## City of Reason

## **MATTHEW JARPE**

From Hartwell, David Year's Best SF 11 (2006)

Matthew Jarpe (home.comcast.net/m.jarpe/) lives in Quincy, Massachusetts, with his wife and son. "I currently work (as a biochemist) at a company in Cambridge, Massachusets, called Biogen Idee. I characterize interactions between molecules," he says on his website, and "I like to cook, build things, and brew beer." Jarpe has published six SF stories to date in six years, five in Asimov's and one in Fantasy & Science Fiction. In the 1990s he was part of Hal Clement's SF writing circle.

"City of Reason" was published in Asimov's. It's an exciting space opera with action, complex intrigue, a nuclear weapon, mind control, a posthuman teenage girl, and much more. Out on the edge of the solar system, a man who is supposed to find out information about space ships for an agency that sells the information finds a ship containing two teenagers and a nuclear weapon, on their way to destroy a city.

Homesteaders made for easy pickings. For one thing, they were hell and gone outside the orbit of Neptune, the last crumb of civilization before the big dark. For another, they all had philosophies. You didn't up and leave mainstream humanity unless you had some ideas that just wouldn't work inside someone else's system. And so the homesteaders moved out and set up on transNeptunian objects, balls of dirty ice, and made a go at Utopia. I've never heard of a philosophy that didn't cripple a society from defending itself properly. So most of the homesteads were weak.

Easy pickings, but slim. Their equipment wasn't the best. They didn't have loads of energy or raw materials, or biodiversity, or any of the stuff that makes a pirate happy to have risked his life to get. In fact, the Kuiper belt had gotten a reputation as a kind of pirate's farm system. You honed your skills out where the sun was dim, and when you had the moves and the weapons, you drifted down into the gravity well and you went major league.

So what was I doing out among the snowballs? Well, that's the thing. I'm not a pirate anymore. I've gone legit. Nowadays, when I reduce a manned spacecraft to a blob of alloy with a crispy center, I'm on the side of the angels. I'm a Damager, license right there on my forward bulkhead next to the picture of my sainted mother.

I get my information from the eye in the sky. The Coordinator Group maintains three space stations in solar polar orbits that are perpendicular to the ecliptic. Between those SoPo stations and the spy bots saltandpeppered around the system, those bastards see everything. Needless to say, the rise of the Coordinator Group was what persuaded me and others like me to go legit. Best play for the winning team.

So there I am, cooling my heels and everything else besides out past the orbit of Neptune, when I get a blip on my radar. Something is out there, and it isn't supposed to be, and the Coordinators don't know about it, and that's the first time that's happened to me.

It's too late for me to go all stealthy. I've had my radar and transponder shouting out for all to hear, so I've already given up my shit. I figured I might as well play Damager, so I flipped on the horn and spoke in Belligerent Asshole voice.

"This is the licensed Damager *One in the Hand* addressing the unidentified object at 183.24.46 incline—16 out 67 heading 004.58.07. Please reactivate transponder and identify." At the same time, I sent a burst of machine code that would give the same message, minus the belligerent tone, to the automated systems of the ship.

And how did I know it was a ship and not some piece of rock wandering off its accustomed orbit? After all, the only thing I had to go on was a little radar blip. It could be anything. Well, call it a gut feeling if you want to. A few minutes of datagathering and my ship's targeting computer confirmed my suspicions. The thing was hollow and rotating, and about thirty thousand klicks back, it had shed a wisp of chemical rocket exhaust during a coursecorrecting burn.

So I was right. Hell, I ought to be. I've survived out here longer than most people have been alive, and most of that time was spent hunting ships. I can smell a can of meat across a thousand kilometers of void.

But there was no answer from the unidentified vessel. Nobody ignores a Damager. I laid in a course and burned hard for the cheeky bastard. I overtook easily in just a few hours. He didn't even try to run. That's when I got my first look at the ship.

Ship. I'm being charitable. It was made of rock and ice, and only a miracle gave it enough balance to burn the engines without wobble. This thing wouldn't last ten minutes inside the orbit of Mars. Sol would cook off the ice and leave nothing holding it together. It was no wonder the Coordinators hadn't pegged it. It looked like just another fucking rock.

"In case you haven't got any sensors, my friend, I'll tell you that I've matched vectors two thousand meters from your... well, I guess we'll call it a vessel. Now, I already told you I'm a Damager, but just in case you've been living under a rock, or inside one, for a long time, I'll tell you what that means. That means I've got a weapon trained on you that will take your whole outfit down to plasma in just a couple of seconds. Okay, you're probably asking yourself about now what you have to do to avoid the fate I've just described. You can tell me who you are for starters, and we'll go from there."

I gave it a few minutes with my message repeating on all frequencies in a couple dozen common languages and I got my reply. "Uh, don't shoot, mister. I'm Jesse Marslarsen. I'm out of the High Fantastic Empire of TransEmotional Excellence."

I looked that one up. Sixtythree people in a cave hollowed out of an ice ball about two hundred million clicks from here. Pretty goddamned Fantastic. "Good job, Jesse. I'm about 50 percent less likely to kill you now that you've started talking. What's the name and registration number of your vehicle there?"

"I don't... have one. It's homemade."

"I kind of figured. So you never registered this thing with the Coordinator Group?"

"We can't afford the fee," the voice said. "We don't produce anything to trade, you know."

"I've got that information on my screen, yeah. Only it's dangerous to be out here without the Coordinators knowing what you're about. Guy like me is likely to shoot first and explain the situation to the oversight board later. They usually don't care much. Tell you what, Jesse Marslarsen. Let's give your ship a name. I'm going to call it *JAFR*."

"What is that, a random code?"

"No," I said. I was about to tell him what it stood for, then I thought better of it. "Yes, that's what it is." Jesse didn't sound like he had much of a sense of humor there. "Now we're going to do pretty much what

the Coordinators do when they register a flight. I'm going to ask what your business is, where you're going and why, and then I'm going to find out what you've got on board. The whole purpose is so we can let the people at your destination know that you're no danger and they're safe to let you dock. If they're willing to pay for that information, of course."

"Well, I guess there isn't much I can do to stop you," Jesse said. "I'm willing to tell you the whole story and let you on board to inspect, but you're not going to give any assurances to the people I'm on my way to see."

"Why is that, Jesse?"

"Because I'm going to kill them."

The probes I brought with me to the *JAFR* confirmed what Jesse had told me. He was transporting a rather hefty thermonuclear device buried in the rock and ice that was his ship. He had no other ordnance, no weapons of any kind. Just one honking great bomb, a standard ion drive, and a rather meager lifesupport bubble. I was rather impressed that they had gone to the trouble to outfit this crummy little ship with a lifeboat and a distress radio. Perhaps a futile gesture in this sparsely populated region, but you had to give them points for thinking ahead. The rest of the ship was barely adequate. It would have been cramped space for one human, but there were two people in there. Two young people.

I entered the ship through a short tunnel that led to an airlock. They let me in without protest or threat, but I kept my battle armor on anyway. Not just to be safe, but because talking to the blank metal faceplate and the array of sensors made people nervous. I like the answers I get from nervous people.

Jesse Marslarsen was just a kid, good darkhaired thinfaced Martian stock. The High Fantastic Empire was working on emotions, according to their published manifesto. They were using some genetic modifications and some hardware implants to... I don't know, conquer emotions or get in touch with them or something like that. Like most of these homesteader manifestos, it wasn't the clearest thing to read. They had reported no success to the rest of the solar system, but best of luck to them anyway. The battle armor trick was working on Jesse. I had thought he was highstrung talking to him on the radio, but in person he seemed ready to snap.

His companion was not of the High Fantastic Empire but from a neighboring colony. She was a darling little thing of sixteen Earth years, strawberry blond hair and green eyes, scattering of freckles across her nose. But looks were, as is so often the case in this day and age, deceiving. That cute little American cheerleader's body was just a walking feeder culture for sophont silk.

I'd seen people boost their brainpower with thread lots of times. I'll bet there isn't anyone on Luna who doesn't have a bit of silk in the old gray matter. It was a popular implant, not one of the ones I was using, but it had its adherents. It was nice to see that even this trend had been taken to its extreme out in the homesteads. I don't believe that there was anything left, mentally, of the young woman who had been called Shaunasie MacTaggart. When I spoke to her, found out who she was and where she was from, it was clear to me that I was talking to the silk.

She was from an enclave that called itself A Better Way. They didn't have much on file, and the name certainly didn't give me much to go on. If their whole philosophy was an unhealthy indulgence in mental enhancements, that made them dangerous enough. But what interested me right then was not why her colony had created such a loathsome creature, but why they had put it on this ship with this kid and this bomb.

"Jesse, Shaunasie, thanks for inviting me in here. I like it when people make my job easier. I'll be sure to remember that in my report. Now, do you mind telling me what you're up to? Looks like your trajectory

is taking you to someplace called the City of Reason in about twentythree days. What's your beef with these guys?"

"We're making a retaliatory strike against them," Jesse said. "They've repeatedly attacked us over the past two years."

"They've attacked both your home colonies?"

"No, they've only attacked the High Fantastic Empire so far, but everyone else in this region is at risk. A Better Way is just orbiting by beneath us, and they've been advising us, first on how to deal with the attacks, and now they're helping us to bring the fight to them. Shaunasie is here to do the strategic analysis of the base we're taking out, make sure the bomb is planted in the right place to do maximum damage. The High Fantastic Empire doesn't have any expertise in the arts of war."

"And A Better Way does?"

"Some of their people had done military service before coming out here."

"But not Shaunasie, certainly?"

"She's been trained by people with experience," Jesse said, glancing at the girl across the habitat bubble. "She can handle the job."

I turned to Shaunasie. "Is this a suicide mission?" At the same time I asked the question in standard Chinglish, I aimed a communication laser at the teardrop lens on her left cheek. I sent out some priority override codes to see what her implants would give up to a licensed Damager. Turned out: nothing. She was locked to me. As a Damager. But I already told you that I haven't been a Damager forever. Before joining up with the Coordinator Group, I was a criminal. That can come in handy, like it did now.

"Not necessarily," Shaunasie said. "We're prepared, if it comes to that." She glanced at Jessie and he looked back at her with admiration and pride.

"So you're willing to throw your life away just to help your neighbors?"

"I'm not throwing my life away. It's true, this isn't our fight. We'll be orbiting out of here in another ten years or so. But we can't let naked aggression like this go unanswered. Our council of elders was willing to risk my life to help these people." I had to hand it to the software that was running her. She was pretty good. I began to wonder whether her comradeinarms had any idea that she was a posthuman. My guess was no.

"Look, guys," I told them, "I have to tell you, it isn't my job to get mixed up in local politics. All I'm here to do is gather the information so that the Coordinator Group can put it on the market. If the City of Reason wants to pay our fee, they will find out everything that I know about you. You've been most helpful and for that I am grateful, but, and I'm being brutally honest here, if they buy what we're selling, the City of Reason is going to blow your ship into something that makes smithereens look chunky."

"They're not going to buy your information."

The young woman was probably right. The City of Reason was weird even by homesteader standards. They had never published a manifesto, had never registered themselves to receive immigrants, and had never once paid any sort of fee to the Coordinators. Now, true, nobody ever read the manifestos, nobody ever emigrated to the homesteads once they were set up, and when you didn't have trade, you usually couldn't make the Coordinators' fees. But at least most of the homesteaders acted like they were still part of the human race, if only a distant cousin twice removed. The City of Reason had left Titan,

grabbed a ball of dirty ice at the edge of the system, and had kept to themselves ever since.

"What exactly did the City of Reason do to make you want to drop a bomb on them?" I asked Jesse.

"They sent us Trojan horse datapackets that shut down our physical plant. We almost died."

"Uhhuh. And how do you know these data packets came from the City of Reason?"

"Our friends helped us trace the source," Jesse said, nodding at Shaunasie.

I shook my head inside the helmet. You'd think these crazies could get along with one another, being united against the rest of us, but it never seems to work out that way.

Shaunasie tossed her short hair in a perfect imitation of a defiant gesture. "These people have a right to defend themselves."

"Like I said before, it ain't my business to get mixed up in all this."

I pulled myself back to the airlock that would get me outside the cramped living quarters. I toyed briefly with the idea of telling Jesse what Shaunasie really was. They had spent one hundred fiftytwo days together so far, and had another twentythree to go before they completed their mission. Assuming they managed to drop their bomb and get away alive, they would have a hell of a long trip back even using the fastest transfer orbit.

Jesse was about eighteen Earth years old. Even if the High Fantastic Empire had some kind of sexual hangup, which I'm pretty sure they didn't, he would have to be crawling the walls trying to figure out a way to get at that tight little body of hers. Transemotional excellence notwithstanding. If he knew she was just software running on organic fibrils interspersed throughout her nervous system, he might lose interest. It would turn the rest of the trip from exquisite torture to something more like the heebiejeebies.

In the end, I decided against it. I was eighteen once. I know what I would have said if some old fart told me to stop wasting my time with my current love interest. I waved goodbye with a gloved hand, and left through the airlock.

As I took the sled back to my ship, I was doing a bit of datamining on the info I had teased out of the little tease on the *JAFR*. Nothing I had downloaded would be admissible in most courts, seeing as how I had stolen it. But the Coordinator Group was not a court. They didn't care where their information came from. They were simply brokers. They found things out, they sold that information, they stayed in business, and they helped the vastly complex process of interplanetary trade happen. Nobody got hurt.

They ordinarily wouldn't pay much for the inside scoop on a homestead, but I had a feeling that A Better Way was up to something the rest of the solar system would find distasteful at best, dangerous at worst. Human enhancement was a touchy issue. Nobody was ready to come out against any form of improvement, whether it was genetic manipulation of the unborn or hardware or organic implants in adults. The practice was just too pervasive. But all the same, everyone wanted to know what everyone else was up to. How smart, how fast, and how much of the natural type human mind was still intact? I didn't know whether the interest was selfdefense or keeping up with the competition. Maybe a bit of both.

The data dump I got from Miss MacTaggart gave me a good idea of what A Better Way was up to. They had a few thousand members, pretty thriving community for the Kuiper Belt. The elders were wellaugmented with hardware implants. Younger generations had some bold genetic modifications, all mental. They had a few dozen brainjacked kids still learning how to directlink with the three artificial

intelligences that ran the physical plant.

They were growing their own sophont silk. In the quantities they were using the stuff, I wasn't surprised. Millions of Outer System Currency Units couldn't buy the crop of thread that went into each baby. Yeah, that's right, they were threading the babies. As if drilling them for brainjacks wasn't enough.

So, it was a creepy setup. So, they were doing nasty things to children. I know that's all bad stuff, I'm no moral cripple. But I also knew that it wasn't moral outrage that would attract the high bidders. No, what they'd want to know was: what were the capabilities of this colony? What edge did their enhanced mental powers give them? And what did they plan to *do* with that power?

I left it to the Coordinator Group to figure that all out. They had the background on the colony's founders, and the data on what sort of mind you could expect to result from extreme abuse of sophont silk. I sent off my data with my usual contract to Coordinator HQ on Mercury. My job here was done.

Here's the thing about orbits. When you leave someone behind, you still share the same orbit around the Sun until you do a burn. To save fuel, you coast in a bit or out a bit and speed up or slow down, and you gradually drift apart. The whole setup is hell on dramatic exits. You're still looking at the people you walked out on for days afterward.

I still had the ugly lump that was *JAFR* on my radar map when the call came in from my ombudsman in the Coordinator Group. No twoway conversations out here, of course. I was fifteen light hours away from the headquarters on Mercury. But then again, no conversation with Seymour Gladstone was twoway, even when he was in the same room.

"Nice report, cowboy," he said without preamble. "Where do you find these people? I mean, a little sophont silk here and there is all well and good, but eeeeewww! Anyway, we had our top analyst dig through your datadump and all the other dirt we've got on these Better Way people. Turns out they come from Titan, just like those poor schmucks out at City of Reason. But wait, it gets better!" He leered.

"City of Reason was founded by a mathematician named Right Finegold. Chair of the Institute for Introspection in the Graduate School of Abstract Sciences in the College of Higher Thought of Titan University." He said this last in a singsong voice while reading off a datapad. He tossed the pad on his desk and leaned into the camera for a conspiratorial whisper that was completely unnecessary and very like Seymour. "There was a Scandal. It had all the ingredients of a classic: sex, money, and cognitive enhancements. Finegold's Institute was collaborating with the Experimental Cognition Department, writing the software that would run on enhanced human minds, and things went wrong."

I paused the playback, made myself a sandwich, and got comfortable for the rest of the message. Should have done that when I first saw Seymour's face on the screen.

"Experimental Cognition planted a spy, a cute little girl type, to steal some mind templates. She seduced a grad student, then an assistant professor, and apparently then Finegold himself. She extracted a lot of free code before she was finally caught and linked back to Ex Cog.

"Well, you know how Titan politics are. Turns out, Ex Cog had a bigger budget and more pull with the Deans, so Finegold gets the ouster. He packs up a few loyalists and he goes Homesteader. They've got a pretty good outfit, judging by their startup package. I'd give them a good ten more years before they come crawling back or die out.

"So meanwhile back on Titan, the legislature starts to get antsy about all this posthuman business, and a lot of what Ex Cog does becomes illegal. Eventually even Titan U can't protect them from the angry villagers with the pitchforks, and, well, we know where this all ends up, right? In the Kuiper Belt on a

snowball called A Better Way.

"Let me tell you about this socalled Better Way. You dug up some of the obvious stuff, but they've also got work going on in nanotech, uploading human minds into computers, all sorts of ways of getting to the posthuman future. It all sounds rather flaky to me.

"So, anyway, these two colonies started out nowhere near each other out in the frozen hinterland, but twenty years go by and orbits are eccentric and rings turn inside of rings, and now they're practically neighbors. Coincidence? Ah, maybe. Or maybe an elaborate plot of revenge...

"Actually, the whole revenge thing is my idea. The analyst, an AI of course, didn't have the imagination to come up with that. AI's just don't have that sense of drama. Anyhow, the AI thinks that A Better Way is setting up a conflict between The High Fantastic Empire and the City of Reason for some nefarious purpose.

"Here's why I'm telling you all this. We've got a customer who's willing to pay you to stop those two kids from destroying the City of Reason. Eighty thousand oscus, of which we take our usual 20 percent finder's fee. Shouldn't be too hard a job, considering they're not armed.

"There, you have your mission! Good luck, mazel tov, bon voyage, and all that. Oh, and be careful. What did I forget? I can't think of anything. We're downloading our analysis for you to study, standard crypto of the day. Any questions, feel free."

The analysis from the Coordinator Group AI confirmed my suspicion that the High Fantastic Empire was being set up. But to what end? Surely A Better Way wasn't trying to avoid the legal ramifications of genocide. This was the Kuiper Belt. There was no law out here. There were only people like me, the Damagers, and we didn't retaliate or punish evildoers. Our only purpose among the homesteads was to prevent the rise of new pirates before they began to plague paying customers in the inner system.

As I scanned more of the data, less and less of it fit. The High Fantastic Empire was apparently completely uninvolved in this dispute. They were Martians, and, as such, hated authority. They were a weak colony, small and underdeveloped, experimenting on their minds not to produce superhumans, but just to understand themselves a little better. I was sure that the Trojan horse attacks had come, not from the City of Reason, but from A Better Way.

I didn't like the setup for a lot of reasons. Jesse Marslarsen was getting screwed, that much was certain, and I kind of liked him. The High Fantastic Empire was probably getting screwed as well, although it was their own fault for believing the charlatans of A Better Way. And most of all, the City of Reason was getting screwed. They were just trying to mind their own damned business and hadn't done anything to anybody.

So it was up to me to put this tangled mess back to rights, champion of justice that I am. I laid in an intercept course for the *JAFR* and fired up the engines.

As soon as I saw the lifeboat separate from the *JAFR*, my first impulse was to cook it. I had the microwave laser powered up and targeted before the tactical computer had the situation analyzed.

It wasn't the bomb. The mass was all wrong, and it had no obvious guidance system. There had to be someone inside it, and I wanted to figure out who it was before I pulled the trigger.

We were just three hundred kilometers from the City of Reason. Both ships were decelerating fast, so there was more than enough time for me to get a 'bot onto the *JAFR* and disarm the bomb before it could be deployed, but the lifeboat changed things. I wanted that lifeboat back with the *JAFR* so I could

deal with all of the variables in one place.

I quickly reprogrammed the 'bot and sent it to intercept the lifeboat, then I suited up and headed over to the *JAFR*. I wanted the bomb to get my full attention, and even if the 'bot couldn't handle getting the lifeboat back, it would at least be able to stop it from doing whatever it was supposed to do. I could deal with more variables once the bomb was no longer a threat.

I reached the *JAFR* and didn't bother with the airlock. I just cut my way inside, carving through the ice with chemical welding sticks, kicking out loose rocks behind me as I tunneled to the center. I reached the bomb in just a couple of minutes, and had the whole trigger device schematic mapped out in a couple more. I popped the screws on the trigger housing, wedged my screwdriver under the manual trigger input, and pried it off.

Now I could relax. I pulled out the rest of the trigger and disconnected it from the bomb. Then I dismantled the arming device and threw the loose parts up the tunnel behind me. Finally, I physically removed the explosive charges that would have compressed the deuterium/tritium mix and vented the fuel into vacuum.

The whole operation took me just under ten minutes. As I worked, I eavesdropped on the conversation between Jesse and Shaunasie.

"He's inside, he's inside the ship." Jesse was frantic. "What do I do?"

"There isn't much you can do, Jesse."

"But he's taking the bomb apart. Should I detonate it?"

"We're not close enough. It wouldn't do any damage to the City."

"I've got to stop him or the mission will be a failure. I'll be a failure. Why did they send me? I can't do anything!"

I got to admit I felt sorry for the kid. He was as easy to read over a voice connection as he was in person. I could hear his sobs clearly. It was too bad they had run into me. Too bad there was someone with money who wanted them to fail. Then again, most Damagers who took this contract would have simply destroyed their ship and collected the fee. The oversight board wouldn't question the use of lethal force in this circumstance. So, in a way, Jesse was lucky. I don't work that way.

It was obvious right away that Shaunasie was in the boat. She had seen the 'bot and was taking evasive action. She flew better than I had given her credit for, but the boat wasn't very maneuverable and the 'bot was closing. When my robot caught up with the boat, Shaunasie brought out the guns. I was pretty sure she had them, but I didn't know what I would have to do to flush them out. She took out the 'bot with a rail gun and resumed course. I had had about enough of her. Since I had no compunctions about blasting a silk puppet into atoms, there was no longer any reason not to open fire on the lifeboat. I was just about to relay that command to my ship when the defenses of the City of Reason made themselves evident.

The lifeboat and the *JAFR* were both snagged in a delicate carbonfiber web. The *One in the Hand* was far enough back that it managed to see the threat and brake in time to avoid it. I pulled myself out to the end of the tunnel, analyzing the situation as I went.

It was a simple and effective defense. The web was invisible to radar because the threads were much smaller than the wavelength of radio waves. Individual threads weren't strong enough to stop even a weak ion drive, let alone a chemical rocket or a fusion torch. But they were arranged in such a way that

any ship driving toward the City would pull more and more threads in, getting hopelessly tangled before it ever reached the center.

It was also a pretty expensive defense. There was enough carbon hanofiber in the cloud to make a sky hook for Mars. Even as I tried to figure out if I could get back to my ship through the holes in the net, I was wondering how they had managed to manufacture so much nanofiber with the limited resources of a homesteader. Then I remembered Seymour telling me that they were remarkably wellequipped for people who had left their homes to escape persecution or prosecution. They were not typical homesteaders at all. They even had some kind of sugar daddy in the inner system who was paying me to make sure they weren't harmed.

It looked like I needn't have bothered. Even if I hadn't shown up, the City of Reason would have been just fine. The property of the webs was such that the lifeboat and the *JAFR* were being pulled together the more they struggled to get free. I decided to hold off on killing Shaunasie until I figured out what her plan had been.

In the meantime, our presence at the gates of the City had been well announced. If Jesse and Shaunasie had been counting on stealth for their plan, that was ruined. We were getting pinged by whatever passed for traffic control in a place that never had any traffic, and I responded with my standard identification.

"Licensed Damager," I told them with a data squirt. "You are under attack. I have neutralized the threat and the situation is well in hand. Not to worry, folks. No cause for alarm."

Shaunasie was outside the boat as it drew closer. She was wearing stateoftheart battle armor and carrying three powerful weapons. She had the rail gun she had used against the 'bot on an articulated targeting arm mounted behind her shoulders, a laser cannon ran along her right upper arm and was aimed by hand, and there was a rack of guided missiles on each leg.

I had the welding torch, a spring powered bolo thrower, and a pretty damned good defensible position down in the tunnel. I had the *One in the Hand* quietly burning me an escape route on the far side so that I could be out the other end before Shaunasie knew what I was doing.

I had multiple views to scroll through every few seconds, trying to keep track of what she was doing out there. The sensors I had seeded over the hull of the *JAFR* were showing the lifeboat's approach. The twisted metal remains of my robot was still feeding me video of her activities on the far side of the lifeboat. She was paying close attention to the nanofibers that were cocooning the boat, making sure she wasn't trapped against the hull.

I stuck my head out of the hole long enough to launch a tether to the boat. The line snaked through the nanofiber net, and the grapple bumped the hull and scuttled along to find something to grab onto. Once the boat was secure with one more line, I could move it where I wanted it to be. I poked out to fire another tether and Shaunasie launched a missile at me.

I ducked back into the hole and the missile tried to follow. But the guidance system got confused en route and the charge exploded harmlessly in space. I crawled back up the hole to throw the other line, and she used the laser. I let my suit take the hit and I got my line on. As I backed up down the hole, I bled the excess heat into the ice. I used the remote winches at the ends of the tethers to crank the boat around to a more advantageous position.

I had a pretty good shot with the bolo and Shaunasie's rail gun was hung up in the web, so I pulled myself back to the mouth of the hole. I hadn't figured on Jesse. I had dismissed him as too timid to join the fight, but damned if he didn't come up from underneath me and hit me with a ball of epoxy.

I got the bolo fired and Shaunasie incapacitated before I turned on Jesse. The epoxy had immobilized my legs in seconds, but you really don't need your legs that much in zero G combat.

I could easily see through Jesse's visor that he was enraged. He came at me with surprising fury for someone who had been shaking in his boots a few minutes earlier. He fired the epoxy gun again and just missed completely smothering me. I lit the welding torch. Much as I hated to use the nonlethal weapon on the creature outside and the lethal one on this poor kid, I had my survival to think of.

He backed away down the tunnel, the fear on his face as clear as the anger that had been there before. But he didn't drop the gun. He turned down my new escape route and I followed. But as I turned the corner, I hit a wall of newly setting epoxy. I started working the edges with my torch when the wall of liquid helium hit me from behind. Before I could figure out where the hell it had come from, I was frozen.

"He's coming around."

"You mean he really is alive?"

"He's probably got some enhancements. He'd have to in his line of work. Didn't you want him to survive?"

"I wasn't thinking."

"You could have fooled me. You set the perfect trap. It isn't easy to trick a Damager like that."

She had a point. How *had* he managed to trick me? He had him pegged as completely useless, and here he transforms himself into an instant genius.

"I guess I just got lucky. The coolant pipe was buried nearby, and I was able to seal off enough of the tunnels that the helium filled the whole chamber."

"Well, you did good. We might need him alive."

"Why?"

"Did you hear what he said just before I attacked him? He told the City that he had the situation in hand. They haven't sent anyone out here to investigate. He bought us some time. We need to use it to our best advantage."

"So why do we need him?"

"We might need him if we have to buy more time. We might need to reassure the City that everything is under control and they just need to stay put."

"But he isn't going to help us," Jesse said.

"I have ways of getting him to do what we want."

"Are you talking about torture?"

"More like mind control," Shaunasie said.

This much I knew: I was immobilized, naked, and I wasn't getting any radio coming in. I tried getting messages out, but I didn't receive any acknowledgment from the *One in the Hand*. That could be bad. If the ship didn't hear from me in a certain amount of time, it would start thinking for itself, and you don't want to be around when it does that. I couldn't tell how long I'd been out. I opened my eyes.

"You're making a serious mistake," I told the two young people hovering in front of me. I was strapped to a board by sheets of carbon nanofiber. It looked like it might have come from the web that had probably encased the entire ship by now.

"I knew you would say that," Shaunasie said. "No one is going to come and rescue you. Nobody will avenge your death all the way out here." I looked at her face and smiled in spite of myself. The crystal teardrop on her right cheek had been covered by a bandaid. Nice touch. She had shut off acess to her core programming. She had probably figured out what I had done before. Very nice.

"What time is it? How long was I out?"

Jesse started to answer, but Shaunasie stopped him. "Let's not tell him anything. Any information he has, he will try to use."

"Six hours," I said. "When I've been silent for six hours, my ship wakes up. And it wakes up angry. Do the math, and tell me if we have anything to worry about."

I could read the answer in Jesse's face. We had time, but not much. "I'm guessing less than an hour." Jesse's flinch was a confirmation, and Shaunasie shot him a dirty look.

"We've got to get moving," she said.

"Do you think he's serious? What if he's bluffing?"

"We should move as quickly as we can anyway."

"Jesse, there's something you should know about your comrade here."

Jesse stopped and looked at me, then at Shaunasie. "He's stalling," Shaunasie said. "Don't listen to him. He's going to use whatever he can to stop us. Remember that."

"You forget, girl. I don't give a shit whether you succeed or fail. It isn't my job."

"Is that why you took our bomb apart?"

"Somebody paid me to stop you from setting off the bomb. They didn't say anything about your other plans. If you have another objective, feel free to go about your business. You *do* have another objective, don't you? Something you didn't bother to tell Jesse?"

Jesse continued to look from me to Shaunasie and back. His emotions were, as always, perfectly clear on his face. He was confused, curious, and determined, all at the same time. It was a potent mix to work with.

"Did you know that A Better Way has a score to settle with the City of Reason? They were allies back on Titan, but they had a fallingout. Now here they are again, twenty years later. It's a good thing that A Better Way found the High Fantastic Empire to dupe into taking action for them."

Jesse looked back at Shaunasie. "You knew them on Titan? You told us you wanted to help us."

"The City of Reason never attacked you, Jesse. That was A Better Way. All part of the plan. So was sending along a pretty girl to help you with the bomb. Only she isn't a girl, Jesse. She's a bundle of sophont silk riding in a girl's body. Go ahead, ask her how she plans to control my mind."

"Where do you come up with this stuff?" Shaunasie said, shaking her head. "Sophont silk? Jesse, think for a minute. You have no reason to trust this man. You've worked with me for a long time. You just *met* 

him! You know me, he's a stranger. He wants to stop us from doing what we came here to do."

"But the bomb is gone," Jesse said. "We can't do what we came here to do."

"We can do other things, Jesse. The bomb was just plan A. Let's go talk about the other plans and see what we can do to salvage the mission."

"These other plans, why didn't you tell me about them? Is this what you were going to do when you went off in the lifeboat?"

"I told you, Jesse, I was doing reconnaissance. I didn't have another plan until he took the bomb apart."

"So what can we do now?"

"The City of Reason has vulnerable points..."

"There was no way I was going to get through undetected," Jesse blurted out. "You claimed that they had no defenses. This nanofiber web is incredibly sophisticated!"

"And undetectable. We couldn't have known..."

"You said you'd analyzed their colony, you knew the weak points. Was that just a lie? Was the bomb even real? I was a decoy, wasn't I?"

Ah, that's my boy. He was finally starting to think with his brain. "Watch out, kid," I told him. "She's not going to let this mission fail just because it smells bad to you."

Jesse glanced at me and that was Shaunasie's opening. I saw the knife flash behind him, and before I could shout a warning, she had buried it in his back. Again, the young man surprised me. He doubled up, slapped his hands on the floor, and mulekicked her right across the little room. He followed on his own trajectory and pinned her to the bulkhead with his knee.

Shaunasie's reflexes were good. To a machine, fighting is just another mathematical puzzle. If you've got the right software, you can work a counter to just about any move. I was expecting her to give him a shot in the pills, but apparently her software found that far too obvious. She managed a good nose smash, then, when she worked her way free, a kick at the stillembedded knife. Then, only after she had lined up an escape path and fought free of his hands, she gave him a shot in the pills.

Jesse was in bad shape. He didn't go after her, but he hadn't had all the fight beaten out of him yet. Instead, he jumped toward me. As he worked his way around behind me, I briefly imagined that he was going to set me free to help him fight her. I was wrong. He pulled the board free and used me as a shield to rush her.

By now, Shaunasie had reached a weapon, a little steam knife that works great in close combat on a ship. The superheated water vapor comes out with enough force to cut flesh but not metal, and the heat even cauterizes the wound so you don't get the room fouled up with a lot of messy blood droplets. And I was sailing across the room right toward it.

I didn't have radio anymore for some reason, but I still had the laser in the corner of my right eye. And the little bandaid on Shaunasie's right cheek was torn off. I focused on the teardrop lens and hacked like I'd never hacked before. I had a couple of seconds before the shortrange weapon would be able to slice me to ribbons.

I had gotten a lot of information out of her before, but she had shut off all the access routes I had used.

There was one fairly simple command structure I was able to get into, however. It was a subroutine that had been loaded up recently but hadn't yet been used.

What I had in mind was only going to slow her down for a few seconds. I wasn't sure if Jesse would be able to take advantage of the opening that would give him. He was a strange kid, volatile and inexperienced, but capable of wild brilliance at times.

Then it hit me, the whole meaning of the transemotional thing. The manifesto had said something about tapping into emotions to solve problems the intellect couldn't handle. The little subroutine Shaunasie had queued up but never utilized would invoke a strong emotional response in Jesse. If I was right, that response would save both our asses.

Seemed like a long shot, but, as I said before, couple of seconds. Tick tick. What the hell? I kept my laser on target and sent the command.

She let go of the knife and it drifted away. "I've been thinking about what you said before, Jesse," she told him. "And you're right. It's time we take this relationship to the next level."

Jesse let go of the board I was strapped to. "What?"

I put all of the command I could into my voice. "Jesse, move quick. Grab her!"

To his credit, Jesse did move quickly. He grabbed her shoulders and held her. The back of his shirt was soaked, and droplets of his blood floated in the air between them.

"Jesse," she said with a breathy tone. "I love you." Jesse looked deeply into her eyes.

Jesus, Mary, and Joseph, he's falling for it! "Jesse," I snapped. "It's a trick. Throw her in the airlock."

They were both lost to me, wrapped up in the programming their elders had installed in their brains. I had a pretty good idea how long Shaunasie would be controlled by the romantic macro I had activated. I had no idea whether Jesse would snap out of it before she did. I couldn't afford to wait around and find out.

I couldn't see very well because my board had spun away from the action. When I looked back at the place I had been held, I noticed that there was a wire cage, hastily constructed, against the wall. A faraday cage. That was how they had blocked my radio. I put in a call to the *One in the Hand* right away. In its strange mechanical way, the ship had missed me. It was only six minutes more until it would have awakened and built another copy of me to download my latest backup into. I was just in time to avert *that* nightmare.

I had already modeled the entire tactical situation in my own dataspace, and now I had the ship's targeting computer to run a large series of simulations. The positions and trajectones of the *JAFR* and the *One in the Hand*, the two kids starting to wake up from their illtimed romantic interlude, the open airlock door and the emergency evacuation button, and me. In less than a second, I had the answer to my problem.

Making a lump of ice like the *JAFR* dance with a laser is pretty easy. Drilling the escape tunnel without spinning the ship took a lot more precision. I calculated the perfect angle, told the ship to fire, and prepared myself for an uncomfortable encounter with a bulkhead. The ship swung about, propelled by steam escaping from the side, and the open airlock loomed up to swallow Jesse and Shaunasie whole. At the same time, the corner of the board that held me prisoner drifted toward the emergency evac button. I slowly turned in time to see the two of them drifting into my trap.

They seemed just about to kiss, but I could see Shaunasie's hand reaching down behind Jesse's back to

twist the knife. He looked completely lost in the moment, lust and longing on his face. Then I noticed his legs spreading apart and that didn't fit his expression. As they reached the airlock door, Jesse let go of Shaunasie and spread his arms wide. His hands and feet just managed to stop him outside the little chamber, as I hit the emergency evacuation button. The inner door slid shut with Shaunasie inside and the outer door opened without the chamber pumping down first.

Shaunasie held on to the inner door as best she could. She stayed conscious a lot longer than an unenhanced human would have. I couldn't see her, but Jesse watched the whole thing through the window and I could see his face clearly. That was all I needed to know that she was dead.

The City of Reason finally agreed to let Jesse go. I had vouched for him, and he genuinely seemed sorry for what he had done. They did ask for Shaunasie's body, and eventually I figured out why. They needed her to complete her mission. Not the mission that she had told Jesse about when they left the High Fantastic Empire, and not the secret mission she thought she was supposed to carry out once they got here. It turns out there was yet a third mission, so secret even she didn't know about it. Not even the elders of A Better Way knew about it. It was the mission given to her by the City of Reason.

I managed to get a lot of data out of her once she was dead. I had a device in my space suit that could map the quantum storage bits in the sophont silk in her skull without a trace. That was important, the no trace thing, because the City of Reason specifically prohibited me from examining the body while they shuttled out and unwound the *JAFR* from the nanofiber web.

I didn't get to analyze the data until after the inquest, after Jesse and I had been escorted back through the one safe passage through the web and were back on my ship. I thought I was going to find out more about what A Better Way had been up to. I did, but it wasn't what I was expecting.

The people who had set up A Better Way had been rivals of the people who had set up the City of Reason. But before that, they had been collaborators. Experimental Cognition supplied the hardware in the form of enhanced and augmented human brains, and the Institute for Introspection provided the software, the thought structures that would run on those brains. It seems they gave Ex Cog a little something extra. Without even knowing it, A Better Way had been working on a prototype for the perfect posthuman as designed by the citizens of the City of Reason.

And I had just delivered that prototype to the designers.

"I still can't believe she wasn't human," Jesse said after I finished showing him my ship. "I really felt something for her. I thought she felt something for me. And now, to find out it was all a fake... That thing she said right at the end, the last thing she said to me, that was probably just a programming glitch. She was probably going to use that against me, and it just came out at the wrong time. She never loved me at all." "Ain't that a corker?" I said. I pulled myself into the command chair in front of the main console and winked at the picture of my mother. It was good to be back again. I had made a tidy sum on this little mission, even though I had probably not done what my client had hired me to do. It's a caveat emptor thing, you know? If they wanted me to kill Shaunasie before she got to the City of Reason they should have just told me to kill her. All this pussyfooting around is no way to get things done.

Ah, well, at least I'd lived to tell the Coordinator Group what was going on out here among the dirty snowballs. To think how narrowly I'd escaped having to confront a restored copy upon returning. The existential headaches, the legal hassle, not to mention the sleeping arrangements.

"Posthumans," Jesse said, shaking his head.

"Posthumans," I agreed. "Fuck 'em."