keep the radiation dose down. And you want to avoid being too close to an ice deposit. The ice will sublimate away because of your heat. That'll make the ground shift under you, and then you'll really have leaks.

Heating is an issue, and sometimes cooling, too. Both of those use energy from the solar fields. Energy we also need for transport and lighting and manufacturing and everything else we do. So even Alpha stays pretty cool, never mind the outposts. You wear long underwear and a jacket most of the time indoors, and often a watch cap on your head.

I know I already mentioned this, but since I do ice mining I am going to say it again. The whole colony depends on ice. Ice is our most important resource, right after energy. We need thousands and thousands of tons of ice for air and food and water. But we also need it for home concrete and home plastic and everything else we manufacture, not to mention spaceship propellant. If we're going to support ourselves and get independent of Earth, we're going to have to produce useful stuff and send it out on spaceships. Everything we do is built on ice.

END VICTOR PETERSON

BEGIN ISABEL HERNANDEZ

My communication belongs to me. It belongs to me, and to the person I'm communicating with. It doesn't belong to anyone else. It doesn't belong to anyone who wants to control my communication. It doesn't belong to anyone who claims to own my communications channel. It doesn't. Those are all false claims. My communication belongs to me.

So I have a big problem with people who want to spy on me, who want to control me, who want to tell me what I'm allowed to say and what I'm not allowed to say. Or who, in fact, just want to shut me up and make me do what I'm told.

You see, this is the sort of thing I'm avoiding when I decentralize my communications. And it's why the bosses keep trying to force me into their centralized communication channels. They're doing it so they can pretend they own my communications. Then they run me over with their network admins, spammers, jammers, trolls, and gatekeepers.

Some of those guys are more official, and some of them are less official. Now, the network admin actually works for a billionaire, who built this centralized communications goldmine so he can make even more billions doing surveillance and advertising. But the admin isn't really doing anything very different from the unofficial people who are running malware and spyware to vacuum up all of my private data for profit. Or the government spy who's maintaining a dossier on me, and on everyone else as well.

Centralization is the original sin. That's what leads to all of these different people pushing and jostling to get their fingers into my communication with the person I want to talk to.

All of the players in this ecosystem get a taste of the gold from the goldmine. For the billionaire, that's just a cost of doing business. And the activity of the illegal private data vacuumer justifies the paycheck of the

network administrator. If the vacuuming activity went away, the network admin might get laid off. The government spies don't want things buttoned up too tight anyway. And the security vendors make money whenever anything breaks. Everyone's happy - except for me!

END ISABEL HERNANDEZ

BEGIN VICTOR PETERSON

I walked around the glitzy end of Midway and peered into the fancy shop windows, and while I was doing that I noticed that at this end of town the surfaces were more white and polished. On the other end there are more dark colors and permanent smudges from the dust. So I gathered that light colors are a status marker. The gates to Bridgetown are tall and white, and you can see them from well down the avenues, which are also tall.

Credit where it's due: the air filters at Alpha are really very good. The smell of sweaty human isn't much more than subliminal. But you still have to be serious about wiping down your suit and everything else when you come in a dustroom. That's the stereotype of self-funders: that they track in dust and make everyone else breathe it. There's a grain of truth in that, of course, but it's still just a stereotype. And there are decent self-funders, too.

I didn't know anyone at Alpha, though, and it was starting to weigh on me. I retreated to the more comfortable Warrenville end, got myself a beer, and tried to listen in on the different conversations churning around me. The tables were surging with people, but I wasn't picking up on anything much beyond celebrity gossip. So I finished my beer, put in a request for a hitch to Gamma in the morning, and turned in early.

END VICTOR PETERSON

BEGIN ISABEL HERNANDEZ

For my personal communications network, I'm looking for specific people I want to talk to, who also want to talk to me. We have to be able to trust each other. Of course, there are a number of issues there, not just one. But one basic issue is that we can't include anyone who thinks advertising is okay. Advertising is spam, and spam will kill any network. Even a decentralized network.

A spammer is trying to sell me something. They're after my money. Sometimes they're after influence. Either way, they think it's okay to flood me with advertising and crap until my communications are dead, dead, dead.

One of the signs of advertising is the way they're willing to spend a significant amount of money to push their message at me. That's also how I can tell they're lying. If they weren't lying, they wouldn't have to pay money to inject their words into me.

Here's how I see it. Who I agree to listen to is one of the most important decisions in my life. It says who I am today. It makes me into who I'm going to be tomorrow. My attention drives my intentions. If I let someone else control my attention - they'll control who I am and what I do.

My attention may be the most valuable thing I have. It's mine. Entirely mine. I don't have to share it with anyone else in the world. It's the key to my freedom, my identity, my own personal agency. It's no wonder that people who want to control me keep trying to grab my attention. They're grabbing the keys! It's a carjacking. And it's like I'm the vehicle. They want to drive off with me. They want to drive me around town like they own me. But I'm not going to let them grab the keys.

Anyone I entrust with my attention had better not try to advertise at me. No way. Because advertising is assault.

END ISABEL HERNANDEZ

BEGIN VICTOR PETERSON

I hitched a ride out to Gamma the next morning. The central towns have daily busses: Alpha, Beta, Ex, and Epsun. Those are all within ten miles of each other. But Gamma is out at least as far as the Deltas, in the opposite direction. It gets a bus once a week. The timing wasn't going to work, so I arranged for a ride with a truck driver.

Hitchhiking is a semi-official thing. You work it out with the driver. The one rule is they're not allowed to take anything for it. Some drivers won't do it. Mostly, they shrug and reckon that carrying a person or two along in the cab is part of the job. Admin might crack down at some point, or the driving might become fully automated, but so far it seems to be copacetic.

We had a pleasant chat along the way. The driver's name was Jose. He'd done some ice mining when he first got here, but then he'd gotten a chance to drive, and that was generally safer than mining. He'd been driving for the last few years.

"You've got to make sure the Lipinski is working, though," he said, gesturing at the radio. "That's vital. One time it went on the fritz. I refused to go out! Absolutely refused. I know they can put me back on mining, but I just refused to go. And they hunted around and found me a spare one that worked. Really, it's because of trucking. And because everyone liked Chris."

"You met Chris?" I asked.

"Only once. Back at Alpha. He was one of the good ones."

I nodded.

The countryside went by. It looks different on this side of Alpha. It's more rugged and varied terrain than by the Deltas, where it's mostly flat. There were long stretches without any solar field glints in the distance. They put Gamma way out here on this side because they found some good metal ores and silicates here. Later on, they found better ones at D5.

Gamma is supposed to smelt metal and do heavy manufacturing. It's also supposed to produce home photovoltaics for solar panels. But it has a problem, or problems. It's not running at speed. And this isn't Earth. We can't afford to throw people at something unless it's productive. So Gamma is one of our smallest towns. It's almost a ghost town. Just a couple hundred people all told.

Jose dropped me off at a people airlock before going around to the vehicle locks. I let myself in through the airlock, cleaned up in the dustroom, and clicked through into town.

END VICTOR PETERSON

BEGIN ISABEL HERNANDEZ

Another type of issue you can run into is a jammer. Jammers are a bit like spammers, but they generally don't care about selling you anything. They just want to shut you up. They'll throw noise at you from all directions at the same time. Technically, what they're doing is called a "distributed denial of service" attack. That means they set up a bunch of loudspeakers around you blasting in your ears all the time so you can't hear your friends. They really only have one message, and it's pretty basic. They keep on shouting Shut Up, Shut Up, Shut Up.

END ISABEL HERNANDEZ

BEGIN VICTOR PETERSON

I'd seen a picture of Liam Dutton, so I knew to look for a balding white guy with a belly on him. Actually, the sight of a belly is pretty unusual.

We have a few overweight selfers. But I knew Liam wasn't eating fancy food or anything. Most of us wind up on the skinny side. It takes consistent work with weights to maintain any kind of muscle mass in this light gravity. We have some chunks of metal around the hab, and Shack works out consistently. I work out semi-consistently.

Here and there, you find an odd person who actually likes the rehydrated food, and they're overweight because of that. Finally, there are the ones who eat too much out of stress. Liam's a stress bunny.

I found him in Photovoltaics Hall B where he was trying to get a miniature silicon smelter to smelt silicon. He glanced at the clock, and sighed. He said he could take a break and show me around.

"It's frustrating. I'm supposed to be doing PV production today. But it's just troubleshooting, again." He patted the baulky machine. "I'm trying to get this gadget to do what it knows full well it should be doing." I smiled at that.

"At least I get to use my electrical engineering," he said. "A lot of guys, whatever they did for a degree, it doesn't come in relevant at all."

"That's me, sure. I did process engineering, and I'm on ice mining now."

"Yes, like that."

"I don't mind too much what I do, honestly," I said. "The future is here. I just wanted to get out here and be part of it."

"Of course. That's why we're all here, right? But come along, let's go bother Isaac. He might be getting work done."

Isaac Schaffner was even balder than Liam, but short and skinny instead of tubby. Irritable, also.

"Damn tourists. Okay, okay, fine. Sure. So, see this thing here, see? This is another attempt at making PV with our own lines. But it's amorphous thin film. That means it sucks. Also, it degrades. It's barely worth putting up at all. But we've got to make this work. Either this one here, or the homebrew crystal grower I've been hacking around on, over there. One or the other of them has got to work."

"It's got to be built here, you see," he went on. "Home PV has to come off home production lines. It's the only way. We need to scale up and build our own lines. Or we're just totally doomed."

Isaac is such a cheerful guy.

"See that line over there, the one Hong is babysitting? That's an Earth line. It works. That one works. For now. But it produces a piddling amount of PV. Every Landing they keep sending us prototypes. New pilot production line in a box. Fancy test equipment. Oh, this one will work, they say. But they always break down. We can't fix them. Go over to Hall D and look at all the broken down equipment." Isaac gestured off to the right. "Rows and rows of them. They're lying around under plastic sheets, like corpses. They've forgotten how to build things big and robust, on Earth. It's all flimsy miniaturized crap now. Maybe that works on Earth. Not here."

"If Admin had any sense, we'd be focussing all of our effort onto getting home PV production into gear. Instead, they keep shipping over hundreds of tons of PV from Earth. And fancy production lines that go straight to Hall D. It's not sustainable. Some of the early PV is already breaking down, and there's no local replacement ready. That stuff off Hong's line is high efficiency. But it doesn't matter if it's high efficiency. It's piddling. It's a fraction of a fraction of a percent."

"We have to figure out how to build working lines here, right here, on Mars, or we're doomed."

He had more to say, but that was the gist of it. After he ran down a bit, I thanked him, and Isaac got a chance to catch up on his breathing. He seemed relieved to see me go. But maybe he was also relieved that he'd gotten a chance to tell someone else about it. I had a feeling the others might have stopped listening to him.

END VICTOR PETERSON

BEGIN ISABEL HERNANDEZ

The next kind of trouble you can get on your network is a troll. Trolls are people who get their joy from breaking up other people's conversations. They're something of an endangered species these days, because we no longer have open discussion forums. They used to be an actual problem on the old forums. Don't worry, they'll show up again as you expand your network!

One type of troll is a flamer troll. That kind throws insults in order to get a reaction. People learned to avoid flame wars. Don't feed the trolls!

Then there are concern trolls, who pretend fake concern about something they don't actually care about at all. They do this in order to disrupt a productive conversation that other people are having. People learned to identify concern trolls: recognize them and ignore them. Later on, there were some professional trolls who got paid, and there were automated troll farms. But, mostly, trolls are enthusiastic amateurs. They do it for the joy of causing harm. That's how some people work!

END ISABEL HERNANDEZ

BEGIN VICTOR PETERSON

After we finished talking to Isaac, Liam took me to see the steel mill. We walked over to get our suits, and he was almost apologetic about the situation at Gamma.

"Yeah, these are all difficult problems," Liam said. "I'm not sure how I can explain why they're difficult. Well, look at the Deltas. You mine regolith, and bake the water out of it. Then you do some fairly straightforward distillation and cleanup to remove the salts and perchlorates. You deliver something that is pretty much clean ice."

"Beta, and to some extent Epsun, they start with reasonably pure feedstocks like ice and carbon dioxide and nitrogen, and they do large scale synthesis with them. That works. And if one production line works, you can build another one. And then you can build another one. That's something you can scale up."

"Now, in the beginning Beta was like us, they had problems getting started, too. They worked through their problems with wrenches and welders, and eventually they got on top of the situation. Now it's mostly operations and maintenance. Beta is moving at speed."

"But here at Gamma, we have to do things like get silicon up to seven nines purity and keep it there. Or the PV simply doesn't work. It's tricky. Maybe it's too subtle. Or maybe we're just dumb." Liam smiled.

"You're not dumb," I said. "You'll figure it out."

"I hope so," he said. "I certainly, certainly hope so."

We put on our suits and went through a series of airlocks out into a cavernous hangar on the surface. There were a few people in a control room

off to one side, heavy pipes and cables and mine carts coming in from outside, and glowing metal in the middle. We stayed well back from the glowing parts.

"There's steel rolling in the next hangar over," Liam said, "but the main trouble is right here. It's a completely different process than iron smelting on Earth. We don't have any fossil carbon to help us yank the oxygens off the iron ore. But steel needs a certain amount of carbon in the final product anyway. So we start with carbon dioxide from the atmosphere, and pull the oxygens off both that and the iron ore. That takes an enormous amount of energy. And then somehow we have to get the carbon and the iron to do their magic together so the result doesn't go all brittle and crack on you. But here's the short answer: it's brittle and it cracks."

"I shouldn't make it worse than it is. Our steel has gotten better since we started. It's good enough we can make some mild steel framing, and we can make those low pressure ice barrels with the rubber flaps. But you wouldn't want to trust it for a pressure vessel. Unless you make it three times as thick as it should be, and that's just a waste of energy. And then you still can't trust it. Or move it, hardly. So that's why we don't have any home vehicles or habitats or airlocks. Meanwhile, the good steel has to come in, two hundred tons at a time, on ships from Earth. And that's an even worse waste."

"What we need is consistent control of the material properties during smelting. They sent us an X-ray machine from Earth once. That's the sort of thing that could give us useful feedback. You can look at the structure. You can see defects in the bulk material. I was supposed to help them work this out. But the machine didn't like the dust, or maybe there was something else it didn't like, and now it's an ex-X-ray machine. I wouldn't know where to begin. You can go pay your respects in Hall D."

"Any chance you could make stainless steel?" I asked.

"Nope. No useful chromium ore. But it turns out regular steel is mostly fine. At least for outdoors. There's some corrosive stuff in the dust, but there's no oxygen or moisture in the air. Oxygen is horrible stuff. You never realize how bad it is, until you can get along without it. As far as rust goes, you really only have to worry about indoor rust."

"We did some small scale attempts at producing aluminum. Tiny quantities of copper and titanium. Chromium would be nice for indoor steel, if they could find us some. You'd think Prospecting would do something about that, wouldn't you? I guess they're called Ex now. They're supposed to look for places with ancient hydrothermal activity. Find deposits of the minerals and ores we need. But since the Chinese set up base here, the Ex guys just spend all their time wearing cool uniforms and running around watching the Chinese."

Liam went back to work, and I was on my own until he got off shift. I roamed the halls of broken down machines and shrouded equipment and thought about things. It was clear we needed to be producing tens of

thousands of tons of good steel and square miles of solar. That's what it'll take to support enough people on Mars. That's what we need if we're going to make it on our own. But what we're producing right now is a few hundred tons of bad steel and a few acres of mostly bad photovoltaics.

I'd been concerned about our prospects for self-sufficiency before. Now I was getting alarmed. I agreed with Isaac - you'd think this sort of thing would be a priority for our leaders. But I guess they're busy playing power politics against each other. The easiest thing, for them, is to just keep on importing steel and solar panels.

So it's up to Liam and Isaac and the others. They're the ones who are going to have grab these problems and break their backs. If we're going to survive, that is.

END VICTOR PETERSON

BEGIN ISABEL HERNANDEZ

Dealing with the troll problem, though, caused a completely different kind of problem, the problem of banning. I'm talking about the old forums. I know we don't have those anymore, but it's worth knowing how people dealt with this stuff, because it'll come back again.

People would ban the trolls from their discussions. And then they would ban them again, when they popped up again as a sock puppet using a different handle. And keep banning them. It was a game of whack-a-mole. There were two main mechanisms for this game. Either a single forum dictator would read everything, and ban the trolls, or else it would be up-and-down votes from people on the forum that would ban the trolls.

Banning did work, and sometimes it was still possible to have a useful conversation under the shadow of the banners. But it was always a narrowed conversation, narrowed to suit to the tastes of the local dictator, or the tastes of the local groupthink. Enforcement was always based on some kind of property claim over the discussion forum itself. Even when it worked, this was always second-best communication. The banners were satisfying various needs and desires of their own, just as the trolls were, but neither of them cared about the important thing: two people who want to talk to each other.

END ISABEL HERNANDEZ

BEGIN VICTOR PETERSON

I went to find the cafeteria and wait until Liam got off work. The bar at Gamma, like the one at D4, is only open for a few hours in the afternoon and evening. Once it opened up it seemed pretty well attended. Maybe Gamma needs their bar more than we do. The only town that has more than one bar is Alpha.

The alcohol comes from Beta. It's manufactured as a nontoxic industrial cleaner and sanitizer, and you can drink it.

But even Beta should be able to do better than this weak and sour beer with the weird metallic taste. They also make sugary drinks with one of three kinds of artificial flavor in it. Gail likes the lime flavored one. Those drinks have a higher percentage of alcohol, but the glass is smaller, so you get less overall. There are rumors about illicit fermented drinks at Epsun. Of course, Epsun is a different story entirely.

The lady at the counter looked annoyed, but not at me. I gather there were a couple of women present who had finished their two drinks and were trying to get more. She wasn't having any of it.

There was probably more than that going on, of course. In a place like this, everyone knows everyone and there's a whole history to everything. Luckily I didn't have to care. I told the lady I was visiting from D4, and that I'd like to hold off ordering because I was waiting for a friend to get off work. She nodded and mopped the counter with a towel.

END VICTOR PETERSON

BEGIN ISABEL HERNANDEZ

Later on, some of the banners evolved into cancellers and gatekeepers. That means they started banning people across multiple communications channels, not just on one forum. They would do this by outing people, and doxxing them, and hunting them down by their real names. They did what they could to hurt reputations and get people fired from their employment.

Some banners and cancellers did this sort of thing for the joy of causing harm, just like the trolls. Some did it for profit. There are solid paychecks in gatekeeping for the billionaires - somebody has to patrol what people are allowed to say, if you're going to keep everybody in line.

END ISABEL HERNANDEZ

BEGIN VICTOR PETERSON

I sat back in a corner. When Liam arrived, I got up and laid my jacket on a vacant table by the music. I did that so the peanut on my collar would have something to listen to, and we would have some privacy with our fizzy alcowater. Liam looked a little surprised, but followed suit. I wasn't doing anything terribly unusual, but there were no other jackets on the table when I did it.

"I'm over there," I pointed, and stepped out of the way of someone who was coming through. I got two pints of beer from the lady at the counter and brought them back to our corner.

Liam took a drink, wiped his mouth, and said "aluminummy!" That made me laugh.

"Seriously," he said, looking me over, "most people don't care they're being listened to."

I shrugged. "I like to think out loud. Without worrying I'll get in trouble."

"Right." He was looking out into the middle distance.

Then he lowered his voice a bit: "I got fined once, for thinking out loud. Ten thousand dollars. They said that was the small fine. Next time it would be a hundred thousand."

That sounded pretty steep to me. When Mateo gets in trouble for blabbing, he only gets fined a few thousand dollars. Maybe that's all the cash he can get out of him.

"It didn't make any sense to me," Liam said. "All I said was they should cancel our passage debt, the way they cancelled our student debt. It wouldn't be all that much money to them." He took a drink. "The peanut must have caught it somehow. They said it was disloyalty and insubordination."

"Trigger words," I said. "Words like 'debt' and 'cancel'. You know, the recordings from the peanuts go through those AI neural nets, and when they hear certain things, or certain ideas, they trigger. They call in a human. Maybe a human like our Checkpoint Charlie, but more likely someone on Earth."

"Yes, I understand that, but why those words, in particular? You can complain about the machines not working. You can complain about them importing luxury stuff instead of the stuff we need. They don't call that disloyalty. Why can't you complain about money?"

I weighed how much I should say. There were mechanisms here that people needed to understand. But what if I got found out as the source of this knowledge? Strickland was after me already.

At the same time, here was Liam, telling me this info. Risking the big fine. He didn't have any special reason to trust me. He wasn't drunk. He was doing it on purpose.

"They're sensitive about money. Money in particular," I said. "And it isn't the complaining in general. It's the idea of cancelling debt. You see, debt is the hook for interest. And interest is what they live off. That's their big source of power. They can't let you off the hook. You talk about cancelling debt, and that's a direct threat to them. It's what makes them different from you."

"Well, that's the idea," he said. "They're not going to be different from me. I'm going to pay off my passage and start saving money. Buy some rooms of my own. Maybe rent out rooms to new colonists. Lend out money myself. I could get rich too. Then there won't be any difference between them and me." He frowned. "Why should I listen to you?"

"Go ahead. Pay off your passage," I said.

"Right," he said, and settled back in his chair. "I've talked to people who've been here longer than me. Third Landing. Fourth Landing. They haven't paid it off yet, either. Sensible people. Not lazy bums. Not spendthrift types. They should have been able to pay it off. Some guys I talked to owe more than when they landed. Twice as much, even."

"Hey, you didn't hit that AI trigger once, you hit it half a dozen times!" I said. "You dropped a ten ton barrel of ice on that trigger. You were asking about people's passage debts? Don't you know that's proprietary information of the Bank of Mars? That belongs to the Corporation. I'm just shocked to hear you talking this way!"

He grinned, and winked at me.

"Yes, that interest will get you," I said.

"Also, things go wrong. And then you owe more." He wrinkled his brow. "But they cancelled my student debt. How was that any different?"

"They didn't cancel it." I saw an explanation was needed. "They paid it off."

"They said they zeroed out the first million."

"I know they said it that way. But that's not what happened. What happened is they paid off the Education lenders. And then they rolled that same amount of money into our passage debts. The student debt is effectively the first million of our three million passage debt. They know that pretty much anyone they want has student debt, anyway."

"What about the selfers? Aren't they paying the same price?"

"No. They're not paying the same price," I said. "There's a lot that's different when you're a self-funder."

He was thinking it over.

I went on. "It was a purchase transaction. The Corporation bought us off the Education lenders. Those guys probably didn't like the risk of us paying them back from Mars. Or living long enough to pay them back. But we belong to the Corporation now. Our interest payments go to the Corporation. They bought us."

His eyes widened, startled. I bet he hadn't thought about it like that before.

"How do you know this? Where does this come from," he asked.

"Look, I keep my eyes open," I said. That wasn't quite true. I'd always known about debt and interest. How Earth has been run since Sumerian times. But the modern details were inside information I'd gotten from Izzy. I didn't want to say that.

"Why are you here, then, if that's what you think?" he asked. And he started to get angry at me. "Why didn't you stay on Earth? What is this bullshit?"

"Because Mars is important. I believe in Mars." I looked straight at him. He looked back at me. I said, "each of us should get a piece of Mars. Not for the lenders. For us." There was a pause.

"Okay," he said, and took a drink. "Gail said you were sharp."

We zoned out for a bit and listened to the music. I got up and got us each a second pint of the strange brew.

END VICTOR PETERSON

BEGIN ISABEL HERNANDEZ

All I've got is my knowledge that I'm one of two people who want to talk to each other. That's our purpose, and that's our power. It's the source of our power to resist all the people who think they want to run our lives.

I keep coming back to what we're trying to do. We're trying to have a conversation. The conversation is valuable to us. We're not afraid of each other. We're not trying to hurt each other. Those things would block our communication even more effectively than trolls and admins do. But we can afford to talk openly to each other.

What if everyone had a dozen people they could talk to openly like that? And what if each of those people had another dozen people they could talk to? And so on? No dictatorship could stand against something like that. No fake democracy could stand against it, either. And so, of course, that's why real networking is illegal, and that's why we keep getting drowned in spies and threats and noise and so on.

Now please don't immediately jump to the idea that we need millions of people talking to each other directly. That's dictator thinking. Although, of course, a dictator wants one person to talk, and millions to listen.

I don't know whether the scale of my own network would be right for someone else. I have hundreds of contacts for various purposes, but there's a much smaller number of people I actually trust. These are people who understand their own surroundings, and have similar relations with a small number of other people they know and trust. It's about the small number of people, and about trust.

I think these choices about our contacts are actually more important than the hardware and software we throw at our speech obstacles. Of course, the people who are trying to control us have more hardware and software than we do. Sometimes that makes things seem too difficult. It may seem like we have to compromise, or knuckle under to them. But that's not true. It's not really that bad. They don't have the good things we have!

We have free and open communication with another person, where we trust each other, and don't threaten each other. I keep coming back to this. And when my trust gets betrayed, or when bad people come by and smash up my network, I start over again. I reseed my communications and start over. I am willing to do that over and over again, as many times as I have to. That's the idea I always come back to, when times are hard.

END ISABEL HERNANDEZ

## BEGIN VICTOR PETERSON

"Some people have paid off their passage," Liam said dreamily. "Oh, I know. You have to be on Ex to get a prospecting bonus, like for finding minerals. And there were bonuses at Epsun for finding new ways to make food. There were some bonuses for engineers at Beta who got their processes to work. That could happen at Gamma. At some point." He looked at me. "Do you see any opportunity at Delta?"

"For a bonus, at Delta?" I asked. "No, not really. At Delta we'd need more pay if we're going to get out of debt. Or else, a lower interest rate. Then I could see doing some saving. Yeah, I'd like to own a room in town, maybe. Some day."

"Right. Not gonna happen," he laughed.

"Sure it will. Right when your bonus comes through," I said.

"Just you wait," he said, "I'll go big time. I'll buy you off the Corporation. I'll put you to work mining ice for me."

"Sure. Go right ahead. Just don't put all that bonus money in the Bank of Mars."

"Why not?" He looked puzzled. "It's part of the Corporation. What's wrong with it?"

"That bank is going to fail. Sooner or later. The self-funders keep their money in banks on Earth."

"They do?"

"You know the Corporation is in debt, too, right? They owe a pile of money to even bigger sharks over on Earth. They pay interest to Earth. That's how it works." I sipped my beer. "The problem is that they owe too much. There's not enough income. Too many shiploads coming into Mars. Not enough shiploads going out."

"But there will be plenty of ships going out," he said. "It's coming."

"Sure. But by the time that happens, the interest may have built up. It'll have built up to many times the original debt. To the point where it can't be paid. No matter what. And, you know, debts that can't be paid, won't be paid."

"Well, maybe. And what happens then?"

"I dunno. Something ugly and messy. Seizure? Foreclosure? I don't know how they'd even seize stuff over here. Who would they sell it to? Some kind of new owner, I guess. You can bet that any savings you have in the Bank of Mars will be gone, though. And they could cut off our supplies."

"Well, if they cut us off, we won't make it," he said flatly. "We won't need any savings then. We'll be cold and dead."

"Yeah, that's perfectly true." But I had a point. "However, even if we do make it, we won't be able to keep anything we had. No piece of Mars for us."

He chewed on that. "Where do you get this kind of information?" he demanded. "Are you pulling my leg?"

"Open secret," I said. Again, this wasn't quite true. People like Izzy know these things. Self-funders know the Bank of Mars is a bad bank. But the regular colonists don't know this. Who would tell them? However, if they went ahead and asked a self-funder the right questions, they'd get confirmation. Like I said, it wasn't actually a secret. "Ask a selfer."

"We only have one of those here. The Gamma Lead," he said. "I'm not asking Old Stan anything like that."

"Sure. But someone could always ask questions around Alpha."

"We should be able to hang onto what's ours."

"Of course. Maybe if we had credit unions."

"What's that?"

"Like a bank, but owned by the regular colonists. Not part of the Bank of Mars. Like the selfers have their money in Earth banks."

"Yeah, right. Good idea. I'll go ahead and set one up first thing in the morning. Or do you have one in your back pocket, wise guy?"

"Nope."

"Didn't think so," he said. "I wonder who'd know how to do something like that."

"I have no clue."

He drew circles in the air with his glass.

"So, I can see why they don't want us talking to each other," he said. "Especially about money."

I shrugged.

He tried a different angle. "Suppose all of us, suppose we all say that pay has to go up? That seems more straightforward."

"Umm, I don't think they actually have the money. Not now. Not until Mars starts making a cash flow profit."

"So we have to shut up and wait until there's a profit?"

"I guess. Then we demand our piece of it," I said.

"Hmm."

"The really ugly demands will be coming from Earth."

"And what do we do if the debt's too big, when we get to that point?"

"Just exactly what you said at the start of this conversation," I said, "but with everyone saying it."

"So, for now, we shut up and wait. Not sure I like that."

He lapsed into silence and thought about it for a while. I had been feeling increasingly sick to my stomach at the risk I was taking by talking this way. There was a voice at the back of my head that had been screaming "stop, stop!" the whole time. I looked at the voice and made a decision to ignore it.

"There are things we could ask for sooner," I said. "Stuff we might actually get. The big problem at Delta is safety. They never want to replace

the old equipment. People keep dying. We probably have twice the accident rate of anyone else. We never get to see any of the numbers, of course, so we don't know. But the safety stuff should get taken care of. That should be affordable."

"Sure, that makes sense," Liam said. "I get drafted for outside work sometimes."

"What, I thought you just sat around indoors all day!"

"When we have a solar panel install," he continued. "That sort of thing. Gamma's got some of the oldest gear anywhere on Mars. Real beat up suits. True antiques. Pickup trucks where the cabin doesn't even hold air. You're in the cold all the time, even when you're driving somewhere. Missing Lipinskis. I don't like it. I don't like it at all. And I only have to do this stuff occasionally."

"Everyone's always afraid to ask for new equipment," I said. "You get blamed if you ask. You get blamed if anything breaks. It's always your fault."

He laughed. "Don't I know it! I got charged for a whole pilot processor line once. They said I broke it. I barely looked at it sideways!" He got serious again. "That's why I owe more than when I landed. Don't like to talk about it, normally."

"Yeah, that's bullshit."

"Of course it's bullshit."

"But you have to talk about it," I said. "Otherwise everyone keeps thinking it's their own individual problem. It's not their individual problem."

"But you can't talk about it."

"Cause they're listening?"

"Of course, cause they're listening. What are we going to do? Hang out at the bar all day? Liz'll throw us out," he said, nodding in the direction of our bartender. She gave him a level look back as if daring him to try for a third beer. Our glasses were empty. She could see that.

I sighed.

"Yeah, I know, it's not very practical," I said. "But imagine we had our own peanuts. Things like that exist, you know. Communicators. Phones that talk to each other. They have them on Earth. Like peanuts, except the Corporation is locked out. Encrypted. They're cheap enough. If you can get ones you trust."

Liam was frowning at me again.

I went on. "The point is to establish the fact that we get to talk to each other. That it's right for us to talk. That it's wrong for them to listen in. Once we get that straight, everything else becomes possible."

Liam shook his head. "This is all too much. You're nuts."

"Sure. I know it sounds nuts. But it's real. People do this."

"Maybe on Earth."

"Yes, on Earth."

"Okay, fine," he said. "On that note, let's get going. Liz is getting edgy."

We headed out and picked up our jackets. I noticed that three other jackets had been added to the table by the music.

END VICTOR PETERSON

BEGIN ISABEL HERNANDEZ

When Robert disappeared, I felt bad, but I also knew what to do. I put out the word. I cleaned up everything I had going on the shop floor and went silent, waiting to see if the hammer would fall on me. It didn't. For whatever reason it missed me.

Yes, there's always the possibility they're waiting. Waiting and watching, so they can spy out more of the network. But as time goes on, that becomes the less likely explanation. Promotions and raises can't wait forever. Even now, the spooks have some degree of patience, but it's limited.

So, gradually, I went back to work. I keep my interactions pretty tight, so that when I go down there won't be too much dirt on other people. I inherited Robert's network of connections. I lose some every year, and every year I make some new ones. It can be nervewracking, of course. I find that gardening helps. Flowers get their chance to bloom, and you make the most of that.

END ISABEL HERNANDEZ

## 7. In the Machine Room

BEGIN VICTOR PETERSON

I hitched a ride from Gamma to Beta and spent a few hours sightseeing there.

Beta has a bit of the unsympathetic air of a person who has every movement planned out, is working as fast as they can, and has no patience for anyone who isn't.

The place manufactures large amounts of home concrete and plastic and foams and rubbers. Also fabrics and clothing and sheeting. There's a lot of incidental chemistry. For example, they rebuild batteries. When the batteries in our vehicles and habitats stop holding a charge, they get sent to Beta and broken apart, and the chemistry gets rebuilt from scratch.

There are limits to what they can do. They've been struggling with seals for a while, but the ones they produce still aren't adequately reliable. And you wouldn't want to wear one of the experimental homemade space suits.

There's an orderly line of facilities built out away from town, mostly above ground for easy venting. Access is limited. There's a single public viewing point, and I stood behind a barricade looking at a hall full of pipes and columns and stacks of reaction vessels. You suit up even though the hall is at normal pressure. I didn't mind at all. Beta is much safer these days, but historically, of course, people had died here.

Visiting here was bittersweet. This was a place I could have fit in, if I hadn't gotten tripped up over my contact list. This could have been home. As it was, I was an outsider here. Now, I don't have the chemical engineering background to do synthesis, but my process engineering experience would have been useful on the light industrial and manufacturing lines. Even if it just amounted to sitting on the night shift waiting for the alarms to go off. Was that more worthwhile than mining? Safer, certainly.

Maybe they'll figure out automation for ice mining eventually. Or PV manufacturing will work out and they'll start sending a lot more colonists. Maybe Strickland will get bored watching me, and they'll give me a chance to help build those new facilities marching across the plain.

The common areas at Beta felt hurried and impersonal, and the air smelled a little off. I made an unofficial purchase of ethanol sanitizer for recreational purposes - known as Beta juice - and got out of town.

END VICTOR PETERSON

## BEGIN GAIL BEESON

After I was out of Admin, I started to understand some more things about Allie Dinh. For one thing, she's one of the very few regular colonists who have paid off their passage loans. Of course, it helps that she's been here since First Landing. And that Admin once gave her a big bonus award for food production.

By the way, about those bonus awards? Everyone thinks they're going to get one. Very few people actually get one. And, as for those who do, well, let's just say the system isn't very clean. Allie deserved her bonus. She's an exception. Admin doesn't care that you can see the bonus system is dirty. It's sort of a power dynamic for them.

The thing about Epsun is, everyone I've ever met from there seems to have this strange kind of personal loyalty to Allie. I haven't encountered that anywhere else. You can't even joke about the food. They'll hold it against you. They'll act as though you're insulting their boss. Allie has her own armed security, called "Quality Control." Inspections and the rest of them have to stay the heck out of Epsun.

I spent a long time puzzling over why things work this way. Eventually I recognized the key to the puzzle. There's a huge whiff of, I don't know, scandal and fearmongering around her? What it is, is the accumulated odor of burnt threats. A deflagration of lies.

The Big Four each must have tried to get control over her. And failed. Repeatedly. There must have been flopped attempts at blackmail, and lies, and slander, and misfired extortion. Somehow, she outfaced them all. But it's left an unpleasant residue of nonsense around her. And a certain grimness of demeanor on her part. Also, if I understand correctly, a lack of a personal life. Unless that, too, is part of the nonsense? At this point her enemies are probably waiting for her to die. Or trying to make that happen. I doubt she eats anything she didn't grow herself.

Once I had this insight about Allie, it changed how I saw the various selfers and Team Leads around the colony. How I thought about them. Once you know what to look for, you can see who's working for who. They all are. They're all working for someone. Everybody who matters is under someone else's thumb, all the way up to the Big Four. Except for Allie. But her power as Epsun Team Lead goes just as far as the Epsun airlocks, and it stops there.

And - except for Allie, again - upward mobility just isn't a thing for regular colonists. As I found out myself! Boss jobs are for selfers. And bigger boss jobs are for richer selfers. So, for example, there are subtle ways you can tell that Victoria Morelli, who is the overall Delta Team Lead, is richer than Melanie Sherwood, who only leads D4.

Looking at it from the other angle, Victoria is aligned with Exploration, while Melanie is aligned with Inspections. They get along fine on a personal level. But they play for different Jumble teams - you know? That's the sort

of thing that is terribly important for self-funders. Regular colonists couldn't care less.

Self-funders can fall from Olympus, too. Bridgetown is littered with self-funders who are out of the loop and have no influence. You don't have to feel sorry for them. Some of them go back to Earth. Others stay on and keep playing the game, trying to wriggle their way back into the system.

END GAIL BEESON

BEGIN VICTOR PETERSON

Epsun is where all the food comes from. For some reason, no one pronounces the "L" in "Epsilon." No one seems to know why it's that way. And no, it's not because Allie Dinh runs Epsun. Allie pronounces her ells and arrs just fine. That's just another bit of nonsense surrounding Allie.

It's a strange, strange place. It has the starch machines, which synthesize most of the calories we eat. But you can't live on that crud alone. So they grow leafy green stuff in bulk for the nutritional value. And then they put it outside to freeze dry it.

The starch moves the same way that water ice moves, in the low pressure drums with the rubber flaps. The greens get compressed into huge bales with Beta plastic wrap around them. They're both barely edible by the time they get to you. You rehydrate the crushed greens together with starch crud, warm it up in the microwave, and eat it. There's also protein powder and ground hot chili peppers, and that's enough to keep you going. Some oil or fat would be nice, but there are a lot of things that would be nice. And then the Poop Patrol comes by and picks up your freeze-dried poo and takes it back to Epsun for the next round.

Epsun also grows luxury food like fruit and vegetables and meat. Those items are valuable and they move in pressurized cases. Don't get the idea from the drama shows that meat is as available as it is on Earth. It isn't. The last time I saw some was at the Landing Day banquet last year.

The small scale experiments happens in the laboratories. You don't see those. But the larger machines and prototypes are out in public. They've been working on the yeast vats and algae bags for years now, and they're finally getting useful quantities of nutritional supplements out of them. So they're building out medium-scale production pilots. You get to see those.

The starch machines are noisy, and there's a lot of thrumming and high-pitched squealing in those areas. But Epsun is different from the other towns. At Epsun you can actually get away from the rumbling. If you walk out into the agricultural domes. There's some pumping and blowing in the domes, but it's so much less you hardly hear it. The quiet is weird, almost like you're outside on the surface. But you're inside.

You should suit up to go out into the domes, just on general principles, but you don't always have to keep your hat on. The pressure is on the low

side, and there's enough CO2 to feel stuffy and drowsy. Loss-of-pressure events happen, though, so you're supposed to stay alert.

The natural reddish sunlight in the domes disturbs me deeply, since you're indoors. It feels like the light should be white indoor light.

In some places there are algae racks overhead, and you're covered in latticed patterns of light during the day. At night the domes are truly dark in a way the towns never are. The towns have emergency escape route lighting. There's no escape route lighting in the Epsun domes. The plants wouldn't like it.

On a side path I came across a guy with greasy hair sticking out past his ears. He was looking up at the pale sky. I wondered how he got all that hair under his hat. I assumed he was a visitor, like me, amazed at the domes.

"Crazy place, eh?" I said.

He looked at me, puzzled, and then looked up at the sky again.

"My eyes hurt," he said. "I come out here to get them to settle down. I guess I'd better get back, though." And he turned and shuffled off.

So then I realized he was a native. In fact, I had just had a sighting of the legendary Len Czarnecki, food wizard. He doesn't come out of the lab often.

In most of the greens chambers you have kale and chard up to your waist. In one place, and I couldn't believe it and reached out to touch them, there was a whole field of stinging nettles. Except for my suit glove, I would have gotten stung real good. That occurred to me the moment after I did it. Which is exactly the sort of thing you don't allow yourself on Mars, because so many mistakes can kill you.

But that's the kind of place Epsun is. It's surreal. Those same nettles are completely harmless when they're freeze dried. I had been eating them the whole time and I didn't even know it.

The popular places to visit are the animal pens, and the luxury food domes with wheat and rice and beans and potatoes. They have to fence off the fruit and nut trees because otherwise people would get tempted to make off with a sample. But mostly I gave those places a miss.

I spent more time than I should have just looking at the green plants and dreaming. And finding out about the different kinds of composting and fish aquas and worm beds they have at Epsun. I can't allow myself too much of that. I have to remember that gardening is for later.

END VICTOR PETERSON

BEGIN GAIL BEESON

I think I mentioned I have a good relationship with Melanie Sherwood. She's the Team Lead for D4. We get along really well. I'd say we're friends, almost.

Of course, that's possible because I'm not anything like a rival to her. I'm completely out of the Admin maze now, and that gives me a different perspective. But I also know what she's dealing with. Sometimes Melanie confides in me a little, without any of the details of course, just for support.

There was one time she had to go to D5 for an in-person talk with the Team Lead over there, Rajiv Sharma. He's polished enough when he wants to be, but he can also be a little belligerent at times. There was some kind of politics that didn't involve me of course, but it sounded like it was going to be stressful for Melanie, so I told her I could take some leave and go along with her.

I was going to have downtime there, so I arranged to meet up with my old friend Carol Zhou. Sorry, just a moment . . . anyway, this was on short notice and she was pretty busy, so we just chatted for a bit, and then she handed me off to Franco Lambert, who had the time to show me around D5.

END GAIL BEESON

BEGIN VICTOR PETERSON

You hear all the time that there are no weapons on Mars. That's bogus. Inspections and Safety have tasers and pistols. Allie's bodyguards also. You see them carrying the tasers. You don't see the pistols.

Exploration has those, and they have rifles, drones, and grenades, too. Some of their vehicles have armor. I think there's a 30 mm cannon and a few anti-aircraft missiles somewhere. And apparently Inspections has a few rifles and drones stashed away as well.

END VICTOR PETERSON

BEGIN GAIL BEESON

D5 was totally fascinating for me. They'd started off mining ore, instead of mining ice like the other Deltas. But they'd gone from there into smelting and alloying, and some light industry as well.

"Most of the home steel comes from Gamma," Franco said. "But we make some of our own, too. It's fine for structural uses, but it won't take pressure. However, if we get hold of good scrap steel, we can make pressure vessels out of it."

"Would you trust something like that?" I asked. It's the kind of question Vic would ask.

"You came over on the shuttle, didn't you? The bus isn't till Friday. That's one of ours."

"You're serious?"

The shuttle to D5 carries a dozen people. It's different from the trucks that take two people, and the busses that take forty. The shuttle was needed because D5 is so far out of the way. Because of the ores.

"Old truck bodies. Stuff that couldn't be fixed anymore. But good steel! Give us your scrap and we'll put it on wheels.

"Wow!"

"Our Jumble team is called the Junkyard Dogs. But seriously, you can trust workmanship from D5. We're not going to cut corners."

He showed me around the fabrication areas. The place was humming like a beehive. There was a sense of excitement to it. I can't quite compare it to anything else I've seen.

The metallurgy was in a separate wing. In fact, it was organized like a wing with feathers. Each feather was a stub tunnel behind a decontamination room and an airlock. Franco called them "sheds." The sheds could be easily vented to the outside, and they were small enough you could be certain there wasn't anyone in there when you did that.

"Smelting and alloying is here, plating is over there," Franco gestured. "They use acids and cyanides and so forth. Things can go wrong, and you don't want to be in there when that happens. Mostly you set everything up, and then you watch it from out here in the decon room."

I peered through a heavy glass porthole, and looked at a computer screen, and pretended to understand what was going on. Franco made fun of me for that. Not in a mean way, you know, just gently. We had a beer at the bar, or rather, I had a glass of the lime cocktail, and we laughed about that, too. Then it was time to meet up with Melanie again.

She seemed a bit abstracted, but she said everything had turned out fine. There hadn't been any significant drama in the end.

I asked her if she thought our town might get into light industry at some point. "D5 has some good stuff going on here. It's kind of impressive."

"Um, I don't really see that as the way forward." She winced a little. "We each have our core focus. Be good at what you're good at, right?"

"Right," I said and gave her an encouraging smile.

END GAIL BEESON

BEGIN VICTOR PETERSON

On my last day, I went on a bus tour to Ex. Technically it's Chi (pronounced Khai), a letter that looks like an X. They're led by Bart Zeller, and they call themselves "Exploration." Everyone else calls them Ex.

The tour was quietly hilarious for me. There's an impressive surface structure with heavy glass windows and a big map of Mars on the wall. The map shows a smattering of Ex outpost locations, and a big red star for the Chinese base. Did I mention the windows? We don't really have windows elsewhere, except as part of the Epsun domes. What would be the point? You

can look through the Ex windows back at Alpha, a couple of miles away, and see the bits that poke up above the surface. You can look over at the Spaceport and see a few ships standing there, and an array of half-disassembled ships beyond. You can look out over a wide expanse of terrain extending away from Alpha. There's a large solar field, and a road or two heading out to other places.

There are more fancy rooms above this room, including a "situation room" where they take the VIPs and talk to them about important stuff. You can tell that the surface for some distance outside the windows has been bulldozed and graded, and a few rocks have been added to make it look like an untouched surface. That's not something that actually exists anywhere near where there are people.

And none of this is actually Ex. The real Ex is a quarter of a mile away by tunnel. It's almost completely underground, with some bunkers and arsenals on a lower level. Honestly, it's pretty small potatoes. They've never had more than a couple of platoons of Exer troops at a time. And there's no way to keep major construction a secret in a place like this. So the basic setup is common knowledge.

Ex was supposed to be about prospecting, before the Chinese landed on Mars. It shouldn't be a big deal. Some day the Europeans will get their act together and they'll land on Mars, too, but that won't happen any time soon.

The Chinese have their act together, but they're hung up on the Moon. They've been on Mars for years, but they haven't done much here, even though Mars is the obvious place to put your focus. I suspect they're suffering from dumb boss syndrome. A dumb boss never admits a mistake.

The Chinese base is even smaller than Ex. I think it's a few dozen people, and they manufacture just enough methane to travel back and forth to the Earth and Moon once in a while. Of course they would like to export methane, but there's a whole lot of scaling up that goes with that, and that doesn't seem to be happening at the moment.

But it's been a wonderful excuse for Bart Zeller and the Exers. Instead of looking for minerals, they get to dress up in black uniforms and carry rifles and keep an eye on the Chinese. They've imported armored vehicles and drones. And they've set up a few remote outposts across the planet. The outposts consist of two habs each, but resupply is difficult, so they usually only keep a couple of people there, if any.

I wonder if those black space suits maybe have an exit port to the outside so they can pee on rocks to claim territory?

Everybody makes the usual noises about cooperation and exchange, but it's fake. In fact, I understand there's been some subtle sabotage back and forth. No one's been hurt so far, that we've been told about. We'll be working with them eventually, I'm sure. I just hope they shake off the dumb territorial ideas before then. And that we do the same.

END VICTOR PETERSON

## BEGIN GAIL BEESON

Moktar and Joe and I were talking about solar panels, and why Gamma was having trouble producing home silicon. I'd heard some of this from Liam Dutton, but Moktar had looked into it a bit more.

"It's not any one thing, apparently" he said. "They say the cleanroom conditions aren't as good as on Earth. So there's dust, and that's a big no-no. There's constant vibration from the life support. Vibration is a big thing. But, in the end, the tooling is just too delicate. When things breaks, we just don't have the facilities and the tools and the expertise to fix it here. It's a combination of things."

Joe broke in. "Then what about home seals? Why is Beta still not able to make a decent seal? Don't tell me that's a delicate operation." Seals matter to Joe. He works outside as a regolith loader, like Dave Sellers did.

"No, but it's a process," Moktar said. "I don't know that much about the chemistry, but there's a lot of stuff that just works different here. Different feedstocks and so on. There's a lot of fossil-based feedstock we just don't have."

"But it's important! Why can't we seem to get there? It's taking too long. The bosses keep preening and posing, but they should get on the ball about this stuff. We can't wait forever!"

"Of course," Moktar shrugged, "you're right. I agree. What do you want me to say?"

"Patience, Joe," I said, "be a little patient." There was a silence.

Joe picked up again. "Did you know there was a Norse colony on Greenland, during the Middle Ages? Over the years, the weather got worse and worse. The ships from Iceland weren't able to reach them anymore. When the weather got better later on, the Icelanders went back. They found one dead man on Greenland. Everything was gone."

"We'll make it," I said.

"You know there's not enough transport for everyone, if things go sideways," Joe said. "The selfers will go back. We'll stay." He looked grim.

"We know that, Joe. We all know that," Moktar said. "We succeed, or we die. So we have to succeed."

"I'm sorry. I can't get it out of my head," Joe said. "I'm stuck."

"Wait here," I said, "I'll be right back."

"You've just got a case of the heebie jeebies," Moktar said. "Everybody gets them. We all get them."

"I keep working and working, but it's still there. I can't get rid of it."

"You'll get through it. But actually, I have to get going now," Moktar said. "Don't let it get you down. Keep on trucking."

"I'll be right back," I said.

I jogged over to my quarters and dug through my stuff. I'd inherited a stash of good quality seals from Dave Sellers when he died, and was keeping them to remember him by. I started to go through and pick out some for Joe. Then I decided to just give them all to him. He needs them. Dave is gone.

He was kind of grayed out when I got back.

"Why - why can't we make these things?" he asked me plaintively. "Steel, solar, seals, the whole deal. Why do they all have to come from some pale blue dot you can barely see, when the sky is clear? Why can't we make them here at home?"

"Here, Joe," I said. "For your suit and bottles."

"Where did these come from?"

"Never mind, they're yours now."

He gave me a bleak look, but he took them.

END GAIL BEESON

BEGIN VICTOR PETERSON

Tenth Landing was a thing that happened. A whole crowd of newbies showed up and filtered into the tunnels. Ninth Landing people like me were regulars now. Eighth Landing were old timers.

I was on my way back from a supply run to D4. I'd hung out with Gail, and chatted with acquaintances, and was feeling relaxed and happy. A few mine carts were coming the other way. There was a lot of dust in the air, kind of building up to a dust storm, on top of the regular mining dust. The road is irregular, and there are tall poles along the side to keep you on track. I was guessing each time where the next pole would be, but it wasn't too bad.

I was bringing back some spare parts and lubricants in pressure crates, and food in one of those unpressurized crates with the little holes that never quite keep out the dust. I'd also come across a good deal on a pint of ethanol sanitizer. There's a minor underground market most places. You can get good seals and gaskets, medication, entertainment, and better food. Though, coming from a Delta outpost, we don't have much to trade with. Do you want some red dirt with ice in it?

When I got back to the hab, I noticed the backhoe was out. The loader was hooked up and charging, but Andy should have been back, too. He could have been doing a bit extra. Sometimes it's peaceful out there, away from the hab and the noise and people. So I didn't think too much about it.

I got out the dolly and wheeled my crates into the airlock. There were three crates and I got them through into the dustroom in one cycle. Then I took off my suit, wiped everything down, and looked into the mess area.

The mess is the only space in the hab that's large enough to swing a cat. Or lift weights. The music was on loud, but the guys weren't there. Both their jackets were hung over the backs of chairs at the table. That was unusual, so I took off my jacket and hung it over the back of another chair.

Kinda obvious if someone was looking at the video feed from the mess, but the chances were they weren't.

I looked into the bunk room, but they weren't there. They wouldn't fit in the crap'n'wash or the monk's cell, which was full of junk anyway, so they could only be in the machine room.

Andy and Shack were sitting in there shirtless, in the dark except for the scattered flocks of white and blue LED lights flashing in the shadows. It was sweltering hot in the little room. A shirt was hanging over the video spycam. The batteries were flashing their reconditioning cycle, and the oxygen compressor was going full blast and making the hab shake. I hadn't even noticed. Makes it like a sauna in the machine room.

"Vic," Shack said, "siddown. Andy almost met Old Harry."

I held up a finger, backed out, and came back with the bottle of Beta juice I'd picked up in town. I opened it and handed it over to Andy. He held it up in a kind of salute, looked me in the eye, took a swig, and passed it over to Shack. Shack didn't bother saluting but just drank. I got some, and sent it around.

"Yeah, it's good to be here," Andy said. He seemed to be coming down. "Things kind of came together in a bad way," he said, and took another drink.

"You know the Lipinski on the backhoe has been broken for a while," he said. I nodded.

"Usually the peanut will get through, but with this dust I just couldn't get through. Nothing. I ran into something and the hoe got bogged."

I knew what he meant. There's something under the surface, and then you've caught an unexpected boulder, and you're stuck.

"I tried to drive it back and out, but I must have strained something. Another crack in the frame. Or maybe it's that damned door seal. But it started dumping air, and dropping quick, so I put on my hat and turned off the cabin air. Which was low anyway, because this was near end of shift."

He took a deep breath, even though this was his second telling of the story.

"So I decide to walk out. I reach back for the spare bottle. And I see it's empty." He shook his head. "You know I checked it, like I always do. I checked it no longer than three days ago. The damn gasket must have blown when there was no one there to notice it. Then I got scared."

"There should be a second spare!" Now he was getting angry. "When I was at Seven, we always had second spares in the cabin!"

I'd been at Fifteen for a full Mars year at that point, but we'd never had second spares. The loader and the hoe and the pickup each have two brackets on the back of the cabin wall, but they only have one bottle each. We keep an eye on them, but you can't conjure up equipment that isn't there.

"Okay," Andy said. "I got a grip on myself. I tried using my suit patch where I thought I saw a crack next to the door. Didn't do any good. But that burned most of the rest of the regular cabin air. Mashed the emergency call

button on my suit. No sign the peanut is getting through. And I'm eating into the suit air."

We'd been working a few miles out from the hab. The suit air would get him about halfway back, in the easy loping not-walk not-run they teach you.

"So I figure, maybe the peanut will get through if I can get part of the way back. I knew you were in town," he looked at me, "Shack was sick in his bunk, but I was hoping maybe he wasn't sleeping. Hardest thing I ever did, getting out of that backhoe, knowing there's no air. I started running, not loping. Go ahead and blame me."

Neither of us felt like blaming him.

And that's what happened. Shack was dozing, but he heard the weird little tootling of the emergency call. Tried to contact Andy. Didn't get an answer. Threw his gear on and took out the loader.

He found Andy passed out in a rut. Almost drove over him. Yanked him into the cabin, pressured up, got his hat off, slapped him around, and got him started coughing.

We sat there, sweating in the darkness with the little white and blue lights going on and off and on again, and passed the bottle around until it was finished.

Shack stirred. He's theoretically the supervisor. "So what do we do now? Report it as an incident, and let them write us up?"

"Hell no!" Andy might have been more affected by the Beta juice than Shack and me. He's the shrimp among us. But being little might have saved his life this time. He needs less oxygen. "It's not our fault. The Lipinski on the backhoe is broken. I got bogged and had to walk out. That's why we didn't make quota."

Shack shrugged. "I brought up the Lipinski a few times already. They told me the repair ticket is put in and I should shut up. Maybe they'll do something now it's costing them production. But we'll get docked either way."

"Fine."

"Think you can weld that crack closed? Or whatever it is?"

"Sure, I think," Andy said. "Unless it's the damn door seal. I'm about done putting patch goo on that thing. I don't know how long it'll hold. Or what'll break next." There was a pause.

"Congratulations, though," I said, "usually people do something dumb, and then they bump into Old Harry. Because they're not thinking about what they're doing. But if you'd gone out this way, I have to say, I really don't know what you could have done different."

"I could have brought along the Lipinski from the loader. Even though it's a pain to get the bolts loose every time." Andy paused, grimly. "And I could have checked that spare bottle at the start of the shift. I will now."

"Was talking to Kate from Thirteen," Shack muttered. "They can't get their hoe to hold pressure for a whole shift anymore. They use an extra spare,

just to work. But then the hab's got one less spare. That's not okay. Not supposed to cycle them that much, either."

"Yeah, hard on the gaskets," I said.

Andy was surprised. "You talk to her about this stuff?"

"We were in town," Shack said. He grinned, a flash in the dark.

"This is the problem, of course," I said, tapping my bare collarbone, where the peanut would be. "We should be able to talk. Without them listening."

Another pause.

"Everybody says we need two spares, maybe we'll get two spares," Andy said.

"Not safe to work without a Lipinski," Shack said in the undertone you use when you know you're not allowed. I've heard the neural nets trigger on that undertone. "Not sure what the other guys think."

"Yeah," Andy said. "It matters what the other guys think."

"On Earth," I said. "we could get our own peanuts. Cheap little thingies that talk to each other."

I hadn't originally intended to mention anything like that, here at home. I didn't need to give Strickland more to work with. But I knew Shack and Andy pretty well. They were discreet. And they were already cynical when I met them. These guys were under no illusion they were about to discover some valuable mineral and get rich on a prospector bonus. Those stories were for fools and newbies.

"They'll never let us have our own peanuts," Andy said.

"Can't bring it up right now, that's for sure." Shack weighed. "But maybe later on. If the guys agree. Kate would be up for it, I think. If everybody's thinking the same thing, and then at some point it comes out . . . There'd be trouble, for sure. But maybe not too much trouble for anyone in particular. If we're all on the same wavelength."

"Still don't think they'll let us have 'em," Andy said.

I didn't say anything.

"Maybe not," Shack said. "But maybe it could happen. Maybe it's a door to somewhere."

"Just make sure it's warm on the other side of your door. Check that pressure pin!" And Andy started laughing. He laughed loud and not caring, just letting go. He was alive.

After he settled down, I said, "I guess we should go pull out the backhoe. Make it look like we're doing something."

"I'll go with you," Shack said.

"Check that spare bottle," Andy said.

"Yep," I said.

END VICTOR PETERSON

## 8. Local Minima

BEGIN MATEO HERNANDEZ

I know you want to hear about Vic. Okay, fine. So Vic is this guy I used to talk to in a bar on Lake Street. We talked about gardening, mostly. Vic had a garden plot and he'd grow tomatoes and peppers.

He knows practical stuff, like blossom end rot on your tomatoes means you're short on calcium. He knows about NPK. Nitrogen, phosphorus, potassium. And he knows it's not just about NPK. There's magnesium, and so on. And good dirt has all kinds of living things in it. The bacteria and fungi are mostly friendly. Not always, so don't go watering from above and splashing dirt onto the leaves.

Now, some of the weeds and insects are your enemies. But they're alive, too. Sometimes you have to kill them, sure, because you want your plants to grow, but only sometimes. Don't use poisons. You should see the poisons people put on everything. The poisons don't care. But you should care.

Vic's garden plot had something to do with his fancy apartment building. The plot was located somewhere else, though. I asked at my apartment building if we had anything like that, and they laughed at me. I think I mentioned. I've got one room, the only place to sit down is on the bed, and the toilet is down the hall.

So I talked to Vic at the bar, and gradually I started to get the feeling this was a guy who knows the score. It was subtle. Kind of an attitude. He's got a real job, but he doesn't act like he's better than you. He's big and tall, but he doesn't push people around. I thought that was interesting.

And I tried to bring up politics once, one time when the snow was deep outside, and he gave me a serious look, and changed the subject over to sports with a jolt. And that left me to wonder. Did he know what I was getting at? Did he use that jolt to tell me he knew? Anyway, that one time I managed to stop digging myself deeper in the hole. I let go of politics and didn't mention it again.

But Vic gave the bar a miss for a few months afterwards, the whole winter in fact, and I thought I'd scared him off. That was too bad, because I liked talking to him. I'd talk to him about gardening or anything at all.

END MATEO HERNANDEZ

## BEGIN VICTOR PETERSON

I never did join Izzy's people.

I don't like organizations. I've always been on my own since my parents died. I couldn't tell you precisely what Izzy's network of connections does, anyway. It's not a labor organization, I can tell you that much. They work with labor because that's where they can make a difference. But I think they're more about the slender lines of communication around the globe. The underground news sites. The occasional smuggling job. Sourcing processors without back doors. The infrastructure of freedom, if you will.

I'm not about infrastructure. That's not my thing. For me, it's something else. I'm not sure if I can tell you what it is, exactly. Maybe I heard a call and knew I had to do something? The call turned out to be that I had to go to Mars. To carry the word. So that's what I did. I didn't do it for Izzy's people, and I didn't do it for labor. I went to Mars to bring the word. Afterwards, I wound up being part of those other things as well, but that was by accident. Izzy understands that. We're not doing the same thing. But we might be part of the same cause.

It's always amazed me how a real organization like hers could exist right next to a walking security disaster like Mateo. He seems to have an infallible instinct, when he's out drinking, where he'll find the one narc in the joint and get all chummy and tell them how we're going to fix the world and there will be universal benefits for everyone and real communication. And then he'll get yanked into the cop shop and punched in the kidneys, and eventually they'll let him go with another black mark on his record.

I guess it's a paean to the power of noise. If everyone's a little bit guilty, how do they know that you're more guilty? They'll always pick up enough victims to scare the others. And, you know, if that's the real purpose - keeping people scared - then who even cares if they catch the more guilty ones?

Some informers do what they do because they're getting paid. Or they're getting blackmailed by the cops. Some of them do it for free; for the feeling of power, I guess. But you have to remember that most people aren't informers.

As a rule of thumb, one in every ten people will turn you in if they get something on you. But you've got to look at it the other way around: that means nine out of ten people won't turn you in. Even if they get something on you. They might use it against you, personally. Or they might avoid you. But that's still a certain degree of solidarity. They're not automatically turning you in to the cops.

Well, why did I get in there and help Mateo, that one time? It was a risk I'd sworn I wasn't going to take. Maybe I should have walked away. But there's something about him. You can't help liking him. Despite his temper and all that. He's obviously a good person.

That's absurd, of course, from a practical point of view. From another point of view, it's not absurd at all. He's a good risk in exactly the same way that he's a bad risk. Opposite sides of the same coin. He's taken beatings before, and he'll take them again. He'll take a beating for you. You want solidarity? Go stand next to Mateo.

END VICTOR PETERSON

BEGIN MATEO HERNANDEZ

So I spooked Vic that one time at the bar on Lake Street. But he dropped in again in late spring, and I noticed him sitting by himself. On this occasion, a guy named Barron around on the other side of the bar was getting louder than the sports channel, telling his friends about how the Chinese were going to kill us all unless we kill them first.

I don't think so. Sure, the Chinese might have it worse than we do with thinking they're better than other people, but it's the same bosses here and there. Our bosses and their bosses seem to get along just fine. Of course, they both need to distract everyone at home, so our news is always full of threats and insults from China. I'm sure the Chinese news channels look the same as ours, just the other way around.

But it riles me up that guys like Barron keep falling for that crap. So to cool myself off I sat down next to Vic, who looked lonely I thought, and I told him about my herbicide problem.

Izzy's green beans didn't come up, and I'd replanted, and they came up this time but looked terrible. It's the herbicides. The neighbors spray poison all over the place, because they think they're not supposed to have anything but grass, and then the poison spray drifts around, and it hurts all the broad leaf plants. It hurts the food plants worse than the flowers, I think.

I don't remember this next part very well. I forget what Vic was telling me. But Barron and his buddies got extra loud about the Chinese, and I yelled at them to cut it out. We went back and forth a bit. The bartender told us to chill out, and they simmered down, and then they left a little while later.

But they were laying for me around the corner. I had to go to work early, so I left, and they got me. I don't remember much, really, but they were stomping me pretty good, and I have no idea if they were planning to stop at some point, or not. But then I heard Vic talking to them in that quiet voice of his, and they gave me a few more kicks and quit.

Vic must have made me tell him where Izzy's place was, because he got me over there somehow. And he showed up the next day to check on me. Izzy had put a couple of bandaids on me, laid me out on the couch, and put a blanket over me. I was still there the next evening when Vic stopped by. I had broken ribs and sprained hands and a ringing head, and a black bruise the size of a football on my right thigh. Everything hurt. Vic told me I was lucky.

He said he shouldn't have gotten involved. Said it was against his principles. Asshole. Anyway, I told Izzy my idea about Vic. She must have been able to talk to him somehow, because the two of them stayed in touch after that.

Vic didn't go back to that bar. But I went back. Oh yes, I went back. It took me a few weeks, but I went back and I looked Barron straight in the face, and he drank his beer and left me alone.

END MATEO HERNANDEZ

BEGIN VICTOR PETERSON

I was really tentative about Izzy at first. But, as I said about Mateo, there's something that comes through. I had a bad moment or two where I thought she might be a narc. But a narc doesn't believe what they're saying. Once she decided to trust me, she laid things out in a matter of fact way. When you fully understand something, it becomes very simple to you. It's that way with me. I could see it was that way with her. That much comes through, I guess?

As it happens, I wasn't in the best place myself. I might have been losing my grip. It's hard to do this on your own. I realize now that I was starting to make mistakes. So I thought about it, and I let myself trust her. Sometimes I'd go over to Izzy's place and we'd gimmick our phones and sit out back by the fire pit and just talk.

This one time, the sun was gone and the stars were starting to come out - Mars wasn't in the sky right then - and it wasn't too chilly yet but the mosquitos had quit for the season, and we sat out in the garden longer. It would have been green and colorful if the darkness hadn't been gathering in around us. We watched the flames dance and the embers glow.

"The crabapple is dying," she said, gesturing up at it. "All those dead branches. That's what I'm burning here."

"Fruit trees don't live that long. Thirty years, often."

"It's a fruit tree?" she said, surprised. "Crabapple. I guess the word apple is in there."

"They're related. Close enough to crosspollinate."

"I always liked that tree for its flowers," she said. "But I guess something with fruit is more useful. I was thinking about putting in grape vines, maybe. Or planting some seeds from an apple."

"The seeds don't go true," I said. "Same for grapes and citrus. You have to graft the varieties you want. Cloning."

"You know how to do that?"

"I learned how, once. It doesn't always take. You have to plan for the rootstock and the cuttings."

"You can still get those?"

"Yeah. Make 'em yourself. But they only propagate the big varieties commercially. Navel oranges. Honeycrisp apples. That sort of thing. There used to be thousands and thousands of them. But the old varieties are going. Or gone. Thirty years. Grapes get a hundred years, sometimes."

Izzy poked around in the embers and threw on another chunk of mostly dry wood. It flared up and started smoking.

"We really do have a paradise here," she said, through the cloud of scented smoke.

"Compared to Mars," I said. "Compared to what you have to do to survive there. Yes, Earth is a paradise. You'd think people would appreciate it more. That's one idea we could've brought back from there."

"I went swimming in the lake today," she said, and then turned her head away. "No, you were saying. About Mars?"

"I've been thinking about going," I said.

END VICTOR PETERSON

BEGIN MATEO HERNANDEZ

People ask me, "so what's it like to be an extremist?"

I know they're laughing at me. They think I'm crazy. But, somewhere underneath, they want to know - so I tell them.

It's like you wake up, and you're in a horror movie.

Now, before you wake up, you're basically fine with the way things are, right? There's people on top. There's people on the bottom. It sucks if you're on the bottom, but you can still get ahead, if you work really hard. There's a lot of pushing and shoving, but that's normal. You think it's normal. Everyone around you thinks it's normal.

But then you get a realization. You look around, and you see: hey, this is all wrong! It's all a huge mistake. There's a better way!

And then, with no warning at all, the whole theater performance goes up in smoke. The background sounds go deep. The color palette shifts radically over to one side. Everything looks different. You look at people around you, and you can suddenly see that almost all of them are evil zombies.

Yes, you too! Because you're all trying to eat each other. And you're trying to eat me. But you're not 100% evil. You're kind of a flickering zombie - maybe 99% evil and 1% good. Flickering in and out of existence. Most of the time you guys are trying to eat each other, and eat the future, and you're definitely eating the Earth. But every once in a while you flicker into something else, and you go and do something good. Who'd have thought it?

Now, you can get a realization, too. You get a choice. You can get dezombified.

You start to figure out what's right and what's wrong. Right now, I have to tell you, you've mostly got that stuff backward. You think bad is good and

good is bad. But then your light goes on, and then you see the world straight on, the way it really is.

Back off. Stop pushing people. Stop trying to eat them. Climb out of the competitive box.

Just so you know, this is going to change how you feel about all the bullshit that's going on around you. About the people you see, and what they're doing. You'll become like super aware that they want to eat you. Because they do. It's true. But it doesn't do you any good to get mad about it. Take it from me. I know. Maybe you can try to do something actually useful instead.

But don't be surprised when you wake up! The lighting changes. There's ominous chords of music swelling on the soundtrack, and something is moving around in the shadows. There's a prickling at the back of your neck. Yes, you're in a horror movie. It's a horror movie and it's completely real. But, you know, you can change the ending. You can fix it.

END MATEO HERNANDEZ

BEGIN VICTOR PETERSON

"They think on Mars they're going to be the new Ten Percent," I said. "Or maybe they even think they're going to be Zeroes. But they're going to be the Ninety Percent. They just don't know it yet."

Izzy laughed. "Yes, half my clients think they're Ten Percenters. The other half think they'll be there soon!"

"Dreaming, eh?"

"All you have to do is look at your paycheck. If it doesn't add up to two million dollars a year, forget it."

There was a crackle from the fire, and a spray of sparks went up.

"There's been an uptick in stories about miners striking it rich," I said. "Maybe recruitment is falling off."

"I doubt it," she said. "They must have plenty of applicants. Things are pretty grim down here. You know, I joke about my clients thinking they're about to become Ten Percenters. I mean, they do. But with the other half of their minds, they know they're one step away from the labor camps."

"I'm not sure the Colony Corporation really wants your clients," I said. "They would have to pay off those debts. Maybe they do. How badly do they need recruits?"

"Not that badly," she said. "Right now they can still afford to be picky. They're still getting people with good scores and normal education debt. The people I talk to are deeper in debt. Or else they're short on skills. They apply, and they get rejected. That's what I'm seeing."

We watched the fire.

"It would be risky," I said. "It wouldn't be a long life out there, likely. But if no one goes and tells them, what are their chances? They might never understand anything. They'll be like toddlers in a forest."

"Imagine giving up all this," she muttered. Then she shook her head again. "No, I don't want to discourage you from going."

"I was thinking. If it's the usual pattern, where the men take the more dangerous jobs? You might be able to learn something about the risk by counting how many men and women they're sending out. They'd send more men, to make up for the losses."

"Well, they don't exactly publish a lot of info," she said, and thought about it for a bit. "But, you know, I think we might be able to get something on the sex ratio."

END VICTOR PETERSON

BEGIN MATEO HERNANDEZ

Vic and Izzy got all serious about that stupid Mars gig. They stopped meeting in person. They both think I don't know how to keep my mouth shut, but they still asked me to carry their dumb love notes back and forth. Okay, I mean stuff like this: "Found a different reference and applied again. Could use an opinion on attached legalese." And, "Says you'll pay off anyone they hurt while investigating you. Thought that was criminal, not civil. Guess they don't care anymore." That's the sort of thing they were talking about.

I didn't like it. I know my sister can take care of herself. But what if there was something wrong with Vic? I'm the one who's supposed to get hurt. Not her. So I told Vic we had to talk, and we had to talk for serious. We agreed to go out for a walk on Sunday, and we'd sort out what we know and what we don't know. See where we are.

END MATEO HERNANDEZ

BEGIN VICTOR PETERSON

We found out the recent Landings had been about a 55 - 45 ratio of men and women. That's 1800 new colonists and 200 replacements. Now, a synod is about two Earth years, so that works out to something like a 1% annual casualty rate over a whole 10,000 person colony. That wouldn't be out of line, if an average person lives to a hundred, but of course they're sending young people, not old people. And it's a lower bound - it assumes all the dead are men.

Now that I'm over here, I know a bit more about the situation. It works out that women do about a quarter of the dangerous jobs. So half of the deaths don't carry any sex information. Meaning the real death rate is around 2%. Ice mining. New construction. Outside maintenance. Some of the

indoor jobs that deal with enclosed spaces and things that leak. Chemical and manufacturing used to be bad, but they're a lot safer now. I hope AI gets good enough so it can take over driving the loaders and backhoes. That would cut down on the mining risk quite a bit.

Add up a two percent death rate across the colony, per Earth year, across all the Landings? A quarter of everyone who has stepped on Mars is dead. But we're still here. And, counting all the new arrivals, there are over ten thousand of us.

It's worse if you do outside work, of course. Four times worse? And I think in terms of Mars years. So there's something like a 16% chance of death, per Mars year, for someone in my job. For an old hand, I mean. For a newbie in their first year? Maybe three times that number. One half chance. That sounds about right.

And that's the problem with being an ice miner and looking for another line of work. Nobody wants your job. And, if you make it past your first year, maybe you should be thinking like, you know, you're saving a newbie's life? One half chance.

END VICTOR PETERSON

BEGIN MATEO HERNANDEZ

We took a long walk outside. This was a great autumn day. At one point we left our phones somewhere on a fallen log, and went further down a wooded valley with a little creek winding down the middle of it. The leaves were mostly off the trees and down on the ground. We stopped where we couldn't see any more mickey mansions on the top of the hillsides.

Yeah, we both had pretty much the same picture. What the real world looks like. Same ideas, originally. The difference was, I'd heard all of this by word of mouth from some guys I won't mention. And later on from Izzy, who got it from her boyfriend Robert. I never saw any of this stuff written down. I just absorbed it from people. But Vic had actually seen original stuff that was written down. And he memorized some of it, apparently. From his parents.

Okay, so we both understood the world is a real place, and ideas are real things. Vic cared a lot about computers, because computers do ideas, and we do ideas, and that's how that works. Now, I'm a little fuzzy on the details about the computers, and Vic was able to help me out a bit there. But I don't think it really changes the picture.

He didn't have to tell me anything about ideas. I know about these. Ideas need to get shared, because otherwise they're useless. And they're real things. Real things in a real world. There are no ghosts in the world. Ideas are just written things or spoken or thought-about things. Words and pictures and thoughts and recordings and you name it. They're all just things, real things.

Vic didn't really believe me at first. He seemed to think I was bound to be superstitious because I didn't do fancy math in school. He kept trying to get me to say I thought there was something magic about ideas. I refused.

That's bogus. Magic and spirits are bogus, just like the idea that there's something immortal glued onto people that sticks around after they die. There isn't. The sooner you get used to that fact, the better off you're going to be. The place to do things is right here on Earth. Or on Mars, I guess.

In the real world, things happen the way they do because they have to happen that way. Like a stone that rolls down the hillside. When its support goes away, it has to roll down the hillside! Vic kept calling this sort of thing a "process," and I winced every time he did it, and I told him to cut it out already with the Old Church Latin.

You see, the guys I don't want to mention specially told me to avoid those kinds of words, like "process" and "computation" and "shared thought." You start using a lot of words like that and the AIs will filter you right out of a city's worth of gossip. Don't do it. They were very serious about that.

Finally Vic and I agreed that he was a good materialist and I was a good materialist - meaning, I guess, that we both know what's real and what's not real - and then we got bogged down in the stupid old argument about how to get along with dumb people who don't understand anything.

At some point the balance will tip. When enough of us want it to tip. Then the people whose deal is all about pushing other people around will just get ignored. There's a whole lot of garbage tied up with the system, though, and it's tough to figure out how we're supposed to let go of the garbage. But we will let go. When enough people are ready. Then the balance will tip, and we'll get out of this idiotic competition game. All of us together.

But right now, the job is to survive. Don't push people around, unless you have to, but let yourself do the things you have to do to survive. Izzy has a hard time with that. She does it, but she feels bad. She overthinks it. Vic doesn't have such a hard time. He stays calm all the time. Maybe he's an alien. I just get mad and drink and argue and get in fights.

Anyway, we let that old argument peter out the way it always does, and got ourselves unbogged again. I looked up and down the deer trail we were on, and over at the wooded hillsides beyond.

"What do you think the chances are?" Vic asked. He was looking troubled. That's not like him. He's usually so chill. I didn't know what to make of it.

"I mean," he said, "for all of us. That we'll get this sorted out. That we'll start going in the right direction, instead of the wrong direction. So it doesn't end badly."

This made no sense to me. I told him he was talking nonsense. Of course we're going to get this sorted out, I told him. The better ideas are going to win. No doubt about it at all.

I wanted to tell him he was being superstitious. Or paranoid. Like, when you imagine something is bad, but there's really nothing there. But I knew he wasn't superstitious. He was just being pessimistic. You watch things go wrong long enough, and you start to get pessimistic. You forget about all the good things that are on your side. But all you have to do is add up all the good things that are on your side, and you'll see it's inevitable. The good ideas will win.

"No, it's not inevitable," Vic said. "Do you know about local minima?" No, that wasn't anything I'd ever heard of.

He said he learned about it in the math he did for engineering. You've got a set of equations you use to describe a problem you're having in the real world, with a bunch of things that can vary and shift around. You're trying to find a solution for this set of equations, where it all works out.

He said it's like there's this ball bearing that's rolling around on a surface with a lot of hills and valleys in it. The ball wants to roll down into the lowest point it can find, and that's supposed to be the solution to your math problem.

"And this surface has a really big dip in it. A deep, deep valley. That's the global minimum. No question, that's the right answer for your problem. It's not even close. But there are also all of these other little valleys in other places on the surface. Those are the local minima. The ball can get trapped in one of those places. And when the ball is trapped like that, it stays there. Unless it gets kicked out of the hole it's in. It can't go out and explore all the other possibilities and find the real solution. It's stuck."

He looked around at the trees. "We're stuck in a local minimum. All of us. We're stuck in a nasty little hole, and I'm not sure what's going to happen to kick us out of it. We're in a bad place."

I looked down at the little stream that was winding its way through the valley we were in.

"Look at that," I said, pointing at the stream. "Sure, it can get blocked. And when that happens, it'll start to fill up. Wherever it is. It'll fill all the way up, until it turns into a great big lake, if it has to. And then it'll break through. And it'll get to the ocean anyway."

He said, "That's not how the math . . ." and then he stopped, and he looked down at the stream, and then he looked out towards where we both knew the river was, and he smiled. You don't see that from him often. "Yeah," he said, "yeah, you're right."

We'll do it. You'll see. People will do it.

END MATEO HERNANDEZ

BEGIN VICTOR PETERSON

When the worries start getting to me, and my sense of hope starts wearing thin, I have a thing I do to make myself feel better. It's probably a bad idea, but it keeps me occupied. Maybe it keeps me off worse ideas.

I try to make some kind of record. A record someone might read in the future. Hide it away where it might be found in a hundred years, or in a thousand years. Like scrolls in a cave in a cliff. Or a garbage dump in the desert.

So I get some paper and I write out the Vision of Poor Megan from memory. Or the somewhat longer Manual. Put it in a sealed container. Hide it somewhere. Inside house walls on Earth. Outside towns on Mars. Under landfills. For if all else fails.

END VICTOR PETERSON

BEGIN MATEO HERNANDEZ

When I need to know, like, how bad is this dude? Are they dangerous? Is this a threat? So, I have a way to tell, actually.

I ask myself if they're doing it to control someone else. Are they trying to control someone? That's what I look for.

You can't tell what someone is thinking. But you can watch what they do. If they're trying to control people, that's who they are. They're controllers. They're advantage-takers. They're playing the idiot game.

Well, of course, maybe they've got a bad job. Maybe their job forces them to push people around. They say they gotta make a living. They gotta cover their ass. Everyone's got an excuse. But there's still a difference, you know. You can see it. You can generally tell what someone's deal is. Once you get to know them a bit. How do they treat people? Do they treat them as equals? Do they avoid pushing people around, any more than they absolutely have to? Those are the decent ones.

I heard someone say it this way once. There's the power to do something for yourself. And then there's power over someone else, to make them do something for you. Those are two completely different things. They've got nothing to do with each other. Power To. Power Over. One's good. The other's bad.

Are you running your own life, and not running other people's lives? Then you've got that in common with people who're doing the same thing. You can talk to them. Because, of course, people don't want to talk to you if you're pushing them around. They just don't. Not for real.

It's really very simple. You won't get confused. Are they trying to control someone? Then you know. That's the key.

END MATEO HERNANDEZ

## 9. Eleventh Landing

BEGIN VICTOR PETERSON

I was at home in the hab, working my way through a bowl of gooey food crud, when the peanut on my collar started babbling at me.

"Peterson! This is Strickland. Inspections. Get your ass down here!"

I sighed. Tony Strickland had left me alone for a couple of months. Maybe he was lonely.

"Okay, sure. I'll be right down."

I got up and rapped on the bunkroom door. "Andy!"

"What?"

"I gotta go to D4. Strickland wants to see me."

"What did you do now?"

"You know they don't need a reason. They must be bored. They don't have anything to do over there."

He laughed.

"Yeah, well, don't get arrested. You know Shack doesn't like the pickup gone too long. He's on the North side right now. I'm going out as soon as the loader's charged up."

That's happened before. I've gotten arrested and locked up, and it's a pain in the butt, because then they have to arrange for someone to bring the pickup back out to Fifteen. The normal round trip is a bit under three hours, including an hour in town.

I arrived at D4, cleaned up my suit in the dustroom, and made my way to the Inspections office. Tony Strickland was sitting at the front desk, filing his fingernails. I came in and closed the door behind me.

"There you are! Lead wants to talk to you." He jerked his thumb towards a small room on his right. I knew that room. "Go in there. I'll let him know. Here, give me your peanut."

This was new. He hadn't demanded my peanut before. I went in and sat down. Strickland stayed out front and locked the door after me. I wondered what that was all about. Normally they don't use this room as a jail cell. It's just a private place to yell at you. There was a small screen on the wall. The screen had always been off, and it was off now, so I waited. It took a while.

Eventually the screen went on and there was a long thin face on it, with a blue collar and neatly brushed dark hair that was thinning on top. I half-recognized the guy. Gary Brodeur. Inspections Team Lead. He studied me for a bit.

"Peterson. You probably know me. I'm Brodeur. So, I've been learning a little about this weird cult you belong to."

"What? No, I'm not a member of any organization." That was too bland. I put more annoyance into my voice. "Other than the colony."

"Sure. It's remarkable. You're surprisingly obedient, for someone who thinks there shouldn't be any such thing as police."

"I never said that."

"It's true. We don't have any recordings of you saying anything like that. I checked, of course. But you're thinking it. You're thinking it right now."

I made a blank face, which I feel works better than a wrinkled brow. "I don't know why you think that."

"I was too slow." He seemed introspective. "It took me too long to figure out where all the chatter about secure communication was coming from."

So that's what this was, then. Little fingers of panic started to come up in my mind. Probably the end of the line for me, I thought. But I clamped down on the panic and focused my attention on what he was saying. He seemed to be using the wrong word - "secure." Speaking as a cop, shouldn't he have called it "unmonitored" or "illegal" communication?

A regular colonist, from D7 to Gamma, would have said "our own peanuts." They would have meant the whole other architecture: peer-to-peer meshing, end-to-end encryption, no unique IDs, no persisted metadata. What on Earth would be called "uncontrolled communication."

But when a cop is speaking, "secure" means their stuff. Their peanuts. Their surveillance. All the things that make them secure, and us insecure.

He looked at me. "You don't have to worry, you know. If I'd caught on earlier? Maybe. But not right now. There's a reality out there, I'm dealing with it, and you're part of it. Congratulations. Right now, I prefer to keep you as an oar in the water. Rather than take you out of the water."

I kept my mouth firmly closed.

"No, we're not going to give you unmonitored communications. That's too much power. But we might be able to find various other accommodation down the line. That's where you could be useful."

I tried to stay expressionless, but my face might have shown a hint of what I thought of that kind of "usefulness."

"There's an archaic phrase: 'with the consent of the governed.' Always thought that sounded good. As long as it doesn't get out of hand."

He left a thoughtful silence there, and continued.

"And then there's another phrase, the one about keeping your friends close, and your enemies closer. That applies to both of us now, you know. And to your handler. I think it would be to our mutual benefit to open up some new lines of communication. That's why I called you in. I want to get you on board with me talking to your girlfriend, Isabel Hernandez. Your so-called girlfriend." He smiled confidentially.

I didn't want him to think there was blackmail juice there. "She knows I'm seeing someone here."

"Oh yes. I reviewed your Monthly Minutes. There's the one where you tell her about the other woman. And then there's the one where she metaphorically throws cups and plates at you and tells you she never wants to talk to you again. She gives you the silent treatment for a couple of months. Then she calls you back and says she still cares about you."

He circled his thumb and forefinger and raised them to his lips in a chef's kiss. "Perfect. And in the drama series she comes out on the next Landing, and then there's a love triangle full of tension and excitement. Except that she doesn't have the social score to catch that ride."

"And, you know what," he looked at me with a straight face. "I don't think she wants to catch that ride. I think she's in the place she wants to be. Plugged into the things she wants to be plugged into."

"I know what that's like," he continued. "That's precisely what makes it worthwhile for me to talk to her. And for her to talk to me. How about you put in a good word for me?"

I had no way to evaluate the risk in this. How many ways could this go wrong for Izzy? He must know twenty people on Earth he could sell her to. But why would he need any evidence to sell her, anyway? Izzy would know she was talking to a cop. I decided to play along for the moment.

"Sure," I said.

"Not enthusiastic, are you?" The smile was back. "It's a win-win. I already know what you've been up to here, so nothing changes on that front. We get a bit of mutual understanding. Cut down on the surprises. Get an idea of how the other side will proceed. And we'll have channels available to us when . . . unexpected things happen."

"Okay, fine," I said. This was a lot of oil and I was a very small fish. "What do you want me to say to her?"

"Don't use my name. A lot of people get to see those Monthly Minutes. Just suggest you have a friend who'd like to talk to her. Ask if that's okay. And put the word 'hummingbird' in the message somewhere. I'll use that to identify myself. Of course, someone else could try that, too. Everything's a risk. But somehow I think you'll fly under the radar." He gave me a meaningful look.

Right then it occurred to me that the connection we were talking on, the screen in this room, would be separate from the broader colony network. And that would also be the reason why Tony Strickland had taken away my peanut when he put me in the room.

"And also, please don't mention our conversation to the Sergeant."

"Sure."

"He's discreet, but he doesn't need to know everything. Keeps him safer, too."

"Well, you could tell him to be less free with his taser, anyway."

Brodeur shrugged and lifted up his palms. "Who am I to change how policing is done? He tells me you've been uncooperative."

"You know that's not true. What was all that stuff about me being obedient?"

"For a crazy cultist. But I'll see what I can do. Remember, 'hummingbird.'"

We looked at each other for a moment, and he clicked off. I knocked on the door. Strickland let me out and gave me my peanut back.

"Thanks, Tony." He lowered his eyebrows at me when I called him Tony. But that's all he did.

And after that, as it happened, he left me alone with his taser.

END VICTOR PETERSON

BEGIN ISABEL HERNANDEZ

The Gail drama was kinda fun for me. I'm usually being practical all the time, and that has downsides. I don't get to emote very often. So I let myself pretend this was real, and like I was all worked up about it. And, you know, me and Vic? Maybe we could have been a thing - in a different universe.

Really I'm just happy for him. He knows I'm not pining away or anything. But I needed to play my part. And, if I say so myself, I didn't do a bad job at it. Not bad at all!

END ISABEL HERNANDEZ

BEGIN VICTOR PETERSON

After the talk with Brodeur I drove back to Fifteen and thought about the situation.

The man was smooth and plausible. But what did he really want?

A bonehead like Strickland would have yelled at me and hit me with the taser and sent me off to the psych cells at Alpha. I honestly doubt he would have killed me, except under orders. Brodeur, on the other hand? I'm sure he'd kill me in a microsecond if he thought it was necessary. Except it wasn't necessary, apparently. Instead, he was giving me the old oil and treating me as though I were important. If he wanted to talk to Izzy, he could always talk to Izzy. He didn't need me for that.

I figured this must be one of those networking things people do. I wouldn't know about that. The thing I do is carry ideas and try to share them. And I guess, to a point, I succeeded. Right up to the moment I got caught.

But I got caught. What does that mean? Does that mean my job is done? Am I on parole? Will I get killed if I show up on their radar again? The guy certainly seemed relaxed about letting me go. Of course he can reel me in again any time he wants to.

Why is Brodeur even bothering with us? I know Izzy is always thinking in terms of building connections. Maybe that's what he's doing. Just to stay in practise? I certainly don't see a win-win either way. Maybe he's really bothered by the reality on the ground for some reason? Maybe he thinks he can use Izzy and me to give him some kind of leverage on the situation? I'm not sure why he would think of us as leverage.

Maybe it has nothing to do with us at all, and we're just an angle that gives him an advantage in some other game he's playing, somewhere else. I'm sure he's playing a lot of different games. Or, then again, maybe I'm giving him too much credit. It could be much dumber than that. Maybe it's just random dumb stuff?

At any rate, my next Monthly Minute to Izzy was due, evidently not by accident. I included the following:

"You worry too much about me. My job is not dangerous at all. Now, you know I'm seeing someone else, but I still care about you. I want you to be happy. It's perfectly okay for you to talk to someone else, too. I have a feeling you'll meet someone else. Don't feel hung up. It's fine."

(Cough) "Excuse me, really hitting all the other emotions here. Anyway, I had a goofy dream that made me think of you. There's this hummingbird, and it's going after a flower. Because of all the flowers you have. It's hovering by the flower, first on one side, and then on the other. And it seems kind of thin and anxious to get at the nectar. Is that silly, or what? Anyway, love you. Till next time!"

I felt like a teenager writing poetry. Most of the message is right there on the surface. Just read it literally. Or figuratively, I guess. The word "goofy" was a code word that meant I was speaking freely and I wasn't under duress. But the "(Cough) Excuse me" was a start phrase. The corresponding stop phrase was "Anyway."

Any schoolkid can break the code where you read only every fifth word. Or the one where you read off the first letter of every word in a sentence. I'm sure an AI will pick up on those codes as well. And an AI will probably notice the awkwardness of the kind of text you have to write to make the first letters mean something.

It's helpful to keep the message short. And our system had one more level, because the first letters of "really hitting all the other emotions here" spell out "RHATOEH." It's a pathetically weak substitution cipher, but at least it's not plaintext. The vowels get rotated separately from the consonants to make it maybe a little less awkward. In this case, you read the vowels "AEIOU" as "OUAEI." The consonants get shifted by a different amount, like eight letters, within the set of consonants. When you decode the message, the "R" turns into a "B," the "H" turns into an "R" . . . anyway, it spells out "BRODEUR."

Well, was Brodeur going to recognize the smuggled message? I felt sure he would run my Monthly Minute through some kind of serious software that

does frequency analysis and so forth. I have no idea how good that kind of software is. So, on the one hand, it seemed certain that he would see through this. But on the other hand, the message was very short, and Izzy and I hadn't used anything like it before. It doesn't look like there is enough information present for message analysis. So how could he possibly decode it? Like anything where I don't know enough to guess at the probabilities, I put the chances at 50 - 50.

And I decided it didn't matter. The message would go through, or it wouldn't. Brodeur would see what I was doing, or he wouldn't. But I was not going to let Izzy walk into this without knowing exactly who she was dealing with.

END VICTOR PETERSON

BEGIN ISABEL HERNANDEZ

After I received Vic's coded message, I got a paper letter in the mail, signed "Hummingbird." At least, it was in my mailbox, but I don't think it was delivered by a postal worker. There was a stamp, but no postmark. The letter was a request that I reply to an electronic address using one of the encryption keys printed below.

The keys were three strings of random characters printed on the paper. They were of three different lengths, and they had short tags identifying three different encryption protocols. The first would have been recognizable to many people, the second was more obscure but familiar to me because I used it sometimes, and the third was unrecognizable even to me. However, I have ways and means. So I learned about the third protocol. And then I thought about things for a while.

It looked like this Brodeur character was trying to recruit me as a footsoldier in some kind of power struggle among his peers. A struggle among my betters. Not a place I wanted to be. Your own faction considers you expendable, and all of the other factions consider you a target.

But this was a message from Mars. Whatever kind of struggle was going on, it was happening over there. At another level, this was an opportunity to punch a second leak into the information seal between Mars and Earth. Making those kinds of connection, despite the risk involved, is pretty much my calling and mission. Vic, after all, had put his life and body into bringing the good news to Mars. I wasn't sure I could refuse a call to bring the news from Mars back to Earth.

There remained the question of whether Vic was speaking freely, despite the code words. They could have beaten those out of him. His voice sounded normal on the message, but that didn't necessarily mean anything. It could always be a deepfake AI voice. And, assuming the message was genuine, what was Vic's understanding of the situation over there? Did he have any

particular reason to think this was a good idea? Or did he merely think it wouldn't hurt?

I went around in circles about this for a while, and then decided the only way I was going to get more information was to bite. So I would bite. If it was a hook, it was a hook. I took the time that was required to spin off a couple of operations I was involved in that didn't really need me. If I got yeeted, those operations would continue.

The three encryption protocols were basically equivalent. Each of them should amount to strong encryption, and I had no reason to believe that any of them had been broken, or had any serious weaknesses. In that context, choosing the least known one carried its own message. So I picked the third protocol.

I went through a couple of levels of indirection and left an encrypted message at the specified electronic address. I wrote: "You seem to know who I am. Who are you?"

I didn't expect a real name, but this is what came back:

"This is the Inspections Lead on Mars. I'm being straightforward because I want to avoid confusion. I see an advantage in keeping an open line to your organization, and I believe that you may benefit similarly. I think one can never have too many connections, don't you? By the way, your agent here has been successful to the point that I see no profit in removing him. You're welcome. Best wishes, Gary Brodeur."

I laughed at what Vic would have thought of being described as my agent, and sent back a short response: "Okay, deal."

END ISABEL HERNANDEZ

BEGIN VICTOR PETERSON

Eleventh Landing happened, and a crowd of new people worked their way into the tunnels and bunkrooms. I was an old timer now. I had only been here for a couple of Mars years, but I barely remembered Earth, except in my dreams. Not all happy dreams. I remembered losing my parents. But I also remembered a deep quiet, and butterflies on the zinnias in the middle of greenery. I would wake up in darkness in the bunkroom, with the others snoring, and it would take me a moment to remember that greenery was only in Epsun, plus a few potted plants around Alpha.

One day after I had finished with loading, I came into the hab at nightfall, and was cleaning up in the dustroom, when Shack called out to me, "Hey, Vic, you've got to see this!"

They were in the mess, watching the news.

"Ellie Sawyer got murdered," Andy said.

It was true.

The Inspectors had arrested a self-funder named Chris Haines. The news announcer didn't bother to use polite words like "alleged." The motive

was jealousy. Haines had been dating Sawyer, and she was about to dump him, so he beat her to death with a ripplerock sculpture she had standing around in her quarters.

We got to see the ripplerock, which was broken. The camera went back to the announcer, with a picture of a mean-looking Chris Haines in the background. There were audio surveillance clips of him talking about how mad he was.

"And if you believe that," Andy said, "I've got a genuine Mars trilobite fossil to sell you."

Shack chuckled.

"It does seem very . . . professionally packaged," I said carefully. "When did this happen?"

"This morning, they say," Shack said. "They keep talking about how he's a self-funder. We're not supposed to care about this one, I guess."

"Society murder," Andy said.

"I wonder who really did it," Shack said.

"Hey, we don't need to have an argument with Checkpoint Charlie," I said, a little alarmed.

Andy shook his head. "He's busy elsewhere, I'm sure."

"They said some of what's going on," Shack went on. "Sue Lindeman's coming out of retirement to take over Admin. Temporary, like. Until they find a replacement. They mentioned Rojas. But Rojas is just going back to running Safety for now. Brodeur and Zeller are all, like, 'investigating.' It could be any of those guys."

"Not Sue," Andy said. "She's a huge nobody. No ambition at all."

"Maybe Sue is the butler here?" I suggested, getting into it. "Nobody ever suspects the butler." I figured we were just talking noise. Nobody cared what we thought, anyway.

"Or Allie Dinh," Shack said. "Talk about someone who hated Sawyer. Could have been some voodoo from Epsun. Psychedelic stuff in the food, maybe."

"Not Allie," I said. "Unless, you know, Murder on the Orient Express, and they're all in on it together."

"They all know what it comes down to," Andy said, "Somebody takes over after the Founder is gone. In the end, there can be only one. I wonder how we'll find out. Fast, or slow?"

We kept watching the coverage until late. There were some more bits of physical evidence, and a lot more dirt on Chris Haines. They sure wanted you to hate Haines.

Much later that night, Jim Bridgewater came on and delivered a eulogy for Sawyer. His timing was off, which makes me think he wasn't in on the whole thing. He seemed genuinely sad. And tired. I'd seen him when I arrived, but I hadn't realized how weak he had become. I wondered if there had been some development in his health that had precipitated events.

Ellie Sawyer had been the leading heavyweight contender for the succession. Now she was out, and the race was wide open.

END VICTOR PETERSON

BEGIN GAIL BEESON

I don't like the way Vic and the others dismiss what happened to Ellie Sawyer. They talk like she was some kind of automaton that was playing a game, and the automatic mechanism made a wrong move and got eliminated. But Ellie was a person. And at one time I looked up to her.

One time when I was in Admin they let me help with a new policy rollout. Three of us were picked to go around and talk to everyone about getting the construction and maintenance teams to fill out a big meaty questionnaire every week, about how they were feeling. We were going to go to the forepersons and get buy-in, and then we would lead discussions with the individual teams. The weekly questionnaire was going to help us to help them. I really felt it was going to make their lives better.

Later on, I kinda saw how the guys might have felt this was more of a burden than a help. But like I said, that was later. At the time I was trying to make it in Admin. And I was exhilarated. It was exciting to be part of a new initiative.

I remember Ellie briefing us in the Dawn meeting room. She was giving us pointers on the people we were going to draw into this, and she was in wonderful form. The Dawn room has dramatic lighting and it makes it look like you're on Earth as the Sun is just rising, and the light is all sideways, and there are these wave sounds like you're near a beach. Ellie was talking, and the light was slanting across her face. At that moment, I felt the future was wide open. When she died, something closed.

I guess I don't really believe Chris Haines did it. But it's not absurd to think so. It's not something to dismiss offhand like that. Guys can be violent. I wish Ellie could be alive. I wish she could be working next to me on the salt line. I think she'd learn something.

END GAIL BEESON

BEGIN VICTOR PETERSON

Events, as it turned out, were slow, not fast. To me, it looked like the contest was down to Gary Brodeur, Bart Zeller, and Manuel Rojas. A triumvirate always falls eventually, but it can be stable for a period of time. Tony Strickland and the other Inspectors acted nervous for a couple of weeks and then they settled down.

There had been a murder or two before. Or manslaughter. If the perp survived, they wound up in an Admin psych cell. There wasn't a trial that I

ever heard of. And they didn't send anyone back to Earth. There are always some people who can't take it here and want to go back, no matter what. If you got sent back to Earth for killing someone, there would be more killings around here than there are.

They put on a trial of sorts for Haines, though. Something about maritime law. Bridgewater acted as captain of the vessel. Then they shipped him back to Earth, where he got tried and convicted again, and he's currently sitting in a prison over there.

END VICTOR PETERSON

BEGIN ISABEL HERNANDEZ

The Sawyer murder was reported extensively on Earth. I mean, it was shaped and massaged and manicured and reported. And they tried to pull me into the massage work. Gary Brodeur sent me a thing that looked like a press release. It was about Ellie Sawyer's real estate holdings on Mars.

The Corporation owns most of the infrastructure, but some things are owned by self-funders on Mars, or by Earth interests. For example, some Earth owners kept their fingers on the most recent shipment of solar panels. The idea is that they're selling the power to the colonists, while retaining ownership of the panels themselves. Earth investors also own a small portion of the residential rooms and bunkrooms on Mars.

However, almost 60% of the residential space was owned by self-funders living on Mars. They rent it out, of course. Half of that had been Ellie Sawyer's real estate empire. Since Sawyer's heirs were on Earth, her death had increased Earth's portion of the residential property on Mars from 5% to something like 35%. This breached some kind of limit on off-planet ownership of Mars assets, and "there were calls" for Sawyer's heirs to sell some of this property to Mars residents.

I couldn't tell if this information was supposed to help the Mars self-funders, if it was supposed to reassure Earth investors, or if it was supposed to accomplish some different purpose altogether. In any case, Brodeur was plainly exploring whether he could use me to leak news on Earth. He provided additional sources I could use to verify some of the claims. And he requested I not use his name.

I felt confident that his press release would include a few subtle inaccuracies and unique details that Brodeur would use to track which news outlets I was reaching. That wasn't great from my point of view. So I decided to spike it.

However, I didn't want to discourage him from sending me other, perhaps more useful, messages in the future. So I wrote back a very polite note to the effect that I appreciated his confidence in me, but that he would understand I couldn't use everything I received, and that I would look forward with eagerness to any other communications he might be able to send me.

Please believe, sir, in the sincere expression of my most distinguished sentiments.

Brodeur didn't reply directly, but I did see the real estate story in other news outlets soon afterwards. You can never have too many connections - I can agree with him about that.

END ISABEL HERNANDEZ

## 10. Rate Hike

BEGIN GAIL BEESON

I had been looking forward to a cup of tea and a cheery chat in the cafeteria when I got off shift. I was passing the tunnel that goes to my quarters, stripping off my respirator, when I ran into Joe. He looked really disturbed, his eyes were wide, and he started trying to tell me something. "The Bank . . ." he got out. Then he stopped, unable to go on. I had a rush that this was a major disaster, like the time part of D6 collapsed. But somehow I knew it wasn't that, exactly.

He gestured down the hall towards the Commons, where there were news screens. I hurried on, and found Soph looking up at one. She glanced at me, and right through me, as if I were a ghost. I tried to see what she was looking at on the screen. The announcer was pale, and speaking very slowly and clearly. There was a number displayed behind her. I got it.

I wanted to sit down on the floor, but I caught myself, and kept my legs.

I don't know if I mentioned before, my passage loan was six percent? That was the early-bird rate. Vic's was eight percent. That's adjustable. The Bank of Mars had adjusted it.

Both our loans were now twelve percent.

END GAIL BEESON

BEGIN VICTOR PETERSON

"They're not going to like this," Shack said, grimly. His shoulders were stiff. Andy was working his face in helpless rage. I'd known this was coming, myself, but even so there was an empty hole where the pit of my stomach should be. We'd all known this was coming, at some level, but now it was here.

END VICTOR PETERSON

BEGIN GAIL BEESON

Six percent, twelve percent, what's the difference? Oh, nothing. Just the difference between "possible" and "not possible." Like the difference between life and death. We were only barely hanging in there before.

You try to forget your passage loan, but it's always there in the back of your mind. We were supposed to be able to pay it off. Get debt-free. People

made their plans for anything from five to ten Mars years. But everything is more expensive than it seems at first. And then there are unexpected things. Something breaks under your hands and you get charged for it. You say the wrong thing and get fined. Fees and taxes keep going up. You're not able to pay down your passage debt at the rate you expected. Some people owe more than when they landed. Interest and penalties keep adding up.

You've been getting along on a vague hope that at some point things will turn in your favor. Pay will go up. You'll get a bonus, and your money problems will be over. Or maybe the colony will finally become self-sufficient, and thousands of new colonists will start to pour in. You'll have an edge on the newbies. You'll end up owning a business, owning a home, hiring newbies to work for you.

You left Earth because you yearned to breathe free. But now . . . there's no way to do it. No way at all. No matter what you do.

Finance has this rule of 72. It's a rule of thumb about the doubling time of a debt under compound interest. Seventy-two is the number of years times the interest rate. Close enough. Those are Earth years, because finance is still tied to Earth. So, just remember, six times twelve is 72. And twelve times six is 72.

Any part of a debt you don't pay down will double in twelve years. And that's if the interest is six percent. But what if the rate is twelve percent? Then the debt will double in six years. That's only three Mars years, you know. And it will keep on doubling. Twice the original debt. Four times. Eight, sixteen, thirty-two, sixty-four. One hundred and twenty-eight times the original debt - and that's after only twenty-one Mars years! It just goes completely bonkers like that.

So, you know, any little bit you fall behind on paying your passage debt?

You are not going to catch up. Ever. Ever!

END GAIL BEESON

BEGIN VICTOR PETERSON

"I'm going to try calling Kate," Shack said. "See what she thinks." My eyebrows went up. Shack usually keeps his head down and avoids trouble. He tapped his peanut. "Hey kid . . . yeah, we heard."

"I wonder what's on the Lipinski," Andy said. He flipped on the radio and skipped around a bit. There was a lot of talk on the Delta channels. And the usual amount of static.

Shack stopped talking, and looked up. "They've gone and turned off the peanuts." He pulled the peanut off his collar and shook it, but it stayed dead.

"Hmm," Andy said. "Well, I guess they can't turn off the ionosphere." He scrolled through the Alpha frequencies, which were a mishmash of static. "They can jam stations, though. It looks like."

"Here, let me try Thirteen," Shack came over and pushed a button. "Thirteen. Fifteen," he said into the microphone.

"Yeah, I'm here," Kate's voice came crackling over the speaker. "I just spoke to Tom at Four. He says there's no Lipinski talk at all coming from D4. Maybe they grabbed all the Lipinskis? Tom's going to drive in and see if he can tell us what's going on there."

"Sure, let us know," Shack said. The news volume in the background was turned down low, but the announcer was still droning on, enunciating very clearly and lifelessly.

END VICTOR PETERSON

BEGIN GAIL BEESON

I continued towards the cafeteria, but I got bogged down almost immediately, trying to weave my way through the people who were milling around on Shop Row. Normally, they'd have been going somewhere, but now they were just standing there, looking dazed. Or talking vacant-eyed into their peanuts.

Abruptly, the guy in front of me - Moktar, it was - looked up, his eyes cleared, and he cursed. For a moment, I thought he was cursing me. But then he yanked the peanut off his collar and said, "they've turned them off!" I realized I had been about to call Vic, tapped my peanut, and discovered it was dead.

The noise level on Shop Row went up. Now people were talking to each other. They started to cohere into groups. I gave up trying to reach the cafeteria. Moktar pulled a chair out of a shop, stood on it, and started a speech about how "they can't do this!"

Tony Strickland and one of his Inspectors, Steve, erupted out of their office, which is just down the row, and made for Moktar. He tried to dodge them, but they hit him with a taser and pulled him down and dragged him into the office. There were calls of "Hey!" and "Don't do that!"

Then Tony got on the loudspeakers and demanded that everyone go to their quarters. A few people went. But, for just about the first time ever, most people ignored him and didn't pay any attention and kept on talking. After a while, all three Inspectors surged out of the office and forced everyone into the Jumble Court. I remember one of them complaining that his taser was out of charge. They used sticks, too.

I wound up high in the bleacher seats. There were at least a couple hundred people in there with me. The Inspectors locked the exits, and occasionally opened them so they could shove more people in. That didn't stop people from talking. They kept going. Pretty early on we had to designate one corner behind the seats as the latrine. Yes, it got awful stinky.

I've always had a good strong voice, and I was high up where everyone could see me, so I thought I'd take a shot at getting them to talk one at a time.

"Hey, let's take turns! Raise your hand for a turn. You - Dan - why don't you go first?" Dan Heilman had cornered someone and was going on quickly and with full animation, but when I caught his eye and pointed at him he climbed up on a seat and cleared his throat.

"Talk loud, so we can all hear you," I said. I didn't need to tell Dan that. But this was for the others. For the ones who weren't used to saying anything out loud.

"We need more pay," Dan said, and when he spoke they could hear him all the way in the back. "If we're supposed to make loan payments like that, they have to give us the means to do it. It has to add up. Otherwise there's no future."

"And no more funny stuff with the fines!" Soph yelled from the back.

"Hold it, take your turn," I said. "Raise your hand and we'll go around. Okay, Soph, go ahead."

END GAIL BEESON

BEGIN VICTOR PETERSON

We took turns monitoring the Lipinski overnight. We couldn't raise Outposts Eight or Eleven at first, but it turned out they were all right, just not talking to us. Nine drove over and checked on them. Tom from Four had driven in to D4, but the dustroom door wouldn't open for him. So we figured we were being locked out. He went back to Outpost Four, and they started unbolting the Lipinskis from their vehicles and hiding them in the solar field and beyond.

At two in the morning, Four reported they had visitors.

"Looks like Steve from Inspections, and, get this, Scared Timmy! Hilarious. Except we didn't get the Lipinski in the hab stowed. We might lose this one. The others are safe. Signing off, Four."

It was several hours later that Steve and Timmy showed up at our place, still in the dark. They'd only managed to confiscate a total of seven or eight Lipinskis. Fourteen warned us that they were on their way, and Andy went out in the pickup, taking our hab comms with him, before they reached us.

They were tired and dejected by this time, and they tracked a lot of dust into the hab, but there weren't any Lipinskis to be had at our outpost. Shack and I just shrugged and offered them tea. Steve wanted to keep moving, but Scared Timmy was hitting peak clumsy in his suit, and needed a break. It was comical to watch him.

We detained them for a little while. By the time they got back outside again, Andy had come by, swiped the Lipinskis out of the back of their pickup, and disappeared. I doubt they even noticed until later.

END VICTOR PETERSON

BEGIN GAIL BEESON

Tony kept us in the Jumble Court overnight. People took turns sleeping on the floor. The latrine corner got very bad. At one point Tony said he'd release people if they'd agree to go to their quarters. He didn't get many takers. It felt like we had something to settle first. And we were constituted to do it.

In the morning we settled on a list of ideas, and picked Dan and me to do the talking. Point One was that we'd all get released together, and Moktar too. No picking and choosing. Dan and I talked to Tony for a long time, and we agreed that those of us who had shift would go to work, and anyone else would at least stop by their quarters before going anywhere else. So Tony could claim that we'd backed down. On the other hand, we'd made him do something for us.

Tony didn't like it, but he let Moktar go, along with three other people he had stuffed into the drunk tank. I guess he didn't actually want them there, either. We made clear that we would continue to meet and talk to each other. Our final item was a call for volunteers to get out a maintenance truck and clean up the latrine corner. That part was easy. It had been bothering all of us. Then we filed out of the Jumble Court, all of us together, and went to work.

END GAIL BEESON

BEGIN VICTOR PETERSON

The next day we started to get seriously worried about what was happening inside D4. The mine carts showed up as usual, and we loaded them. We wrote notes and sent them in, attached to the sensor mast, asking what was happening, and letting them know that we'd been able to hang on to our Lipinskis.

Outpost Four kept one person in an inconspicuous location watching D4, just in case the Inspectors tried another round of confiscations. The rest of us worked with one ear on the emergency frequency.

END VICTOR PETERSON

BEGIN GAIL BEESON

Melanie Sherwood wasn't at home, or in her office, when Dan and I stopped by. We went over to Inspections, and Tony Strickland reluctantly agreed that she might be camping with them.

"She'll want to talk to me," I said.

"I doubt it," Tony said.

"Ask her."

He thought about it. "I guess." And went back into the office. I asked Dan to let me start the talking.

"All right, come on in," Tony said, holding the door open.

Melanie was sitting behind Tony's desk. I guess she'd taken over the desk. We came in and sat down across from her. Tony and Steve stood up against the wall. They only had one other decent sized room behind that room, plus the drunk tank and a few jail cells and toilets. I wondered who had slept in the jail cells.

"Melanie! How are you. Are you okay?" I asked.

"Yes, I'm fine. How about you? I heard you were in the Jumble Court. Did you get any sleep there?"

"Not much. But I'm okay. We're all fine."

"It's been a bit uncomfortable in here, too," she said.

"I'm sorry you feel you have to stay here," I said. "Nobody's being violent or anything out there, you know. You'd be safe at home."

"I know. I know. I just need . . . independence," she said, spreading her hands out on the desk. She looked questioningly at Dan, sitting next to me.

"Umm, so, " I said. "Dan and I got elected to talk to you."

She sighed.

"We're supposed to tell you what they're saying."

"What are they saying?"

"Well, about the rate increase. It can't be done. It either has to go back to the old rates, or we have to get paid more. Enough to pay for it. Because we don't have the money."

"But they talked about that on the news," Melanie protested. "It's temporary. You can make it up later. The financial condition of the colony . . ."

"Yes, I know. But, you see, that's the other thing. They don't believe any of that. They think it's fake. They want to see the financials, all the financials, or they won't believe anything. They're saying it's all bogus."

"You can't possibly believe that!"

"It's not what I think, Melanie. This isn't what I think. It's what they think. I'm just saying what they told me to tell you."

There was a strained silence.

"You know we can't show them the financials. That's completely impossible."

"I know," I said. "I know that. But it's part of the problem. It's a big part of the problem. That they don't believe it. Maybe it's impossible. But there're a lot of things here that are impossible. Or seem impossible. We have to do something. Despite that. Something."

There was another silence.

"What if we just don't . . . do anything?" she asked, in a small voice.

I looked at her with all the this-is-serious I could get across to her. "You weren't there last night. That isn't going to work. We have to do something. We just have to."

"I'm not dismissing you," she said, "it's just that I don't see how . . . well . . . What's going to happen?"

"I don't think anyone knows that," I said. The only sound was the four of us in the room breathing.

Dan spoke up. "There are other points. The surveillance isn't okay. We need our own peanuts."

Tony made a disgusted sound in his throat.

Dan continued. "Fines and charges are out of control. Those need to get reviewed by regular colonists. Only with our permission."

"Who do you think . . ." Tony started, but Dan cut him off. Dan, like me, has a fine resonant voice.

"We can cut off the plumbing," he said looking straight at Tony. "We can cut off the air. We're not going to do those things, but you need to know that we can. You're going to take us seriously. You're not going to talk down to us. I'm finished."

Tony was sputtering, but I got in between the two of them. "Enough Dan. There was no need for that." There was, though, and I'm glad he said it. "We're going to solve this together. Keep it cool. Keep it collected. It won't do us any good to blow up at each other." But it was a fact that the Inspectors and the selfers didn't know how to operate this town. The regular colonists did. It was good to remember that.

Melanie caught Tony's eye, and Tony decided to skip whatever it was he had been going to say. It looked like Dan was going to play the bad cop. So I guess that made me the good cop.

"This is extremely unacceptable," Melanie said, looking at me, and not at Dan. "Admin and the Team Leads will make these decisions."

I held her gaze. "Of course you will. Please let me bring you the information you need." I felt sorry for her. "Right now it all looks impossible. I know it does. But we'll find a way through this. I know we will."

"We will," she said, and looked down at the table top.

END GAIL BEESON

BEGIN VICTOR PETERSON

About mid-morning we started getting written notes back on the mine carts. D4 had lost their Lipinskis and wanted some. We sent them a few on the carts. We didn't produce quota that day. We kept driving back to the outposts to top off the vehicles with air and charge, since we might have to run around and play games at a moment's notice.

By the afternoon, it became clear the regular colonists had gotten the situation under control. That evening I was happy to hear Gail's voice on the Lipinski, recounting the status of negotiations at D4, and reaching out to representatives from the other towns.

END VICTOR PETERSON

BEGIN GAIL BEESON

Our regular news announcer disappeared the next day, and the announcements were taken over by a very young man with odd mannerisms. Sandra, who runs the cafeteria, recognized him as Anton Jankowski, a selfer nepo baby from Alpha. The news was too important to be left to the professionals now. So Sandra got the job of following what they said on the little screen and letting us know if anything important came up. I have no idea how she did that while also making the hot food happen.

They showed mostly canned segments from Earth, where everything was apparently even worse than usual. Lots of death and disaster over there. I guess that's supposed to mean that things are great here.

They showed an address from Jim Bridgewater, talking very seriously and somewhat haltingly, about how we were all part of this Mars adventure together, and how we would all reap its rewards together. I wondered if he was actually that far out of touch? Maybe he couldn't see any other possibilities, either.

Anton also did a ridiculous piece about how people were eager and enthusiastic and volunteering to work extra hours, and how this was going to relieve the financial pressure on the colony - with the clumsy implication that this would somehow make the interest rate increase get rolled back. It was embarrassing. That was how we came around to realizing that production at Alpha was actually stopped.

We couldn't reach Alpha at first, because of the jamming. Beta started running couriers over, and eventually they were able to tell us what was going on there. At one point they had to break down a dustroom door to get in.

Alpha was pretty excited. There had been more drama there, and people had been hurt. Fortunately nobody had been killed. They had gone through multiple rounds of committee formation, election of speakers, arrest of speakers, election of new speakers, and so on.

Their production was completely shut down. The selfers had retreated into Bridgetown. Once or twice a few selfers came out and tried to start up a production line. They didn't have a clue what they were doing, so that went nowhere.

Traffic from around the other towns was quite informative. Gamma and some of the Deltas had lost their Lipinskis, and it took them a while to get back on the air and figure out what everyone else was doing. On the other hand, D5 had actually ejected their Team Lead and Inspectors and sent them

back to Alpha. The speakers from Beta sounded very, very angry. It was clear that Beta had completely shut down production as well. In contrast, Epsun sounded eerily calm. They reported productive discussions on the shape and process of constitutional reform.

END GAIL BEESON

BEGIN VICTOR PETERSON

You have to understand how hard this hit people. A critical mass of colonists abruptly realized they were never going to pay back their passage loans. They suddenly understood that those loans were not meant to be paid back. They were meant to bleed the colonists dry, forever. Just like on Earth.

You see, that's exactly what we came to Mars to get away from. Now Mars would be wealthy, and we would get none of it. Not one red cent. And the owners had known about it from the start.

The dream was dead. Dead of murder. Cold-blooded, premeditated murder. Deliberate, long-planned, carefully-organized, bought-and-paid-for murder.

The Bank had to do it, of course. I knew that much, even if the colonists didn't. The Bank didn't have a choice. They couldn't meet their own loan payments to their creditors back on Earth. All those shiploads coming in, not enough shiploads going out. And we were so close to turning the tide. But the time ran through our fingers, it ran out, and then we ran into a brick wall: the interest catastrophe.

You might get away with murdering a person. But murder a dream . . . !

Worse, the murder was done by the exact same people who had led us to Mars. They had led us here on the strength of this dream, and then they had murdered our future. While continuing to rely on us - on us! - to carry out their plans.

I had a feeling it wasn't going to be quite that easy.

END VICTOR PETERSON

BEGIN GAIL BEESON

I think I mentioned that Manuel Rojas was a former boyfriend of mine. He was effectively running Admin at Alpha at this time. But knowing him personally didn't really help me understand what he was doing. For some reason Admin continued to behave especially intransigently over there, and the production lines at Alpha stayed shut down. Bart Zeller brought in his Exer personnel and they tried to start up the lines again. That was a terrible idea, because these guys had no clue what they were doing, and they basically broke everything they touched.

If you're on Earth, you might have heard claims of "sabotage." That's the opposite of what actually happened here. It's sensitive equipment, and you can't run it unless someone takes the time and shows you how to do it correctly. The Exers did so much damage that they needed to blame someone. So they called it "sabotage." And that's the truth of the matter.

After that happened, the regular colonists got so disgusted that they offered to step in and do some repairs and run the lines at a basic level. Competent people would provide at least some output at Alpha. This was the point where we started to experiment with controlling the production level. For example: "Today is still a 40% day, but tomorrow we will do 10% because of the arrests you did today."

I'm afraid, though, that this may have given Bart Zeller the idea he could get his way by breaking things.

END GAIL BEESON

BEGIN VICTOR PETERSON

Some people went crazy. There were suicides. We heard that one guy at Beta took a steel pipe and walked out into a solar field and started smashing panels. He didn't bother to bring air for the walk back. They found him in the middle of half an acre of wrecked solar panels.

Now, to be clear, that's not sabotage. That's just insanity. Don't believe it when they call it sabotage. There wasn't any sabotage. You would in fact have to be insane to break our machines on purpose. You really would. We need them way too much.

END VICTOR PETERSON

BEGIN GAIL BEESON

Admin kept turning our peanuts on and off. They must have wanted to know what was going on, too. We mostly keep the peanuts in our pockets now, muffled in a sock so they don't hear too much, but we can still tell if somebody is trying to call us. Or else we keep the thing wrapped in a scrap of conductive mylar, if we want to cut off the signal for a while. They still remember what they hear, though, so we have to make sure to leave them outside the room if we're discussing anything sensitive.

The peanuts also behaved inconsistently when people wanted to go through a dustroom door, or scan for a purchase. For example, my peanut wouldn't scan for purchases. Possibly because I was speaking for D4? Sandra in the cafeteria didn't care and gave me free meals. She drew the line at free drinks, however. Other people filled in with the drinks, though, so I did okay.

The original safety reasons for needing the Lipinskis were still the same they had been before. Nothing had changed there. At least in the Deltas, we prevailed on the Inspectors to stop trying to confiscate them. Vic says the Lipinskis and peanuts definitely help the miners work. Their production went back up to quota. In fact, we asked them to push hard on the ice, and go beyond quota, for reasons I will explain later. I put in extra hours on the salt line as well.

At one point, Admin attempted to put a Lipinski jammer into the Deltas, but they didn't have outdoor-handy people to babysit it. The engineers tell me it's relatively easy to find the direction of a signal like that. So we triangulated in on it and found it, and now we have a jammer of our own.

Of course we know they've been recording everything they can get their microphones on. So far they haven't done much with it except threaten future punishments. We interfere a bit by shifting our frequencies and callsigns, so there's some plausible deniability about who said what on a Lipinski.

We use artificial voices and digital scramblers for sensitive things. In general, though, we've been sticking to plain voice and standard frequencies. We want as many people to hear us as possible. Admin eventually gave up trying to jam Alpha. It wasn't doing them much good anymore at that point.

END GAIL BEESON

BEGIN VICTOR PETERSON

People tried to tell Earth about the situation and had their Monthly Minutes gulped. Silence. Mine reached Izzy, though. Presumably because I only talked about the cactus I was trying to raise in the outpost hab.

I assume Gary Brodeur ran my message through his analysis software, but I have no idea whether he saw anything. I used a different start-stop phrase and spelled out "INTHIKETWELVE." I also used a code word that meant "major unrest short of war."

Izzy was able to use this info, especially the detail about the interest rate, and she pushed it out through various foreign news outlets. So Admin wasn't able to hush the matter up entirely on the Earth end. There were other signs and symptoms as well. Wealthy creditors don't like to suffer in silence. Enough people read between the lines and gave them a hard time that the Corporation had to respond to some questions.

They were forced to admit that there was some kind of trouble on Mars, and that it was due to an interest rate increase. They made claims about sabotage and rioting and so on. There was even something approaching a discussion of the situation in the domestic media in the US.

END VICTOR PETERSON

## 11. The Pause

BEGIN VICTOR PETERSON

I was back in town for a visit.

"We're going to put everything on pause," Gail told me. "Or most things, anyway. There just doesn't seem to be any other way to get through to them."

"I thought that might happen."

"I didn't. Honestly, I didn't think we'd get to this point. I figured Admin would be reasonable, and after everyone got over being mad, we would talk to each other and start up production again at Alpha, and all the rest. I really thought we would get through to them. That . . . they would work with us honestly and try to find some kind of solution."

"Didn't seem very likely to me."

"So now the Committees are going to vote about going on Pause," she said. "I'm not sure how we're going to collect the votes from you guys. We'll have to drive around the outposts. Unless we can do it over the Lipinskis?"

"This isn't new, you know," I said. "It's kind of forgotten history. But it's happened before."

"What has?"

"Committees and so on. A Committee used to be called a union."

"I thought a union was a criminal gang," she said.

"That's what they told you."

"But a Committee is just all the regular colonists in a town. Like the D4 Committee."

"That's what a union was. Everybody who worked at a company, or in the same line of work. So you could refuse to do the work, and make it stick. It was perfectly legal."

"Are you serious? That's strange. I have to say, it doesn't sound very legal to me. But . . . well, I guess that's kind of the same thing we're doing now, isn't it? With the Pause?"

"We're rediscovering this stuff. The Pause is what used to be called a strike."

"But, no, wait, I thought a strike was when people went and broke everything, wasn't it?"

"That's what they told you. But it wasn't. It was a pause."

She digested that.

"Well, then, what do you call a Committee Co-Chair? Like Dan and me?"

"Oh, those are just regular criminals," I said, and waited a moment before I grinned, and she thwacked me with the back of her hand.

END VICTOR PETERSON

BEGIN GAIL BEESON

A drone showed up and flew part of the way along when I rode the ice truck to Alpha. The driver said that had been happening more often. I ducked down in the cab and stayed down so it wouldn't see me; it seemed better that way, since I was on my way to see the other Committee Chairs. Dan was staying home and minding the shop at D4.

Olivia Grasso and Liam Dutton met me in the dustroom, and they let in me through the door. My peanut stayed tightly wrapped in conductive mylar the whole time. So as far as the peanuts know, I never went to Alpha.

Liam had been elected Co-Chair at Gamma. Of course we had been friends going back to the old days, when the colony was a lot smaller than it is now. I was happy to see him again, and got a big soft bear hug.

Olivia always looks like she just bit into something sour, but she's completely frank and unselfish and super organized, and that is why she keeps getting elected to things like this. She'd been arrested and released three times, and each time she came back to some new role with the Committees.

It was only on the most recent iteration that they'd gotten themselves together as a single Committee at Alpha. Olivia was Co-Chair, together with Rafi Eisenberg, who was on Propellant. Originally, Propellant and Creative considered themselves different and better, so they wanted to stay separate as their own Committees. Eventually they came around in their thinking and decided they would be better off joining up with the rest of Alpha.

Rafi and the others at Alpha assumed that we would be forming a single large Committee at this meeting. It would include all of the regular colonists, and there would be representatives in each of the towns. I went in at first thinking the same thing. However, there were rumblings about this question, and the rumblings grew louder until they were impossible to ignore.

For one thing, the colonists from Alpha kept referring to us as the "outlying towns." We think of ourselves as the "working towns." That by itself wasn't so important. But there was also general uneasiness about the fact that Alpha has close to half the population. If it came down to straight voting, they could swing decisions by themselves. The towns wouldn't have a voice. That made a consensus approach more attractive to us.

Olivia argued against the consensus approach. If we insisted on consensus for decisions, we would risk paralysis at times when we needed decisive action. She pointed out that the passage loan situation put us all in the same boat, and that our common interests greatly outweighed our differences. Obviously, she'd had a lot of practise making these arguments when she was getting Propellant and Creative on board.

But Franco Lambert from D5 wasn't having any of it.

"Decisive action, my foot! You haven't done anything about the occupiers. We have. We kicked them out. We need local autonomy precisely so we can make the decisions we need to make, when we need to make them. We can't afford to wait for you bozos to get your act together."

Liam was milder, but his point was similar.

"At Gamma, we got cut off from everyone. Until we managed to smuggle in a few Lipinskis. That could happen again. It's nice to be able to meet everyone in person like this, but we can't count on it. And, no offense, but we don't actually know you guys as well as we know the people in our own towns. Exchanging messages is fine, but it's not the same as discussing something face to face. We're going to need that."

The communications issue carried the day, and we postponed the idea of forming a single Committee. In the meantime we would have to come up with decisions everyone could broadly agree on.

END GAIL BEESON

BEGIN VICTOR PETERSON

What happens when debts can't be paid?

On Earth, the next step is asset seizure. Creditors pour across the landscape, looting and burning and breaking apart anything they can sell for more money somewhere else. Meet the new boss, same as the old boss. And the cycle of debt and interest starts all over again from scratch.

On Mars, it's more complicated. Who are you going to sell that solar field to? The Chinese? But the owners and self-funders can't imagine any alternative to the current system. It's the circle of life under which they made their own money. The idea of cancelling debts doesn't compute. It's not how their world works.

So, then, what will actually happen next? Will Earth cut us off? Will public funding come to the rescue? Will we be choked down to a trickle of supplies, and suffocate slowly?

I know people on Earth will say we should simply tighten our belts and live within our means. That's what I would have said when I was on Earth. Hold off sending any new colonists. Use what you have. Learn to do more with less.

But they don't know how tight our belts are already. They don't know how close we are to the edge. Don't get confused and think the Pause means there's a lot of slack in the system. This is us holding our breath. We can hold our breath for a Mars year, maybe. But not forever.

We'll get to the breakeven point. But we're not there. We'll get to sustainable. But we're not there. We're close, but if Earth cuts us off, we won't make it.

For creditors on Earth, it'll mean taking a haircut on a bad loan. For us . . . just look outside.

END VICTOR PETERSON

BEGIN GAIL BEESON

I wanted to meet up with Alicia Phillips, but I didn't want to go through the rigmarole of getting invited and checking in through the Bridgetown gates. I needed my peanut to stay firmly wrapped in mylar and socks in my pocket.

So I sent her a paper note through a friend, and she came out of Bridgetown to talk to me. We met at a teahouse just off Midway. Alicia was bright and effervescent and wearing the latest clothes from Earth. She gave me a hug. "I hear you're speaking for D4 now - that's so exciting!"

I held a finger to my lips and handed her a heavy gray sock for her peanut. She looked confused for a moment, and then her face lit up. "Oh, we don't like being surveilled, either. A lot of us are taking the opportunity and having an offline vacation." She took out an elegant zipper pouch with a metallic sheen and showed me how her peanut was neatly nestled inside. It looked better muffled than in my wad of socks.

"We have Committees, too, you know," she said. "I started a Free Colonist Committee." Her eyes shone.

"I knew you would," I said. I pointed up at the ceiling to remind her there might be microphones in the teahouse, too, and lowered my voice to a whisper. "But you know, this is really a big deal for us. You guys aren't facing the same thing we are."

"I know. That's true. But I think we can help. There are things we can do. For one thing, I'm doing my best to keep a sympathetic and constructive tone going, up in Bridgetown. There are a lot of free colonists, I mean self-funders, who really hate the regulars. And the Committees, and the Pause, and everything. You know Sue Lindeman, of course."

"I know Sue Lindeman."

"It's not her, personally, so much. But she's the figurehead, obviously. First Landing. She's retired from Admin again. She doesn't have a role over there anymore, but in Bridgetown they've made her Chair of the Management and Discipline Committee."

"You're serious?"

"Yes, they're really calling it that. I wish it were a joke. Maybe it will be a joke? For now, it's a real thing! So I'm trying to put a more constructive tone into the air. What can we do that will work for all of us? That sort of thing. So people don't just hear resentment and the anger all the time."

"Do you have any ideas?"

"What to do? I don't know. Couldn't we tide things over with a moratorium, where people don't have to pay the extra interest for some period of time?"

"No, that won't do, unfortunately" I said. "That doesn't stop the interest. It just delays the payments. The interest keeps building up anyway. And that's the problem. That's what blocks the future for us."

"So nothing temporary will work, eh?" For a moment Alicia looked her age. "I was afraid of that."

"It comes down to either fixing the interest rate, or the rate of pay." Then I added, "Or debt cancellation."

She looked shocked for a second. Then the shock passed, and she thought it over. "Yes, cancellation isn't going to fly in Bridgetown. Even if Earth cancelled our debts as well." She mulled it some more. "They've got this property rights thing in the Mars constitution. That's pretty important. Debts are property. You see, if someone got their passage loan cancelled, that means someone else could come and take away my property, like the rooms I own in Bridgetown. That's how people are going to think about it. That's going to make them very unhappy."

"But that's not the same thing at all!"

"People will think it is, though." We sat in silence for a while, sipping our tea.

"I looked at that Mars constitution," I said. "It's hopeless. Whatever we do, that thing isn't going to be part of it. There's going to have to be a new constitution. No matter what we do. If the self-funders want property rights to be in there, they're going to have to explain how that works with the right of regular people not to be trapped in this kind of forever debt."

"Two kinds of rights," she said, looking at me over her tea. "Two kinds of property?"

"Maybe," I said. If she wanted to think of it that way. I decided to let her in on the latest brainstorming.

"There's this idea of Pieces of Mars that I heard about this morning," I said. "Someone at D5 came up with it. I don't remember who. Franco brought it to the meeting. One piece per person. Everyone gets one: regular, self-funder, everyone. The piece goes with you. It can't be taken away. It can't be sold. And it's not a one-time thing. It's a portion of whatever Mars does. Okay, that doesn't amount to very much right now. Maybe it gives you nothing. Maybe it's even negative. A piece of debt?"

"But when Mars gets wealthy," I went on, "your piece makes you wealthy. And it can't be taken away to pay any kind of debt. It's permanent. So why bother to pay down your debt? You'll be getting your piece of Mars anyway. And you'll get to keep it. They might as well cancel the debt at that point. Or not. It doesn't matter. Anyway, that's the idea."

"Ohh, the Management and Discipline Committee is going to love that one," Alicia said. "I can already see them foaming at the mouth. Where's the

incentive to work, they'll say?" But the twinkle was back in her face. She lived for this sort of thing. Solving problems.

"Well, where's the incentive for a self-funder to work?" I said, needled. "Honestly, I have no idea how to make this work. We'll figure that out later. The point is, it's a way to get to the future. And it doesn't change any of the accounting today."

"It doesn't change the accounting today, yes, that's true," she said. "That's good, but it's also bad, you know. There's still a problem. The accounting is a problem all by itself. Confidentially, it's bad. Really really bad. The Bank may have delayed too long, out of fear about how people were going to react. By now, twelve percent may not be enough. Especially with the Pause happening. I've heard talk of fifteen or twenty percent."

"Oh great. That's going to be popular with the regulars, for sure" I said. Then I had a sudden thought. "Hey, you know, any of that accounting you can get leaked to us will be a huge help."

She looked confused. "They don't tell us very much, either. Most of this is just gossip. But I suppose some people have access to the real numbers."

"We need those real numbers. The more detail the better. Seriously. Right now, most of our people think it's all a put on. Fake. Made up. They don't believe the Bank has money troubles at all."

"Really?" This was news to her.

"Yes, really. Why would they believe what they say on the news? I mean, do you believe the news? We need the real truth. We need to be on the same page together with Admin and the Bank. Otherwise we're just talking past each other."

"This is going to be tricky." She thought about it. "I'll see what I can do."

END GAIL BEESON

BEGIN VICTOR PETERSON

A week after the interest rates got jacked, Tony Strickland called me in for another chat with his boss. I drove in to D4 and went looking for Dan and Gail. I needed to see if they wanted me to talk to Brodeur at all.

I found Dan first. I didn't know him very well at the time. He's a nice guy, but he's not even a little bit shy of letting you know what he thinks.

Dan made a face. "Yeah, that Brodeur guy insisted on talking to me, too. I have no idea what he even wanted. He was all coy and roundabout."

"He's playing about fifteen different games at the same time, I think," I said.

"The way I figure it, his main game is dividing us," Dan said. "Don't let him do that."

"Right. I wasn't about to," I said. "I'll tell him he has to talk to you and Gail about anything to do with D4."

"What does he want to talk to you for, anyway?"

"He thinks I have connections over on Earth."

"Do you?"

"Not really. Not in any practical sense. But I don't mind him thinking I do."

"Fine, okay, go and play your fifteen dimensional chess against that guy if you want. But don't make him a bunch of promises and such, okay?"

"I wasn't going to," I told him.

When I located Gail, she gave me a hug. Then she assigned me a dolly of food and supplies to deliver to Tony at the office.

"Bring the dolly back here when you're done, will you?"

"Okay."

"Let's make the good Sergeant suffer a little obligation to you, all right?"

"Sure."

Tony didn't look very obligated to me when I brought the cases in. Maybe he was suffering inside. We gave each other the usual even looks. I told him I'd be taking the dolly back after I talked to his boss.

"Fine. Gimme your peanut."

"Don't have it on me," I said. "I left it with Gail." I pulled out my pockets to show him. All I had was an empty sock.

"Oh well," Tony said, in what was, for him, a relatively resigned tone of voice.

The communications room was a little smellier than before, due to all the people living in the Inspections office. Brodeur's face on the screen was the same as before, neat and brushed.

"There sure have been a lot of 'unexpected' events recently, Gary," I said, trying to throw him off guard. "Did you have a good time chatting with Izzy?"

"Just a ping or two on the sonar so far," he said, unfazed.

"Dan Heilman says he can't figure out what you want."

"I've talked to bricks with more insight."

"But you know you have to talk to him and Gail, right? I'm not doing anything without them."

"Sure. This is just a social call." There was that ghost of a smile again.

"What do you want?"

"Ground truth," he said, perfectly seriously. "What are the sentiments out there. What are the options. What are the pitfalls."

"Why don't you ask one of your flunkies?"

"Ahh," he said. "I believe your fellow cultists would call this something like 'the blindness of the bosses.'"

"I haven't heard that one," I said.

"But you recognize the idea." He pondered. "Why don't you help me be less blind?"

"If you've thought that far, you should understand why not," I said. "Quit your Lead. Come out and work in the Deltas."

He couldn't hold my eye, and glanced aside.

"The more you live like us, the better you'll understand," I said. "That's what it takes."

He shrugged. "It's easier to talk to me, you know. Than to the others. I can see more possible ways out, through the situation."

"That's a discussion you should be having with Dan and Gail."

"Yes, I guess it is."

"I'm not your oar in the water, Gary," I said.

"Not right now." And there was that damned smile again!

And, yes, I remembered to return the dolly.

END VICTOR PETERSON

BEGIN GAIL BEESON

The meeting of the Committees at Alpha decided the terms of the Pause. Exports were the soft underbelly of the balance sheet, and we went after those with an axe. No more propellant production. No more entertainment production. No more dramas and reality shows. The key audiovisual equipment had already mysteriously disappeared from the studios.

We also put brakes on the work towards a larger colony. This was much more controversial, but it was ultimately necessary. No more tunneling. No new construction. No chemical synthesis of construction materials. So we needed less ice. Production of food and water continued. Maintenance continued. In fact, we got caught up on maintenance. A lot of repairs had been deferred for years and years, and this was a chance to bring them up to date.

The Committees back in the working towns figured out how to fine tune production. We would turn it up and down in response to the situation. If there was progress in the negotiations, we might put through some extra runs. If there were setbacks, we would shut down another line or two. Beta Committee was putting through batches of clothing that said "Liberty or Death" on them, just to show that we had control.

Overall, we set production at close to 60% of capacity. That was enough to keep us alive for the moment, and it was something Admin could see and measure. They could compare it with whatever benefit they thought they were getting from scribbling down bigger and bigger debt numbers next to the names of the individual colonists.

Admin retaliated, for sure. They blocked accounts and stopped pay. So we set up our own way to distribute food and supplies. They used remote access to lock doors and immobilize vehicles. That was obnoxious and put people into a number of dangerous situations. So we got better at fiddling those systems. Of course everything needs a manual backup anyway. If it

didn't have a manual backup before, you can bet it had a manual backup after we were done fixing it.

We didn't mess with the Team Leads, Inspections, or Safety/Medical. And, mostly, they didn't mess with us. The communications network was in chaos. Sometimes the peanuts worked. Sometimes they didn't. Anton Jankowski kept broadcasting surreal news items, along with stranger and stranger entertainment segments from Earth. There was something weird about sharks, and then something else about sex robots. It was one big massive stalemate.

END GAIL BEESON

BEGIN VICTOR PETERSON

A remote signal got sent out from Earth, and it turned off some of the newer batches of solar panels. This was after a technical default somewhere in the payment system. If you remember, these panels had been brought out under a scheme where someone on Earth kept ownership of the hardware, and sold the power output to the colony. Since they weren't getting paid, it made sense to them that they should turn off the power from these fields. That's what they thought. However, at this point their remote diagnostics went screwy.

Outside Maintenance reported that wind and dust storms had messed up the support machinery. This was odd, since the weather had been clear. You would think the Inspectors would have taken an interest in the situation, but it turned out they didn't like to go outside themselves any more than was strictly necessary. They went out once or twice, and reported that the solar panels with the relevant batch numbers didn't seem to be where the map said they were. But if the maintainers said they had been damaged by the wind and moved to junk, well, that was what must have happened.

Seriously, Inspectors breathe oxygen, too. You're going to leave solar panels turned off for no reason? Why would you do that?

It turned out afterwards that the guy with the steel pipe hadn't done nearly as much damage to the Beta field as initially estimated. A number of other fields also showed significant output improvements. This was attributed to better cleaning. You have to keep up with the dusting. It's very important to keep your panels clean.

END VICTOR PETERSON

BEGIN GAIL BEESON

I'll tell the kids I rode along on the Epsun Raid. At least, that's what Anton Jankowski called it on the news, before he went off the air abruptly. So we laughed and called it the "Epsun Raid," too.

It was the middle of the night when I swung up into the truck cab. Jose was my driver. I gathered he knew Vic. Anyway, my job was to tell them where to stash everything in the Deltas. I wasn't necessarily the best person to do that, but I was available. My salt line had shut down after weeks of running at absolute maximum capacity.

All the reservoirs in the working towns were full of water. We had built several new reservoirs, too. And there were big chunks of ice tucked away, wrapped in plastic, in the sand outside. Alpha got left out of the distribution, but they were going to be fine. They had production for everything. It was the working towns that needed a year or two of autonomy. Everyone had enough water. Now we were going to take care of food.

When the sun came up we were already waiting in a massive line of trucks at Epsun. Steel drums were in short supply, so the starch came wrapped in plastic bales, the same way the dry greens usually come. They loaded us up, and we dashed off to the staging grounds at D1 and Beta, back and forth all day.

Epsun keeps massive reserves of dry food on hand, enough for the entire colony for several Mars years. But the working towns usually only have a few months of food each. D4 goes through a couple hundred tons of starch a year, and a similar amount of the dry greens. Now we would have at least that much stashed away in cuts and hollows in the regolith terraces, and no one would be able to hold us hostage over food.

Allie Dinh had gone off to Alpha with her lieutenants and bodyguards for a meeting of some sort. This gave her plausible deniability at a formal level, but I can't imagine anyone thinks this was done without her say-so. The guys at Epsun will never tell, that's for sure.

"Hey, get down," Jose said suddenly.

I got down, and then asked, "what is it? Drone?" It was close to noon.

"Yup."

"I don't know, does it matter? They already know we're doing this."

He peered over at me. "You're know you're a target, right?"

"Well, I know I'm on their blacklist. Since I'm a Chair at D4."

"No, I mean I've seen those guys holding grenades." He shaded his eyes.

"Not this time, though. I guess you can get up."

"You're serious?"

He shrugged.

We kept going all that day and the next days, carrying the plastic bales deeper and deeper into the Deltas. Gamma got theirs from Beta. We pressed busses and pickups into service as well. The regular Delta bus needed suspension work afterwards, because of all the extra weight. But we got the food distributed.

END GAIL BEESON

## 12. A Constitutional Process

BEGIN GAIL BEESON

"This is really amazing," I told Vic one day after coming back from a Lipinski net meeting. "They're absolutely sticking to their controls. I'm so proud of them! They should totally have given up by now."

"Why would they give up?" he asked.

"Well, there isn't an obvious way to win here, right?" I said. "After all, there's no money. We don't have the money. The Corporation doesn't have the money. That's getting to be pretty clear by now, and people are starting to believe it. So what are we doing here anyway?"

"Oh, but you know what we're doing," he said. "We're making a future."

"Of course I do. But everyone else seems to know it, too! And they're determined. Anyone would expect us to quit. Even me. Everyone always settles for some kind of easy out. But not us!"

"Well, on Earth it's pretty normal to work a job with no future," Vic said.

"Not here," I said. "Like I said, I'm just so proud of them."

"People know they're needed. That counts. It matters that you're doing something real," he said.

"Sure. It's also something, I think, about the kind of person who came to Mars," I said. "That's a special kind of person. They came for a reason. And they're not scared."

"So they're sticking to their controls," he said.

"They're not just wearing those 'Liberty or Death' jackets, you know. They really mean it."

"Yep," he said.

". . . I'm terrified," I told him.

END GAIL BEESON

BEGIN VICTOR PETERSON

I was trying to noodle out a problem. It didn't seem to make sense to me. So I brought it to Gail.

"Here's what's puzzling me," I told her.

"What?" she asked.

"The supervisor game," I said. "Having about five percent supervisors is just practical. You need an experienced person whose job it is to keep things

running smoothly. But the old time Earth thing was always to have a lot more supervisors. About twenty percent. For a different reason."

"Well, why?" she said.

"It's from the point of view of the bosses. You pay your supervisors a little better, to split them off from the others. Then they have slightly different interests. So when the rest go on strike, you rely on your supervisors to keep production going. They still know how to do the work, and there are enough of them to make a difference."

I didn't want to give Gail an overdose of history here, but this was the background for my headache.

"So the supervisors make up another layer in your social pyramid. They put weight on everyone under them. But after unions and strikes were made illegal, that mostly went away. We still have twenty percent supervisors, but they don't get paid any better these days. Or at least, not enough to matter. So Shack's my supervisor. So what? We do the same work. And am I really supposed to be jealous of Andy because he's an Equipment Handler 4, and I'm only an Equipment Handler 3? I mean, seriously? It doesn't do anything."

"Sure," she said.

"So . . . here's the thing. I keep waiting for them to remember how this works. They need a wedge to divide us. The passage loan is a great wedge. Divide and conquer. So you want to restart Propellant? Pick a few regulars and tell them they're the new super-duper supervisors. Pay off their passage loans. Or give them a big enough paycheck so they can see their way out. Three million dollars a person? That's nothing. Have an Inspector with a taser sit there, too. Give mean looks to anyone who doesn't like the new super-duper supervisors."

"No, Vic," she said. She was looking amused. I could tell she knew more about this. "That's not going to happen. For a whole list of reasons."

"Why?" I asked. "It sure looks like it would work. They should do it. Buy people off. I bet they'd find people who'd sell out."

"Not the right people," she said. "They'd get, you know, Scared Timmy."

"Yeah, I suppose they would," I said.

"Tell me, would Shack take a deal like that?"

I laughed. "No, I guess he wouldn't. But we know each other."

"Even if, say, they have him move out to D7?"

"No. You're right. He wouldn't do it." I thought about it. "But you really think they wouldn't be able to find anyone better than Scared Timmy?"

"I doubt it," she said. "We're not strangers to each other here. This isn't Earth. People care what you think about them. The smaller scale is a real advantage for us. That's something that has come up in Committee meetings."

"It's true, everyone has a reputation. Even at D7."

"So, for example, now, I don't know everyone personally, but . . ." she continued.

"You don't know everyone personally?" I pretended to be surprised.

She shot me a dangerous look. "But! If I wanted to know more about someone, I could probably find somebody to tell me."

"And another thing," she went on. "I've never heard of anyone trying to run production with twenty percent of the shift, but if so, that's an Earth thing. We're not playing around here. We need a full crew to run these lines. Even when we have a salt line shut down, we still run people full time to keep an eye on it and make sure nothing goes wonky with it. Something gets trapped in there, you get corrosion real quick."

"Sure," I said. "I'm not actually saying there was ever that much slack in the system. Even on Earth. It was more that people simply didn't care. Not any more than they had to, anyway. So you needed more of everything. Everything took longer. You had to accept less. But I guess Earth is easy mode."

"And, finally, it's not three million dollars a supervisor. It's much more than that."

When Gail has a list, you are going to hear each item in order, so you might as well make yourself comfortable.

"We got hold of Admin's current numbers, but we don't have their projections. Olivia has some ideas about what those might look like. But the main point is, it's not the principal up front. It's the interest around the back."

"They bought us, and they've already sold us ten times over," I said. That gave her a pause.

"You know, I wouldn't have thought about it like that, back when I was in Admin," she said. "But, yeah. That's right. I didn't know about the projections at the time."

She furrowed her brow. "It might even be ten times," she went on. "Three doublings of the debt? Maybe. Anyway, the problem with making someone a supervisor and paying off their debt, is that it's not three million. It's a continuous flow of interest payments that's based on the three million. So that debt-free supervisor costs you, okay, thirty million dollars. That money was already in the books. There was a plan for that money. It was going to be sent back to creditors on Earth. And that money is the reason the business plan closed to begin with."

"So," I said, "adding it up, we're worth three hundred billion dollars, all together. Something like that. Just the ten thousand of us who are here right now. Yes, I can see how that starts to look like real money."

"The part that bothers me," Gail said, "is that, in the end, all this money, it's not principal repayment. It's profit. Just pure profit for someone."

"Plus, the whole future wealth of Mars," I said. "Don't forget that part! All of Mars, taken away from us and given to them."

"You know . . ." She looked worried, "I think they really did mean to let the early colonists pay off their loans. I don't know if that was ever intended

to go as far as Sixth Landing. Let alone Ninth," she looked at me. "But I think it got away from them. They intended to have some debt-free regulars."

And she started to look sad. "But then the books had a problem, and it was always easiest to add some charges, raise some taxes, add some fines . . . and everything got multiplied by ten. It made the books look so much better. And then that time was past. They could never go backwards after that. And now they're left with no options at all."

"They're missing a layer in their social pyramid," I said. "And they can't afford to add it back. I think we got lucky."

"Maybe," she said.

"Somebody is going to be writing off three hundred billion in profit, when we get to that point," I said. "They're not going to be happy about it. But that's going to happen, or I don't know the Mars colonists."

"I hope so," she said.

END VICTOR PETERSON

BEGIN GAIL BEESON

We went and negotiated on every possible track, with anyone who would talk to us. All over the place, really. The closest thing to official talks were with Admin. That meant Manuel Rojas. But Manuel was never much of a talker himself. He mostly avoided dealing with us personally. Nevertheless, we stayed in the loop with Admin every day, all day. Rafi Eisenberg from the Alpha Committee has the determination of a Mark 4 Tunnel Boring Drill, so that became his job.

Bart Zeller from Exploration wouldn't talk to us at all. Gary Brodeur from Inspections would talk to anybody and anyone, and that made us nervous because he was constantly trying to get around the Committee Chairs and enlist sources and allies from among the regular colonists. We tried telling people not to trust him, but we weren't very effective, partly because we weren't quite sure what to make of him ourselves.

We tried to stay on good terms with our individual Team Leads. My relationship with Melanie Sherwood had been strained for a while, but it improved just by dint of seeing each other regularly. I'd come over to chat, and we would discuss the things we could discuss, and shrug off the rest. She moved back into her quarters and sat in her office during the day. I brought her the daily production reports as a courtesy.

I had to go visit Alpha pretty frequently. Because I had been in Admin myself, I even ended up talking to Sue Lindeman and the so-called Management and Discipline Committee. That was an exercise in patience. Talking to Alicia Phillips and the Free Colonist Committee was less stressful, but it wasn't automatically any more productive. Neither our side nor theirs had any real flexibility on the essential financial points.

There was no direct channel to the Founder Jim Bridgewater, but indirect reports from Alicia were not encouraging. He was old and a bit bewildered. He didn't necessarily seem to fully understand why there was a problem, even. Nevertheless, any compromise or negotiation with the major financial interests over on Earth would have to go through him. We hoped the friends who had his ear would help him act wisely.

Our constellation of needs settled into two clusters. One cluster, things like the legitimacy of the Committees, and the right to talk to each other without being spied on, would need to become part of the new Mars constitution. But everything else, from safety to finances to open workplace information, would basically amount to a series of ongoing discussions between Admin and the Committees.

And the foundation of our negotiating position in those discussions was our unity - basically, our ability to continue talking to each other.

"They can cut off Gamma any time they want," was an often heard refrain in our meetings. What if we got stuck with just the peanuts from Admin? What if they brought in Lipinskis they could control like peanuts? Admin could break any agreement they had made and crack down on us again. And we would have lost our power to do anything about it.

END GAIL BEESON

BEGIN VICTOR PETERSON

Gail didn't tell me what it was all about, but she hauled me to a meeting at D1, which turned out to be a full meeting, with Chairs from all the towns from Alpha to Epsun.

They had other business first, and after they were done with that they asked me to come in and gave me a seat. There were about twenty of them, with their tables drawn up in a rough circle.

Olivia Grasso looked at me with her usual severity. She made me feel like I was a ton of water with severely excessive residuals. "Gary Brodeur suggested we talk to you," she said.

I was startled. I hadn't heard anything from Brodeur for months. Figured I'd pissed him off. Had tried to piss him off, actually.

"He made us an offer on communication devices. Our own peanuts, if you like. He would supply them, and we'd run them. It's true, that's something we've asked for. He seems to think that would allow us to back off our pay and interest demands. And would make a deal possible. That's what he thinks."

Gail spoke up. "It's because we can't get anywhere on closing the debt. The idea is the peanuts are supposed to give us future negotiating leverage instead of money. To get us past the sticking point. Everyone is anxious for some kind of deal, because the decisions on Twelfth Landing are coming up. Nobody knows if there is even going to be a Twelfth Landing at this point."

Franco Lambert from D5 took over. "But we don't think this makes any sense from his point of view. It weakens them too much. Letting us speak freely as a matter of course is the last thing they'd ever want to give us."

He looked around, checking that he was on board with the consensus of the others. "So we figure it's all a lie. We don't see how we could trust any devices from Brodeur, anyway. They're bound to be full of hooks and doors and spyware. So we told him no. Told him to get lost."

"Any chance we can build our own?" I asked.

"Basic chip manufacturing isn't scheduled to happen until after we reach life support self-sufficiency," Franco said, "so that's not going to be a realistic option for us."

Of course. These people were going to be the new Admin. I turned my head to look at the twenty faces in the room. They started to swim in my vision. Old Admin would be going away, and this would be the new Admin. Made up of Committee Chairs and so on. Meet the new boss, same as the old boss . . . No! There's a chance here, I told myself. I have to believe it's possible. There's a chance we can turn the corner here, a chance for something different. For something real.

It was quiet and they were looking at me. I had missed something. "What?"

Olivia repeated. "I said, Brodeur told us to talk to you. He said you might have a line on devices we can trust."

Okay, go ahead and laugh at me. This had literally never occurred to me. Me, pull an Izzy? Not me. I'm here to carry ideas. I did my job. Here they are, all these representatives, and they know what they want. Isn't it up to them, now?

"Um, I guess, maybe?"

Gail helped me out. "Vic, I know you don't talk about the people you know on Earth. But Brodeur called you in and talked to you, and he says you have connections over there. Is he wrong?"

"Not exactly." I took a couple of deep breaths. There were twenty people in the room. But I knew I was talking to thousands. I hated that.

No, it was more than just that I hated public speaking. My cover stories flashed through my mind. All the garbage that was supposed to come out first under torture, so they wouldn't know for sure what was real when they inevitably got real information out of me. I had made these things deeply non-verbal for a reason. To minimize the damage.

"Okay," I said, and took another deep breath. It occurred to me I might start hyperventilating and faint. "I came to Mars for the sake, for the reason, of uncontrolled communication. I was afraid you wouldn't hear about it. Well, now you know about it. I thought my job was done. But it's true. I know people on Earth who are using the kind of communication devices you need. And I know people who can get them for you."

I took a deliberately shallow breath and held it, like when you're conserving your suit air. "How many of you have talked to, like, a building custodian, or a grounds maintenance person, about this stuff?"

No one spoke up. No one raised their hand. Not their background. Virtually all of them had gone to college.

"Safety is part of it. They don't want to get hurt on the job. So they organize it so when someone gets hurt, management has a really bad month. So then management is forced to care about safety. Well, when they're not flailing around trying to swat the people who work for them. It's illegal, of course. Organizing is. People go to jail for it. But it makes a difference."

"They're not fancy, like the peanuts," I said. "Oh, they could be, if you have the money and bandwidth. I've never actually seen one of these free communicators myself. But I know how they work. They're little gray boxes that only do text messages. For now. That's how you spread it out all over a mesh network, until it gets to the person it's intended for. End-to-end encryption, so only the intended person can read it. Enough ongoing traffic all the time so nobody can tell who's talking to who. But they shut down for a while when there's a flood of noise or spam or whatever. There's a limited range. Like, I don't know that they would reach from my outpost to town. We'd have to use shared nodes between the towns, for sure. And over to Earth. But all of this stuff exists. It's not expensive."

"The important part," I said, "is that they've been through trial and error. The backdoors have been cleared out. They work. If we get them to be legal over here, we could improve them. Make them better."

Franco remained skeptical. "Why would Admin play fair with us? Why would they let us ship these little gray boxes over here? Even if they agree to them being legal?"

"Well, that's Brodeur's angle, of course," I said. Nobody reacted. I realized that Brodeur just confused the heck out of everyone.

I spelled it out. "Look, you all know he wants to take over. He's playing for the succession, after Bridgewater dies. And he thinks this is how it's going to work. Zeller can't let us have our own peanuts. Rojas can't let us have our own peanuts. Those guys would think that was like giving us the keys to the treasure chamber. Control of communication is their whole power over us. But Brodeur thinks this is his opening. He thinks he's so smart he can give us the keys, and let us loot the treasure chamber, and he'll still ride the storm. He really thinks he's that smart. Maybe he is. Maybe he isn't. What do you think?"

"I think you're Brodeur's man," Franco said.

I snorted. And then I began laughing out loud. It came out really loud and unexpected. A laugh with sandpaper and grit in it. All these years of worrying and fear, and it comes down to this! But of course. That's what it looked like.

"No," I said, wiping my eyes, "I'm not Brodeur's man. I'm a genuine extremist. Sorry!"

"No, Franco," Olivia said. "Vic's been quiet, but he's been consistent. He's been on the same line the whole time. I've talked to enough people."

"Well, you could be under pressure now," Franco said to me. "What's Brodeur got? What's he using against you?"

"Sure. That's how things work around here, isn't it? No, all he's got on me is that he can have me killed any time. He made that really clear. And I know he would have killed me if he'd caught on to what I was doing any earlier than he did. So what if he imagines he can use me now? I don't care. He can go ahead and kill me. Doesn't change one damn thing I'm going to do."

There was a pause, and then someone from Beta spoke up. "That's harsh cold," he said. "Are you for real?"

"I came here for this," I said.

"Oh, he's for real," said Gail. "Trust me."

"Umm," I said. "Seriously, you're going to have to trust someone. Some of you know me, at least a little. Have I ever said anything different?"

"Only when the peanuts were on," someone said.

"Only when the peanuts were on," I agreed.

END VICTOR PETERSON

BEGIN GAIL BEESON

At the Mars Training Academy they told us straight out we weren't going to have children. Everybody needed to work to get the colony started. Later on there would be children, but we wouldn't be the Landings that would have them. We half believed them, and we half didn't believe them.

I'm not someone who needs to have a family. If I were, I don't suppose I would have passed the psychological screening to come out here. But I guess I always kept an eye on the possibility.

Before the Pause, there were a dozen or so children born on Mars, all to self-funders. There were a few medical issues. The light gravity does have an effect on development. But it's not insurmountable. There are things you can do.

So I was surprised how much it bothered me when some of the women, regular colonists, tried to have children during the Pause. It wasn't just me. Other people had a pretty strong negative reaction, too. I don't like to think I'm selfish. Or vindictive. But maybe I am?

I felt it wasn't right. I know that sounds like I'm letting the selfers off the hook. Like, it's okay for them, but not for us? But it's about the practicality of the thing. If the colony is going to make it, we really do need everybody at work. Selfers are already a burden on that.

Only two of the pregnancies conceived during the Pause came to birth. One was at Alpha. The kid was adopted by a selfer. The mother survived.

The other one was at D2, and the kid was adopted by the D2 Committee. In that case the mother didn't survive. There were complications. Or an accident. The explanations were thin. I don't want to say it, but I'm trying to be really honest here, so I should probably come right out and say it. It's awful, but I think some of the other women maybe let her die. And I'm complicit of course. I didn't ask questions either. I guess things really are rougher in the working towns!

I feel bad about this. But I also understand how it might happen. There's an existential threat to the colony here, if everyone does their own thing. Of course, I'm also letting myself feel a little bit of resentment. The boys from Sixth Landing might still have a chance of becoming parents when we hit self-sufficiency. The girls from Sixth Landing won't, though, just because of the way our biology works.

But that's just too bad for me. It's unfortunate, but I have to set it aside. I know our individual genes aren't supposed to matter so much. It's not supposed to be a big deal. Yes, I get it - I understand the big goal is the survival of thinking life. So I tell myself it doesn't have to be my own kid. But the truth is, I would love to play with children again some day when it becomes possible. I suppose there'll be a lot of people who will want to be the adoptive auntie or grandma when we get to that stage.

And I might have my eye on that a little bit, too, when I make friends with some of the younger women who've been coming in on recent Landings. They can benefit from having me there to help them, since I know how everything works. And maybe some day I'll get to be a grandma. Is that manipulative? I don't know. What can I say? I'm good with people.

END GAIL BEESON

BEGIN VICTOR PETERSON

There was quite a bit of innovation during the Pause. People wouldn't have had the time otherwise. But they got an enforced break, and they took advantage of it to go ahead and do something new. For one thing, the quality of the beer from Beta improved dramatically.

The bigger news from Beta was that Andrea Jackson finally figured out how to make a reliable bottle gasket. My understanding is the problem wasn't in the chemical synthesis and composition, which they had been working on, but in the molding and curing instead. The new process doesn't quite work for the large door and airlock seals yet, but it's a step along the way. Getting a good supply of reliable gaskets makes a big difference for the outposts. It turned out that we had more bottles in storage, we just didn't have the gaskets. So this gave us more spare bottles. And simply the knowledge that we can make true home seals gives us a certain warmth. The air is going to stay in!

At Gamma, Liam Dutton and Isaac Schaffner finally got one of their homebrew photovoltaic lines to work. They'd been tinkering around on those lines for years together. The Pause pretty much shut Gamma down for the duration. Liam went off and mostly did Committee Co-Chair stuff. Isaac buckled down and got the whole thing sorted out.

This new home PV has frankly crap efficiency, but it's robust as heck, and it doesn't degrade under Mars conditions. It's good enough that it's worth installing and hooking up. It's not enough to replace solar from Earth, by itself, but it's a start. Much better than nothing. And it should help revive Gamma. They can start building out production lines for home solar panels.

I wish I could say the Deltas contributed to this burst of innovation. People did some work on the transport and mining automation, but it didn't lead to anything definite. At least not this time around. I guess we were too busy enjoying the improved beer. Just kidding. We were busy enough, and I'll tell you about that in a little bit.

END VICTOR PETERSON

BEGIN GAIL BEESON

I've been arguing with Vic a fair bit about the right way to talk to people. I don't mean the tone you take. I mean, what are you allowed to say and do when you want to influence someone? What's going too far?

Vic is pretty radically anti-influence. He says things like, "Seriously, men shouldn't be threatening, and women shouldn't be influencing and manipulating. It all comes down to the same thing. Money, advantage, kids. They're different strategies, but they're aimed at the same goals."

I give it back to him. "You're the one to talk! Now I find out you came all the way over here because you wanted to give us your two cents about free peanuts. And you're against influence? Forget women. You're the worst one of them all. You're a mega-influencer!"

He's a decent guy, and he looks sheepish about that. "All right, it's true. There's a problem there. Okay, so I think it matters to some extent if people are interested. If they want to listen to me. I'm not supposed to force anything on anyone. I tell myself to speak up if it's for the value of the ideas. Or if they're a good friend. Because each of us cares about what the other thinks. The fact is, I'm not really comfortable telling strangers what they should think, you know?"

"But you'll do it if it's for their own good, eh?"

"Well, maybe, if there's a universal benefit, and it's not for my advantage, at least. I'm not getting anything out of it."

"Oh, leave it alone about advantage, already," I say. "It's not always about advantage. Sometimes you're just trying to influence people to do the right thing. Like when you're on a team together. You can make it about cooperation, not competition."

"Gail, you know we disagree about that one," he says. "I still say cooperation is the same thing as competition. Just one level deeper."

"No, you're wrong."

"Influence can be a threat, too," he says. "When there's power or position behind it."

"No, it's not. Real threats are, like, muscles and weapons and violence. It's not a threat when you simply suggest that someone should do something!"

"But what happens when they don't do what you suggest? What's behind it?"

And, well, I have to admit he does have something there that bothers me a little bit. There's a point where things can get serious pretty quick if someone's not . . . cooperative. But you have got to accept that part. It's a necessary part of the whole.

"Yes, there's something backing it up," I say. "But that's just where we are. You can't get away from it. There's always someone who's trying to align things to put themselves in a stronger position, to put you in a weaker position. So you have to play the game, too. You don't have a choice."

He just lowers his chin and gives me that look of his under his eyebrows, the one, like, "are you sure you've thought that through?" It should come off as superior and arrogant and infuriating, but somehow he gets away with it. I don't know how he gets away with it. It's unfair.

"Well, things are changing, anyway," I say. "You know, my mother's generation was more like, just tell them what to do, and they had better do it, because that's the way things should work. That's the right way. And my generation's a bit more hesitant about that. We're not so sure when it's really okay."

And that's where we usually leave that argument.

I think about this a fair amount. I can see how you might have two kinds of threats, the direct ones and the indirect ones. Obviously, they're both unhelpful a lot of the time. But you still need them. You can't pretend they don't exist. Both of them are part of the picture. They're part of how people interact. How else are you going to get anything done?

I'm not sure my old people managing skills would actually be good enough today, if I became, say, a Team Lead. I'd have to think a bit harder about what kinds of influence I should be exerting. And where I should back off. I don't know that I'd fit into the current system as well as I used to. I would certainly do things a bit differently.

Being a Committee Co-Chair isn't the same thing as being a Team Lead, at all. Right now, I'm kind of floating along on a flood tide of what everyone thinks. We're all pretty much together on this, and my job is to articulate what we want and need, and to negotiate that position with people who are living in a very different place and mindset. Later on, I can imagine the Committees breaking down a bit more into factions and competing interests. At that point the job of a Chair might get harder. It might be more of a management

challenge. But for the moment I'm not really trying to influence anybody; it's more like I'm opening myself up to all of these influences around me, and trying to figure out how to express them?

And I don't necessarily look up to the same people I used to admire, like Ellie and Melanie from the old days. It's still about being good with people, but these days I don't think I'd want to settle for being a functionary like that. I'd rather look up to people who are actually doing what it takes to make Mars a better place. Like, well, Allie Dinh at Epsun, and Olivia Grasso on the Alpha Committee.

END GAIL BEESON

BEGIN VICTOR PETERSON

It got to be really obvious that there was going to be a new constitution. Because the selfers wanted it! The regular colonists were surprised to learn that the selfers themselves had been living under a web of blackmail and intimidation. The strands of that web had run through the peanuts and microphones and spycams, and they didn't like it one bit. So there was going to be a new constitution, and it was going to legalize uncontrolled communication, and that was going to happen regardless of whether we, the regular colonists, got our own communicators, or not.

The selfers were almost as anxious to get rid of the spying, as we were anxious to get rid of the passage debt. But the debt was the crux. It refused to yield, in the books, or in the minds of people. Debt loomed above us in its absurd multiplication like an unstable escarpment about to give way over our heads. Meanwhile, like whispers of a hidden path out of disaster, the idea of a Permanent Piece of Mars called out to us and beckoned us, and we talked about in undertones, and then in full voice, until even selfers spoke about it without sneering.

Would a Permanent Piece carry through with its implied promise of debt annulment? Or would it turn into another betrayal in the end? As always, that would depend on who got to do the talking, when the time came.

These discussions were no secret. They permeated the air in the towns and the outposts. They formed themselves into gradually advancing understandings. This mysterious constitutional process moved along until no one, from the most timid selfer sheltering behind the gates of Bridgetown, to an Exer stationed at an outpost halfway around Mars, to an elderly Founder surrounded by worried cronies, was unaware of the coming choices and implications.

END VICTOR PETERSON

## 13. D5

BEGIN GUS PALUMBO

This is Gus Palumbo. From D5. They want me to tell again what happened at D5 Outpost 13. It's okay, I'm used to it by now. People need to know. They want me to tell it so people from Earth can understand, too. I'll try.

So I was out cleaning the solar panels when the Exers came. You see, we have these big fields of solar panels around each outpost. They're to charge up the vehicles and keep the hab going. I mean, the habitat. The wind brings dust. The panels get dusty, and you have to go around every once in a while and clean them off. Otherwise the power levels go down. It was boring in the hab since we'd put mining on Pause. It also gets crowded in there, so I was happy to be outside dusting.

You have a big long soft brush to reach out over the panels. And a bottle of CO2 to blow the dust off places. I was a ways out in the field when they pulled up, in two pickups. These were the Ex pickups, all black and armored. One stayed further away, and the other one pulled right up to the hab.

The peanuts had been off for a week. I mean, like a phone? That's what a peanut is. And they'd been jamming the Lipinskis. The radios. So we had no idea what was going on. But I knew I wanted to hunker down. I got down and stayed there.

Two of them got out of the nearer pickup and went in the hab airlock. Black Exer suits. I couldn't tell you exactly who they were, but I don't think Bart Zeller was one of these two. He had a special way of walking. And he always liked to stand back and make the others do the dirty work.

After a bit they came back out, making Liz and Logan go first. And the moment they got clear of the airlock they shot them down. I guess they didn't want to make holes in the hab.

When I was on Earth I thought you couldn't hear anything outside on Mars. That's not true. Sound does carry, even though the air is super thin, and it's real quiet, and doesn't go as far. You can vaguely hear someone standing next to you when comms are out, if they yell loud enough, but it's easier to touch hats. Then the sound carries through the helmets.

Any case, I heard the gunshots just fine. In fact, I thought I heard Logan yell something. I can't be sure. Maybe I made that up in my head later. You can imagine, it comes back. In dreams. And other times.

Afterwards I kept thinking what I could have done different. To be honest, there wasn't anything. What I actually did was I remembered there

was a bit of a hollow under one of the panels, one row back and a bit over, with a bit of plastic sheet I could scoop dust over. I'd previously thought of it as a place to hide Lipinskis or whatever. Now it was a place to hide me.

So I ducked down and scrambled over, and I got myself under a mound of the dust and sand underneath that panel. I'm not sure there weren't bits of me sticking out. Musta been good enough, though. Of course, there's footprints all over the place everywhere anyway, so that didn't give me away.

The panels were just half swept, and that should have given me away, if they'd ever done that job. I guess they hadn't. I got my hat in contact with a frame strut so I could hear what was happening. I heard them walk out into the solar field. I heard them walking, stopping, going on. I wish I didn't have to listen to that anymore, but it comes back in my dreams. So I have to listen to it. Walking, stopping, going on.

Then they got back in their pickups and drove off. I'm still not sure why they didn't search better. Maybe they killed Liz and Logan before remembering to ask where the third person was. Maybe they thought there were only two. They could see the vehicles were all present and accounted for.

I got up and looked after the cloud of dust in their wake. They'd come from the direction of D5, from Outpost 6. And they'd gone off towards Outpost 14. Number 12, in the other direction, was "E3": Eli, Eva, and Evelyn. Maybe they hadn't gotten to 12 yet.

There was blood on the ground outside the airlock, but they'd taken the bodies with them. I remembered I'd seen something sticking up in the back of the first pickup. They must have had a pile of bodies in there already.

I was about to go inside when a drone flew by. I froze. I don't know if it saw me or not. Or if the person flying it saw me. Anyway, it flew away, and I went inside.

I tried the Lipinski, but I could tell it was being jammed. So I grabbed oxygen bottles and CO2 scrubbers and, for some reason, my book of pictures from Earth, and loaded up the pickup. The charge was good. It was 60 miles to the nearest D4 outpost, which was their Outpost 10. I should be able to get there from here. Could I get to our Twelve, to E3, along the way? I figured there was nothing I could do for Fourteen. I do miss Brendan. He was friend of mine from Fourteen. But that's done.

I got to Twelve, went in the hab, and yelled at them to get going that very minute. Eva and Evelyn moved quick. Eli wanted to save their pickup. So we pulled away while he was still loading up. We watched him get started. But then we didn't stick together along the way. That was my fault. I said we should scatter, because of the drones.

Eli never made it to D4. A drone got him with a grenade. He was hurt, and he tried to seal things up, but he didn't make it. Maybe if we'd been there we could have helped. Or maybe we would've died, too. I don't know. I just don't know. It's done now.

Nobody else got out of D5, except for the three of us.

We found out later we were lucky it was broad daylight. At night, those drone cameras can see you with their infrared. Your heat signature makes you a huge glowing target, out on the plains at night. The infrared works better than on Earth, because there's no water vapor in the air. You're visible for miles. It's better to take your chances in daylight, where everything all around you is lit up by the sun. We didn't know that till later.

We got to D4 Outpost 10, where the jamming was less, and we got through to D4. They told everyone to come in from the outposts on the D5 side, barricaded the airlocks, and broadcast the news on the Lipinskis. But the Exers didn't attack D4. They'd done what they were gonna do.

END GUS PALUMBO

BEGIN GAIL BEESON

I was howling and pounding on the walls. Vic had to hold me. I couldn't see straight for days.

END GAIL BEESON

BEGIN VICTOR PETERSON

Bart Zeller. Shawna Stroman. Dan Murphy. Chad Yanez. Frankie Omar. Nobody's naming their kids after those guys.

They put a platoon of Exers around D5 as a perimeter. Zeller and the four others went in. Maybe there was some kind of ultimatum and refusal. We don't know. They started setting off demolition charges and shooting people. Each of the towns has a lot of internal compartments and airlocks to protect against leaks. If you go and visit the ruins of D5 you can see where they went in and blew open each of the sections and methodically murdered everyone in there. The five of them, with rifles, killed five hundred people in two hours.

It was Stroman who went around the perimeter next and shot everyone who had fled out of the exits and gotten stopped by the other Exers. After that they got in their vehicles and drove around the D5 outposts and killed everyone there. Except for Gus Palumbo and the two others. Everything was jammed, had been jammed intermittently for weeks, and no one was expecting anything.

Zeller got on the comms and started boasting. He got no response from anybody. Not from the selfers, either. We all just started doing what we had to do.

END VICTOR PETERSON

BEGIN GAIL BEESON

We moved quickly after D5. We found out the Epsun and Beta Committees had already been manufacturing and stockpiling explosive material. The Deltas use a grade of piping that's suitable for making single-shot break-open shotguns, and we manufactured hundreds and hundreds of those. I understand there's a lighter birdshot you can use to take down drones, and heavier buckshot that can make holes in space suits and, well, people.

Logistics had to be sorted out. Trucks had to travel in convoys to watch out for each other. We coordinated between the Committees, with the selfers, and with the circle of people around Bridgewater. The Founder released an address in which he deplored "recent events" without specifying them, and pleaded with everyone to get along and be nice to each other.

Admin went silent. We couldn't get anything out of Manuel Rojas. His dozen or so Safety officers withdrew into the Admin labyrinth and stopped being visible around Alpha. Brodeur's Inspectors became almost polite, which was bizarre. And there was planning, planning, planning.

END GAIL BEESON

BEGIN VICTOR PETERSON

Perhaps surprisingly, the Monthly Minutes resumed after a short hiatus. You couldn't say anything out loud, of course, but I was able to send Izzy the code word for "war." And I spelled out "ZELLERKILLEDDFIVE." If we were going to die, Earth might as well know who did it.

For a while, though, it was a cold war.

END VICTOR PETERSON

BEGIN GAIL BEESON

Our relations with the selfers in Bridgetown improved like a switch had been flipped. Sue Lindeman and the Management and Discipline Committee hadn't actually supported Zeller, but they wound up isolated anyway. Alicia Phillips and her Free Colonist Committee were now able to speak for an overwhelming majority of the self-funders.

Suddenly, a deal became conceivable. We worked through the numbers, and clarified our language about the Permanent Piece of Mars and about uncontrolled communication. Some of Bridgewater's associates agreed to talk to the Founder on our behalf.

No one talked to Zeller. At least one Exer tried to communicate with a Committee member at Alpha, and subsequently disappeared. About this time things started to become dangerous inside Ex. Exers appeared in Alpha and kidnapped some people. After that we made sure to evacuate anyone Zeller

might have an immediate grudge against. They got put up temporarily at Beta, at Epsun, or out here in the Deltas.

END GAIL BEESON

BEGIN VICTOR PETERSON

We were outside every day doing civil defense construction. The drone threat was highly variable. We always had a driver and a spotter, and we carried extra patching gunk. Ex didn't have enough drones that they could afford to fly one into you. They needed to drop a grenade, and it was a pretty small grenade at that, because the atmosphere won't carry much weight. So we had sandbags on the cab roofs, and that was usually enough.

We dispersed all the vehicles and hid them in cuts in the berms and terraces. Plastic tarps go over the cuts, as well as over all the exposed airlocks and machinery ports on the outpost habs. Dust and sand go over the tarps.

We built bunkers outside the towns, although people argued about the bunkers. Because what are you going to do if your town gets blown up? Nevertheless, we sank a lot of home concrete, plastic sheeting, oxygen tanks, and the last reserve airlocks into building some deep holes in the ground. These could have sheltered a few hundred people for, at most, a few days. It was better to have them than not, we figured. There's no air on the surface!

Quite a few people wanted to stay in the outposts, rather than in town, because Gus and the others had escaped from the outposts. So they took turns and cycled through the habitats, with up to half a dozen people per hab. That gets extremely cozy. I made room for them and moved into D4 myself. I was just happy to spend the time with Gail. The towns all organized defense squads, made up of people who were experienced with outside work. They had enough people, and I didn't volunteer. This might be the last time Gail and I would have together.

When I had a spare moment, I'd sometimes wonder if there'd been any chance I could have persuaded Franco and the others to let the Inspectors back into D5. And what if I had? Would it have made a difference? Maybe Zeller would have hit D4 instead. I can't know.

END VICTOR PETERSON

BEGIN GAIL BEESON

In addition to everything else, I admire Allie Dinh for her defense of Epsun. Regular food shipments had continued, including shipments to Alpha, but Zeller must have decided he wanted to take control of the food supply himself. This time he sent Dan Murphy with a force of Exers. They also had a convoy of hijacked trucks with them.

They tried to encircle Epsun, but ran into trouble with their vehicles right away. I'm told this may have been due to "electronic countermeasures," but I don't really know what that would have been.

Allie went outside with a few of her bodyguards and talked to Dan Murphy. She explained that she was Team Lead for Epsun. She wasn't going to let him into Epsun, and she wasn't going to hand over any starch or greens.

I want to make clear that you shouldn't believe the version of the story that says she offered him a banana. That's just a legend. People made that up after the fact. It's not the sort of thing Allie would do, at all. Anyway, she explained that Epsun was armed, and, after retreating, set off two very large landmines, near, but not underneath, the vehicles.

It's quite possible she was bluffing. Maybe Epsun wasn't defensible. Maybe they would have all died. In the event, Murphy declined to call her bluff and withdrew. Minus a couple of the black vehicles that had become unmovable, and couldn't even be towed. Those vehicles were later repainted and used for other purposes at Epsun.

The Exers soothed their feelings by going around and kidnapping some people from a random D1 outpost. They beat them up and held them in some kind of detention at Ex for a while, but they didn't kill anyone on this occasion.

END GAIL BEESON

BEGIN VICTOR PETERSON

Scared Timmy went missing for a week and half after the D5 massacre, and then he tried to sneak back in. You can't really sneak into a place like D4. Dan Heilman collared him and we put him in a room where we could talk to him.

Dan pulled me into the room as well. I was reminded of my chats with Tony Strickland, except that this time there were no peanuts, and no tasers. Dan sat across from Timmy. I sat in a chair against the wall on the side.

Timmy didn't know nothin'. He'd been at Alpha on some kind of mystery leave. Didn't have any idea about anything at all. No clue.

Dan tried again. "We need to know, Tim. It's crucial. For us, and for the other towns. We've gotta know what happened. We've gotta have the details of what happened."

"But I can't help you!" Timmy's eyes were darting all over the place.

"Yes, you can, Tim. You know you can." Dan scratched his nose. "Do you really think you're going to be all right? If Zeller kills the rest of us? Do you think you'll be okay?"

Timmy didn't say anything.

"You really think he needs you? He doesn't need you. He doesn't need you at all."

That seemed to get through, a little bit.

"You know what? Unlike them, we're not going to hurt you."

Timmy glanced sideways at me. Of course he was thinking about all the times he'd reported me to Strickland.

"Not gonna hurt you, Timmy," I said.

He thought about that for a while, and he must have believed me. The darting eyes settled down. He started stuttering, paused, and started over.

"They took us out there in a bus. It was all over by then. Just blasted. The whole place. All the doors gone, inside. We were supposed to put the bodies in a hole they dug outside. By the tailings. Umm . . . a hole. Also, haul a lot of stuff out of the place. They were taking stuff with them. They were . . . looting it, I guess?"

He had run himself out of words, and had to collect himself again.

"It was all outside work, for us. In the cold. In the town, too. Only the bus was warm. Everything was vacuum. I've never seen a town in vacuum. All the inside stuff ruined. It was bad. And the bodies. I don't know how many bodies. A lot of bodies. They wanted us to strip off the suits. To use again. So the guys are lying in that hole. In their jackets. That isn't right, is it? Burying someone without a suit?" He looked scandalized.

"And they were all frozen stiff. I guess this was the next day, after . . . afterwards." He gestured vaguely.

"The whole thing isn't right. Just not right. Anyway, it was tough to pull the suits off. My gloves were clumsy. Sometimes I had to cut a suit to get it off. And there was blood. Frozen solid . . . chunks of blood. Fingers, frozen in the gloves. I had to break off fingers. And the faces . . ." He broke apart and started sobbing.

Dan got up and walked around and patted him on the shoulder.

"I think you'll like us better than your old friends, Timmy," he said.

Dan is nice that way, but I didn't think Timmy was going to change, particularly. And he didn't.

END VICTOR PETERSON

BEGIN GAIL BEESON

There's a stone out there now, and it says "Hic Jacet D5." Gus Palumbo has said he wants to be added there, when he goes. The other two haven't said, one way or the other.

I know it's Latin, and it means "Here Lies D5." But for some reason, it makes me think of them lying there in their jackets, Carol and the rest of them. Because they were buried without space suits. Since First Landing, people have always been buried in space suits, with a hole in the suit.

But Carol, and Franco, and all the others, all they've got is their "hick jackets." And it makes me laugh, just a little. I don't know why. Is that bad?

END GAIL BEESON

BEGIN ISABEL HERNANDEZ

Earth was told that the D5 colonists had rioted and burned down their own town - that's what the Corporation said. That was Admin's angle, of course. They downplayed the casualties, too. But they didn't get their way.

Gary Brodeur sent me massive quantities of evidence, including pictures, and he kept sending me more. He had an axe to grind, of course. I knew perfectly well he had it in for Zeller and Admin. But with Vic's word behind him, I didn't hold back. I opened the floodgates, and Admin's version of the story got washed all the way down the canyon.

To start with, I only made an impression in the foreign news. But the Corporation didn't exactly have a lot of credibility at the moment with people who mattered. Then the Monthly Minutes came through, and colonist after colonist reassured their relatives that they were okay, an attribute they hadn't typically felt the need to stress previously. The total silence from D5 was easy enough to piece together. It came as a shock.

Admin's narrative collapsed and drifted away in this flood of information, and they were left with no story at all. The domestic news outlets took a break from their default mode of distraction and coverup, and started simply reporting the facts for a change. It was strange and refreshing.

As much as I loved writing out the words "multiple sources from Mars report . . ." as part of each new revelation, that assertion had to be carefully limited to the bare fact of Bart Zeller's culpability. The meatier items came from a single source, and I made that clear in my grammar. After all, I never knew when I might have to distance myself from that single, highly fallible, source!

END ISABEL HERNANDEZ

BEGIN GAIL BEESON

If it went through, Twelfth Landing was going to be half a Landing. We couldn't accommodate more than half a Landing. Within our limits, though, we did everything we could to prepare - hoping that Earth could be persuaded to carry on, despite everything that had happened. More than anything else, we needed to conclude a deal.

Manual Rojas and Admin still wouldn't talk to us, so we negotiated with Alicia Phillips and the Free Colonists instead. The deal was that the Committees would immediately raise production to 80%, and then to 100% after the free communicators for everyone had actually arrived. Similarly, pay would be 80%, and then it would be 100%.

The missing production, plus all the missing payments and losses from the Pause, presented an obstacle. The Committees flatly refused to have these

debts assigned to the individual colonists. So we agreed that they would be assigned to a series of accounts at a brand new "Bank of Reparations."

The "Bank of Reparations" is an odd duck. It will be serviced by a number of theoretical revenue streams, almost all of them situated in the future. Notably, alcohol sales at the bars will be dedicated to this purpose. But these are token payments, and they're not even enough to cover the interest. So the balance will continue to grow until some unspecified time in the future. You can be of your own mind what will happen then.

The new Mars Constitution starts with its single most important point: "No person will be deprived of their permanent piece of the wealth of Mars."

Well, what does that mean? For the moment, it's left to your imagination. That's as much as everyone could agree on, right now, and so that's what is in there. You can argue about the implementation, but you can't argue away the fact that it's the first sentence of the constitution.

Immediately after that it says: "It is okay for anyone to talk to anyone about anything. It is not okay to stop them from talking, or to listen in on them."

And later on, more specifically: "The Committees will from time to time obtain and distribute the technical means for each person to talk any other person without any third person seeing or blocking their communication."

No one on Earth agreed to this constitution. They weren't asked to. On Mars, only the Management and Discipline Committee actually rejected it. That sealed their destiny as a punchline. After that, they were the standard butt for any joke about stupidity.

Nobody asked Ex. In Admin, our usual contacts gave us the nod, almost imperceptibly, while looking backwards over their shoulders.

The Founder's friends persuaded him to agree to the deal, and to do his best to convince Earth to send the ships. Like an old horse, he settled into harness, and started getting traction with his old contacts. As far as I heard, he exerted all of his remaining strength in support of Twelfth Landing.

END GAIL BEESON

## 14. Alpha

The Editor would like to thank Rafi Eisenberg of the Alpha Committee for sharing the audio picked up by one of the microphones in a common area during the Fight for Alpha. It is hoped that this transcript will convey an impression of being present at the events.

### BEGIN RECORDING

The recording opens with a warning siren.

Loudspeaker: "Suit up. Suit up immediately. All sections. Suit up."

Running feet. Indistinguishable hubbub. Distant gunshots.

Loudspeaker (a different voice): "Resistance Plan A. Plan A. This is Alpha Committee. The Exers are in Alpha and shooting. Inspections is on our side. Repeat, Inspections and the Committee are working together. Go to your stations. Plan A."

Pause.

Loudspeaker: "Warning, sections may go cold at any time. Keep your hat on. Or keep it really, really close. I'm not kidding."

Pause. Sound of feet. Indistinguishable voices, both helmeted and not.

Loudspeaker: "The Exers are in Midway, heading for Admin and Bridgetown. Admin is evacuated. Get out of Bridgetown if you haven't already. Avoid Midway. They're shooting people."

Pause. Distant thuds.

Loudspeaker: "Safety is with us now. Repeat, Safety, Inspections, and the Committee are on the same page. The Exers are not in full strength. Looks like about half of them. They're in Midway and Admin right now. We'll put a map on the screens. They're going for Bridgetown."

Helmeted voices: "Here, can you help carry this?" "Sure." "Why're we moving these?" "Barricading Midway." "What?" "Behind them." "You serious?" (fading out)

Pause. More running feet. Gunshots, closer this time.

Loudspeaker: "This is Jim Bridgewater. Speaking to Ex. I'm not in Bridgetown anymore, so please stop breaking down the doors over there. Listen, I'm asking you to stand down. Return to Ex. This is not the right way. You know this is not the right way. Please, just, return to Ex [mumbling]."

Loudspeaker (music): "Get up, stand up. Stand up for your rights [etc]."

Pause.

Voice 1 (unhelmeted): "Put her down. I'm going to try to fix the tourniquet."

Voice 2: "It's sloshing around in there."

Voice 3: "Has she said anything more?"

Voice 2: "No, she stopped talking a couple minutes ago."

Voice 1: "I can't get this thing to hold. She's still losing blood."

Pause.

Voice 4 (helmeted): "Watch out, we're going cold! Get your hats on, right now! We're opening up this section to the outside. Going cold in a moment."

Voice 1: "Okay, okay." (Helmeted) "Hey, we can't seal her up. Too many holes. Where can we go?"

Voice 4: "Medical's in the Theater. That way. They should stay warm in there. We're just opening it up from here all the way down to Midway."

Voice 1 (further away): "Okay. Can you get them to hold off just a little more?"

Voice 3: "Yes, please!"

Voice 4 (also further away): "I'll try. Hurry."

Pause of two minutes and 15 seconds.

Loud whooshing sound. The recording goes to a much quieter volume. Clicks. Low rumbling.

Pause, followed by several helmeted voices, quiet and indistinguishable.

A much softer whooshing sound.

Long pause. Distant thuds. End of recording.

END RECORDING

Editor here. The voices heard in the recording are not identified. The casualty being discussed may be Abigail Warden, who did not survive.

BEGIN VICTOR PETERSON

Maybe Zeller was out of options?

He must have thought he had some kind of understanding with Brodeur. Maybe that Brodeur would stand aside? He was certainly counting on Rojas to hold Admin for him, while he took Bridgetown. But he remained at Ex himself, with half his crew, and sent the other half into Alpha with Dan Murphy and Frankie Omar.

"The situation on Mars has been pacified, and is safe for investment," he preemptively broadcast to both Mars and Earth. "Rioters and ringleaders will be punished. Production will be ramped up. We will use existing labor resources, or new resources to be imported. We're back in business."

I doubt Zeller cared if there were fifty people left alive on Mars when he finished consolidating power. The problem for him was that everyone else understood that, too.

Manual Rojas let the Exers into Alpha, and then he switched sides and blocked the doors. Admin evacuated itself into the bowels of Warrentville. Safety and Medical stayed near the doors.

Gary Brodeur was prepared for this event, obviously. He had concentrated thirty or more Inspectors into Alpha. Surprisingly, they had rifles. And grenades. And drones that could fly indoors. And "search and rescue" crawler bots that could crawl up and find you, with a grenade in their grip.

The Alpha Committee had hundreds of defense squad colonists with shotguns. And preplaced explosives in all sorts of unexpected places. The main and backup wiring in the tunnels had been modified for additional functions. They had real-time information on where everyone was; they patched into all the screens and speakers and broadcast that information, together with appeals from Bridgewater, loud music, and demands for the Exers to surrender.

The Exers punched through into Admin and Bridgetown, killed a few people who got in their way, and found those locations largely deserted. But they took some casualties, too. It was not a repeat of the D5 massacre. Detonations started a few slow leaks in Bridgetown, and the pressure began to drop. The Exers found their line of retreat blocked. They fortified themselves into a central area in Midway and called for reinforcements. But no reinforcements came.

At this point the Alpha Committee dropped Midway into the cold. The damage and material loss was enormous, since a lot of indoor things can't survive vacuum, but it was clearly necessary. And it had always been in the plans.

The Exers had oxygen, but Alpha had more oxygen. Warrentville was still fully pressurized. Grenades kept finding their way into the Exer positions. After holding out for a while, the Exers tried for a breakout. Preplaced charges on their route killed precisely Omar and Murphy. After that almost no one else died. The Exers put down their rifles and surrendered.

The reason that reinforcements had failed to come was that Bart Zeller and Chad Yanez were already dead at that point. There had been a bomb, or more than one. Take your pick of any one of five or six different explanations. My own belief is that Brodeur had an agent in Ex who assassinated Zeller, and then somehow managed to avoid getting identified. Or maybe the assassin died too.

However, the most popular explanation is that this was a coup d'etat carried out by Shawna Stroman. She was the last of the D5 murderers, and she was certainly running things at Ex after the failed attack on Alpha. But the timing doesn't make sense to me.

These people were tremendously isolated. I'm sure they expected their grab for Alpha to succeed. Why would she have risked failure in order to take power at this juncture? But maybe it's a mistake to read too much into the actions of these people. They were all very, very sick.

There followed a two week war of nerves between Alpha and Ex. Defections and sabotage began to tell increasingly against the latter. Finally, Stroman and eight of her loyalists made a break for an Ex outpost halfway around the planet.

The Alpha Committee did nothing more than keep drones and surveillance on them for the next six months. Then something bloody happened out there. There were three survivors, not including Stroman. They negotiated a surrender and returned to Alpha.

END VICTOR PETERSON

BEGIN ISABEL HERNANDEZ

Buying freekoms for Mars was a big and difficult operation. What made it so difficult was that we were doing this practically out in the open. Not in an "announced on the evening news" sense, but in the sense that important people knew about it and were enabling it. To the point of leaning on US Customs to allow these things into the country and onto a ship to Mars. Do you know how badly Customs wants to put its fingers all over everything? And how much that's an absolute nonstarter for anyone who cares about the interests of the Mars colonists?

We won that one! Now, I would get all excited about "absolutist demands of the State broken, smashed, scattered to the four winds!" except I know perfectly well this was a one-off, and that it was purely for the convenience of the powers that be.

Protecting my sources and methods was a huge challenge. We had to arrange multiple points of transfer, including a dead drop, and we somehow had to get payment through cutouts and in-kind deals. I couldn't actually be sure it was 100% clean. My counterparts accepted significant risk, though they seem to have come out okay in the end. We agreed on one thing: the cause was worth it!

END ISABEL HERNANDEZ

BEGIN MATEO HERNANDEZ

Yeah, I don't know who built the freekoms. What I know is that they got delivered in Thorshaven in the Faroe Islands, up in the North Atlantic. They got loaded onto a small ship that went up and down in the waves a lot.

I know because I was on the ship, along with a dozen other landscapers and janitors and some sailors. I didn't know any of them. They didn't trust

each other very much, and they didn't trust me at all. They called me "the commissar from the central committee," and they didn't mean that in a nice way, either.

The gear added up to a couple of tons of freekoms, relays, and interplanetary communications dishes. It was packed into something like a hundred boxes that were small enough so one person could carry a box. They were elaborately sealed and chained together, and we chained ourselves to the boxes. We watched them in shifts, never less than half a dozen to a shift, which means we sat on them.

Then we spent a week offshore at anchor waiting for them to get done with an interplanetary pissing contest over Customs. They said we might be smuggling drugs or weapons. Right! We were transporting something much more dangerous than that, and everybody knew it.

They eventually agreed on "sampling." They couldn't take anything into a back room, but they could point at a few boxes, and we would open them in front of them, while they got to watch, but not touch. They hated that. So did we. We resealed the sample boxes, but I think the colonists maybe later gave those ones to the narcs and the inspectors.

END MATEO HERNANDEZ

BEGIN VICTOR PETERSON

Alpha got patched up, and they stopped the leaks. I moved from D4 back into Outpost Fifteen, and went back to mining ice. We were going to be at 80% production until the freekoms arrived.

I generally did close to my 80% quota. There were a few guys at the other outposts who were bothered by the idea of doing less than their best, now that we were up and running again. I can understand that. So they did 100%, and the rest of us passed around occasional breaks, so the result came out to 80%.

Ex got shut down, and we started up a new Prospecting Team. It's six or eight people, and they do actual prospecting. The Ex outposts are mothballed. We told the Chinese to go ahead and use them if they need them in an emergency. Just let us know, and put everything back when you're done.

There was a problem about what to do with the Exers. A few were genuine psych cases, but most of them just needed more time around normal people. They preferred to hang out with each other, of course. That wasn't such a great idea. You could say that was pretty much the problem to begin with. There was some discussion, and it wound up being "a year on ice," or a few other things. Rehab options, I suppose.

Andy let it be known that he loved us like brothers, but he wouldn't mind at all switching to a safe and comfy job in town. So he ditched us, and we got a tall guy named Mark. He'd been on the perimeter at D5, at Epsun, and at Alpha, where he'd lost some fingers to a grenade. He was nervous around

Shack and me at first, but we didn't treat him any different. Eventually he settled down and chilled out. We don't talk about the Troubles much.

END VICTOR PETERSON

BEGIN GAIL BEESON

Manuel went through a rough time. For old times sake I stopped by a couple of times, to see if I could help. I think he always knew he was going to wind up in second place. He's just doesn't have that killer instinct. But seeing it come true was hard on him.

The fact was, Brodeur had a level of popular support. Manuel Rojas just . . . didn't. His association with Zeller was never going to go away. Nor was his reputation. He was known around the colony for partying and luxury and waste, for everything the regular colonists hated. Of course, public opinion doesn't matter. At least, on a formal level it doesn't matter.

Manuel could pretend to himself for a while that he still had a shot at the top job. But the Committees put out a statement in support of Brodeur. And then finally, after Twelfth Landing had launched and was underway, the Founder and his board made their announcement. Gary Brodeur would take overall control of Admin immediately. And Gary Brodeur would be the next CEO of the Corporation. Rojas was out.

He started to show some signs of mental illness, maybe paranoia. Since he was still officially in charge of Safety, this made people nervous. His friends advised him to step down. I, too, suggested he step down.

"You know what they told me?" he asked.

"What?" I said.

"They invited me to go to Epsun. To live there. Picking greens! That's what they told me. Allie said so."

"It might not be such a bad idea," I said. "You could get away from Bridgetown. Epsun is a beautiful place. Almost a paradise, if you go out into the domes at daybreak."

"I don't need to pick greens," he said.

"Of course you don't. You've got plenty of funds. I know that. But it might be good for you. You don't want to wind up in a psych cell. You know that's what they're thinking."

"Yeah, that's what they're thinking." He brooded. "I don't like it."

He burst out, "Those are our psych cells! Safety controls them!"

I tried a different angle. "Working on the salt line has been good for me," I said, "it's really not so bad." And I gave him a wry look. He laughed at the wry look, and he calmed down a little.

"You know," I said, giving him the serious explanation, "I've lost some people along the way. Good friends. I wish I could talk to them. But I can't. If I let myself think about it too much, I might wind up in a psych cell myself. Keeping busy helps. I think it might help you."

"Maybe," he said reluctantly.

A week later he resigned his Safety Lead, and went off to Epsun to pick greens.

That made for a change here in the colony. We still work hard, of course. But "picking greens" came into the language. Slowing down was a thing that didn't exist before. If someone couldn't handle things, you'd say "he's going to wind up in a psych cell." And sometimes he did. Now you might say, "he needs to go pick greens for a while."

Before, the idea of taking a break - of giving someone else a break - was absurd. That was not something we did. Now it's at least socially conceivable. I think it's a good thing.

Not everybody likes it. I hear a fair amount of grumbling. They say nobody works hard anymore, and they blame the Twelfth Landing kids for that. I don't really think that's true. Just my opinion.

END GAIL BEESON

BEGIN VICTOR PETERSON

"You can't accept it," I told him.

"What the hell!" Liam said.

If you remember, Liam Dutton was Chair at Gamma. Well, Admin went out of its way and awarded him an outsized bonus for his part in Isaac Schaffner's photovoltaic process. Isaac was given a big bonus, too. Andrea Jackson from Beta was given a smaller bonus, for her bottle gaskets.

"You know what they're doing," I said. "They're buying you off."

"So what? I don't have to do what they say."

"How's anyone supposed to know that? They'll assume you're under the thumb."

"Well, I'm not."

"Admin's trying to split you away from Gamma. This is their method. Now your interests are different. It's how these people work. You can't accept it."

"Of course I can," he said. "I worked with Isaac on those lines. It's a huge deal. It makes the whole thing possible. The whole colony. It's worth every penny of that bonus, and a hundred times over."

"Of course it is. I'm not saying it isn't! But that's not what's going on here. And you know it."

"I don't care."

"You're giving away what the Pause won."

"Piss off." And he hung up on me.

The next day, he called me back.

"Okay, I'm going to resign from the Committee Chair," he said. "I'll take the bonus and there won't be a problem."

"Sorry Liam, no," I said. "It's bigger than that. It's bigger than you. It's about the future. We have to get rid of the bonus system. It's the only way."

"You're an idiot," he said. Click.

Of course I knew what was bothering him. And why he was still talking to me. That PV line had been mostly Isaac's baby, and Isaac had in fact made the main breakthrough. So he felt awkward about the whole thing to begin with.

We went back and forth like this for days. Then he came out and announced publicly that he was rejecting his bonus. And explained why: the system had to go. That set off a total firestorm. Friend fought friend, just like I fought Liam. I think people got more excited and wrought up about the Bonus Debate than they did over the Fight for Alpha.

Andrea Jackson from Beta screamed the loudest. She'd worked on this for years. No way was she was giving up her bonus. To be honest, everyone agreed with her. Reliable bottle seals, made at home, hit people in a visceral place. The prospect of dependable door seals in the near future was almost existential.

But letting Admin make the call - that just wasn't going to be possible anymore. Everybody knew what that meant. So after the argument settled down a bit, the Committees moved and turned the bonus system into an annual popular vote. The current year's awards were re-run as a one-colonist one-vote election. Liam bowed out, kept his Chair, and superintended the election.

Jackson came in first, with Schaffner second. I guess I was a little surprised the seals were rated more important than PV. It was, admittedly, lousy PV. Both of them were awarded more money than Admin had assigned them in the first round, since Liam had taken himself out of the running.

Then Admin tried to dodge making the payments. The Committees declared an open-ended public holiday. No work. Admin paid up the same day, and that was that. There's talk of making Bonus Day an annual holiday, like Landing Day.

END VICTOR PETERSON

BEGIN GAIL BEESON

Twelfth Landing got here before the free communicators arrived, since it took longer to organize the communicators. It was half a Landing, about a thousand people. And it was a culture shock. Newbies always take a while to get acclimated, but this was more than the usual adjustment.

People had set out from Earth with some definite expectations, and when they got here they found the situation on Mars had shifted completely out from under them. The rug they were standing on got yanked.

When they found out their dream bonus would now depend on a popularity contest with other colonists, some of them wanted to go back. Of

course, that wasn't really an option. Others hadn't quite realized the eight percent interest rate they had been given on their passage loans was only good for the first year, and the rate on Mars was now fifteen percent.

Immersed in the mass of regular colonists, they drifted towards the prevailing temperature. But when they grasped the financial situation that had led to the Troubles, they couldn't immediately understand why we hadn't held out for a deal that would fix the problem of debt, pay, and interest. Why this pointless business about communications equipment? They had long since given up their privacy on Earth. They didn't understand why it should be any different on Mars.

We take them out to visit the ruins of D5, one busload at a time. Gus Palumbo describes how he was out cleaning solar panels at his outpost when the Exers pulled up, and how he realized they were shooting people. "Comms were out, see," he says, tapping the peanut through his suit. "Nobody knew anything." They walk through the blasted doors. They walk down the cold halls, where the red dust is slowly sifting in and covering the bloodstains on the floor. They walk over to the place in the embankment outside where everyone is buried. Most of them get the idea.

END GAIL BEESON

BEGIN MATEO HERNANDEZ

After the Customs crap got sorted out, we loaded up the freekom boxes onto a slow boat to Mars. There was a crew, and three of our guys to guard the boxes. There was a fierce lady named Valentina Flores, and an old guy with a missing eye named Jack Jensen. And they put me on that boat.

This was after the regular departures, and the distance gets worse, so it took us absolutely forever to get to Mars. There was a bunch of other cargo, but we had a compartment to ourselves, and we could lock it from the inside. We were supposed to rigorously keep two people awake at all times. Have you ever tried to do something like that while you're sitting in a little room for months and months? I think the idea was to make sure a single traitor couldn't mess up the shipment. I don't know if that actually made sense, but I knew better than to bring it up with the others. We did our best.

After we landed, we waited for the crew to get off, and then we waited for the colonists to get on. My job was to check it was really Vic, and that he was free and sane. You know, I don't know if I was sane by then. We exchanged code phrases, and I punched him and he punched me, and we called it good.

Jack and Valentina had the names and pictures of the Committee Chairs, and they insisted on seeing everyone in person. For some reason they were also determined to do the handover in the main terminal, not on the ship. So Valentina stayed chained up, guarding the boxes on the ship, and Jack chained himself to the boxes in the terminal.

They locked me to the boxes in transit, and I carried every one of those boxes from one place to the other, through two airlocks. It took most of the day. The colonists stood aside, grinning sometimes, and opening and closing the doors for me. Then we all stood around in the main terminal, all formal, and turned over the boxes to the Committee Chairs.

END MATEO HERNANDEZ

BEGIN GAIL BEESON

We took delivery of the freekoms in the big vehicle bay at Alpha where the freight comes in. Then we found them some quiet rooms so they could get a bit of sleep. Valentina Flores woke up screaming. She was having nightmares where we were taking the chains off her, and taking her boxes away. I went in and listened while she talked it out. She's a tough lady, tougher than I am for sure, but she'd been under a lot of strain. Then she slept better.

When Mateo got up, Vic and I dragged him off to the cafeteria, and the two of them had a chance to catch up. Vic had been telling me about Mateo, but he wasn't what I expected at all. He's too normal. I was expecting this beaten-up granite monolith, covered in dings and bashes and scars. But he's just a normal guy. Even a little handsome. When he tried the beer, he wrinkled his nose. We laughed and told him that this was the new improved beer. Vic told him he absolutely had to go and visit the greens chambers at Epsun as soon as he got a chance.

As far as the Committees and the rest of it goes, it took us all a bit of effort to figure out how to use the freekoms. Effectively, I mean. You have to fit your meaning through the little text messages. There's a learning curve. But the freekoms do what they need to do, and we haven't looked back.

We have our own low bandwidth link over to Earth. There's a mechanism for relaying messages to people on the Blue Dot. The messages are encrypted, of course, until they get where they're going. We use that to convey news back and forth. And for Committee business. People can send and receive personal messages, too.

The personal messages caused a bit of kerfluffle. People tried talking the way they do here, and their friends and family on Earth got in trouble for it. Often they got in trouble just for receiving the messages, not even for answering back!

So there's still an unfortunate communications bottleneck between Mars and Earth. It's just more on the Earth end now. I'm told they're talking about "Permanent Pieces of Earth" over there, though. Unlike ours, a piece of Earth would start off with a net positive income. If they can persuade the current owners to cut them in, of course.

Valentina and Jack both found useful work at Alpha. Bloody-minded determination is a good trait to have on Mars. They'll do fine.

Mateo joined up with a salt line at D7. Vic and I keep in contact with him and his girlfriend Mia. We've managed to meet up with them on leave once or twice. He got in a fight and got his nose broken again. Maybe there's granite in him after all. In his head, at least.

END GAIL BEESON

BEGIN VICTOR PETERSON

Of course I trust Brodeur - I trust him to follow his own advantage. And so I worry he may try to mess with our freekoms. He may try to take back the keys to the treasure chamber. If he does try, I hope he looks down and realizes, like a cartoon character who has run off the edge of a cliff, that he needs the support of the colonists after all.

Are the freekoms really free of back doors of any kind? Frankly, I don't know. Maybe they are, and maybe they aren't. Any time I don't know enough to estimate the probabilities, I have to say 50% yes and 50% no.

Has quantum computing broken public key encryption? 50 - 50. Are Izzy's communications as good as she thinks they are? 50 - 50.

There's another dilemma. Izzy thinks her communications are good because she hasn't been busted yet. Sure, there are cycles of busts and moppings-up. That happens. You can see it. There's a pattern. The pattern may not cover everyone, though. What happened to Robert. To my parents. That seems like it might have come from a different place. That doesn't fit the pattern.

But, you know, if some day some well-dressed person comes up to me and says, "I knew what you were, and I intentionally let you go to Mars," or some claim like that? I'm going to be pretty cool to that person. Whatever their alleged reasons may be. That's no friend of mine. I don't owe them anything. I'll ask, "well, and what are you going to do next?"

Because I know this: when people decide spying is wrong, they'll get rid of it. That will happen. Spies will keep on spying, but they won't be able to use what they get. It won't do them any good. Everyone will understand that the spying itself is worse than anything it reveals. They won't care what you say. You won't be able to distract them from their real interests.

END VICTOR PETERSON

BEGIN ISABEL HERNANDEZ

I want to be clear about one thing:

I took a cut.

Yes, I did.

I know that sounds like I took an advantage. Like I'm an advantagetaker. But it was necessary. Hear me out.

If I was going to act as an agent in this transaction, I would have to expect to get doxxed and outed. And then I would never work in law again. Why would my firm keep me as an employee? Why would any other firm hire me? From there, it's a short step to the labor camp, given my debt.

Now I'm just as willing to charge the machine guns as anyone else - if there's a good reason to do so. But there was no reason to simply hand these guys a loaded blackmail gun. They're the kind of people who can't believe blackmail won't work. So they'll make demands. And I'll say no. And then they'll have to pull the trigger. And doxx me. Because that's who they are.

So I insisted on a commission. Enough to pay off my law school debt and my house, and to give me something to live on. And, as it has turned out, I haven't been outed. I've been able to keep working. And the reason for that, of course, is that the blackmail gun isn't loaded.

The guys who took the shipment through Customs aren't trying to work in law. They got paid. Mateo got free passage to Mars.

Vic didn't take anything.

He carried a virus to Mars, you might say, but now everyone's got it, and he's no different from the rest. They still need all hands at work. They're building a country of people, not laws. He doesn't stick out like a sore thumb over there, the way I would stick out on Earth.

Maybe you think I'm deceiving myself? Lying and rationalizing my own selfish motives? You can think what you like. But I don't think so. I think my reasons carry the weight. Anyway that's what I'm sayin'.

END ISABEL HERNANDEZ

BEGIN VICTOR PETERSON

I know who I'll be voting for next Bonus Day. (That is, unless Liam figures out home steel this year. He's been throwing himself into it. I don't know, though. What are his chances on steel? 50 - 50, I suppose.)

But what's certain is that Len Czarnecki, the food wizard at Epsun, finally figured out how to synthesize fatty acids like omega threes and omega sixes, and how to produce them in quantity. We got some sample tasters first, and now they're about to start full production. I might get into cooking. Do you know how much better synthetic starch and reconstituted greens taste when you drizzle some oil over them? Seriously, it's night and day.

END VICTOR PETERSON

## **Epilogue: Founder's Funeral**

BEGIN VICTOR PETERSON

Some people want to be composted, and Epsun has a memorial garden for that. One or two want to be sent back to Earth.

But most people get buried outside. In the ground. The cemetery is on a small rise just outside Alpha. For some reason it's traditional to be buried in a broken space suit. If there isn't an opening in the suit, they make one. The body dries out. The hole is four feet deep. It needs to be deep enough to stay there for a long time, but there are no animals to worry about.

I'd never seen so many people outside and in one place. There were thousands and thousands of them pouring out through the big vehicle airlocks. It was an in-person thing, and I've heard people mention that they were there, later. Or regret that they weren't.

Not much to it. They brought out Bridgewater on a stretcher. Big gap in the chest of the space suit. They put him in the hole and filled it up with the scoops you use when you're clearing the dust away from an airlock. A couple of rocks on top. A marker with a name and two dates: one Earth date and one Mars date. I'd like to see a future archaeologist figure that one out.

There was some light dust in the air, so the sky was redder than usual as the sun went down blue. And we went back inside.

END VICTOR PETERSON