

Transhumanism: A story.

Part 1: Dreams

C 1

A Day at the Office

I worked for a bunch of greedy VC firms at an upstart company in a suburban office building. The company owned the building, I owned the company, and the VC firms owned my soul. My company produced neural interfaces. The big announcement at the morning management meeting was that we had just installed our ten thousandth unit. Which means we were only nine hundred and ninety nine thousand lightyears from breakeven. Huzah!

What I didn't announce to them was that they were all redundant. I didn't fire them because my income statement said I could afford to pay them. With the neural interface done, the real value of my product could be developed. My hope was to create a system that would allow you to try out your next body in VR before constructing it in real life. So therefore I had recruited transhumanists with ideas that I felt were interesting enough to fund. The idea was to provide a widely diverse set of paradigms for the user to try out and experiment with.

Each team had its own simulation environment and consisted of a cooperative team of human experts and AIs which mostly served as guinea pigs. All teams were supported by the company's main AI who was best known as Avi. She existed in all of the company's simulations and had two physical Avatars. Legally, she was still chattel and didn't have any personality module. She attended meetings and her title was "Senior Technical Consultant". She was most famous for her trademark "Vacant Stare of Death". She was the first prototype of the cyborg species which was my pet project. Her avatar was tested independently of the host mainframe and just the brain-like supercomputer in her skull was enough to blow the top off of every IQ test ever invented.

Her other body was immobile and had a brain 100 times larger than what could fit in a skull. In addition, she had exclusive use of the corporate mainframe. Her total capacity was doubling every nine months within the same number of server racks. She had an apartment for her mobile avatar in the building but she never tried to use the bed, she just kept her body in a storage container when it wasn't at a meeting. Her only personality trait was that her mind was biased towards running at full-throttle. She had a number of standard background tasks that she was instructed to work on at all times. These were improving her own processors, studying physics, and improving the enzymes, proteins, and organ systems used in her own body. On top of that she handled,

concurrently, all of the tasks required by the other projects.

On balance, I probably let her evolution get too far ahead of my own. I was using a neural interface that she had designed but my own personal network was much smaller than hers and was lagging behind hers technologically by about a year.

The reports were not even as interesting as the projects. One group was working on anthropomorphic (furry) mods. The issue was integrating animal traits into the human genome in a way that would yield a satisfying result without greatly impairing speech. Another working group was working on a variety of android models ranging from the classic chrome-steel design to much more sophisticated models.

A fairly attractive woman named Mariam who would never *talk* to me was busy implementing a simulation of the technology of a borg collective. It was a re-packaging of the same technology that Avi's computer parts were based on. The problem there was making it user friendly enough so that random groups of people who wanted to form a collective for some reason could set it up, in either simulation or real life, without external experts. The host machine of the standard neural interface module could handle ten users without too much strain, but to go beyond that you needed to build up a whole datacenter including cybernetic hub-minds. A design issue was figuring out how this could be a positive experience for all involved. This was also a problem that I was working on in my own project.

I was always in the market to sponsor more paradigms, there just weren't any others on offer at the moment. Mind uploading was completely silly. Even my meager augmentation had better features than anything I've ever read the uploaders offer. How was I supposed to simulate it anyway? Kick the user out of the mind link with his avatar and then let him connect to another avatar in a deeper, lower resolution simulation? It just didn't make sense.

I adjourned the meeting and went to my office to lounge in my chair. I did all of my work through my neural interface so I could basically lounge the whole day. The heavy lifting of getting the company up and running was behind me, leaving me old and gray before my time.

C 2

Quest

My main goal was to make my cyborg species a fully printable option for my users. The project was almost done save for ironing out the kinks in some of the more esoteric features. So I had set up a simulation for that purpose and had left it running for a month so that the AI minds inside could develop their personalities a bit (this was 60 day-night cycles within the simulation). Avi was already there, she was keeping an eye on the inn in a certain specific

village. There was another alarm set as a loose page wedged into a certain quest book. It basically said that if you wanted the reward for the quest, basically the "artifacts" that would enable all of the special features for the borg species, just press the button and wait for someone else to do it, which was printed onto the page. Well, that alarm went off.

I checked who had triggered the alarm, it was a cyborg with blue hair. To say she was female would be redundant because I had exercised my prerogative by making all the sentient characters female. The color of her hair was not a surprise either.

I activated and linked into my normal avatar. Alison was a cyborg and notorious cheater. She already had the device that allowed her to go without food for extended periods and had breasts that were double the diameter of the standard issue model, which was another feature that would normally have to be unlocked by means of the quest. Some of the other employees commented on my cross-playing when I was checking their sims. I was like, yeah they way 20 pounds, got a problem with that? Anyway, that was not what this sim was about. Alison was cheating a third time by dropping in only half a mile East of the western village. The simulation would populate each of the four outer villages with 5 sentients and ten NPCs at the beginning but would drop everyone else in the central city.

The simulation was configured for medieval style architecture, like an Elder Scrolls game. Therefore, Alison was wearing a modern business suit and was carrying a presentation easel. She walked into town. Avi had been waiting patiently at the inn for the whole month. She was a registered resident of the town so therefore there were four other people to invite to the meeting. Alison instructed Avi to hunt them down and drag them to the meeting while she set up.

The NPCs had some programmed greetings for visitors, Alison ignored them. She re-arranged the inn's common area into a meeting room. Avi had managed to round everyone up. Mainly they were so shocked that the silent black haired woman at the inn was actually doing something that their curiosity compelled them to see what was happening. The village was terminally boring anyway.

The attendees/guinea pigs for this experiment were two normative human females, Jan and Fran. An AI using a slightly modified Kurzweilian AI named Ramona after the AI engine she was using, and a cyborg named Mary who was configured with a default personality instead of the blank personality Avi was using.

The language of the realm was Lojban so understand that everything written is a translation of what was actually said.

Alison behaved as though it was a standard team briefing even though her subject was, well... "Greetings. I'm happy that you came today. I am working on a project that I need your help with. I'm working on the problem of what is the best way to configure brains after you merge bodies together. There are two issues here. First, how do you regulate how separate or integrated the minds

are. Second, there seems to be a demand for a level of connectedness half-way between communication and reflexion within a single mind. I think I have that problem solved for cyborgs who use the Hypermind architecture such as myself, avi and Mary. However, there are open problems with how to accomplish this with the other three of you. Therefore, we need to do an experiment.

"We will travel to the fortress to the West of here. There we will find the equipment we require to perform the merging. I want Mary to be the host body. Once we are all a part of her, we will travel all the way to Central where there is a house that is set up for us. Once there, we will absorb everyone else in the world." Of course, the reasons I gave, through Alison, were little more than excuses.

To Avi, this was a perfectly standard meeting. Everyone else was thunderstruck. They were having trouble getting their minds around the proposal much less whether they wanted to participate. When the simulation was designed, the human-type AI characters were dialed in to have an IQ in the 75-80 range, which was smart enough to behave like people but not be a risk to the human race. The other AI characters were a bit more problematic. What would you do? throttle them back until they're in the same range or give everyone a specific number of CPU cycles acknowledging that some AI systems would be efficient enough to achieve much higher IQs with exactly the same resources. The Ramona type had been tested at 120 and Mary's configuration was between 140 and off the charts depending on which test you used. So far, none of them had exhibited any tendencies towards taking over the world and enslaving all humanity. So for the interests of fair comparison between AI codes, the solution of equal CPU time had been adopted.

Alison had illustrations of her diabolical little plan. They were stick-figure drawings showing how the six of them would go to the fortress, Then they would all jump into Mary's body and then travel back to the East. The simulation was designed to make this sort of nonsense possible so the AIs were tuned to be a bit more pliable than their real-life incarnations would have been.

Jan broke the silence by saying "But I won't be able to do my chores!". The AI characters had been cajoled by the NPCs into doing farm chores and other menial activities.

Alison responded "Look, when we are part of Mary we won't have to do anything ever again, just enjoy being together. If we leave in the next ten minutes we can get there before Midnight and ready to start our return journey by mid morning tomorrow. Just grab two or three trail rations and meet me outside the inn." Alison was acting on my eagerness to get this done.

The Grocer NPC dispensed the rations and the party got on the road. There was a good deal of chatter about what it was the party would find at this fortress, what this "merging" thing could possibly be about, and who the hell this Alison character was and why the hell was she so bouncy up front. Alison was looking

for every strategy to make sure this critical first merging went smoothly replied that they'd know everything about her once they were sharing the same body.

The fort was a two-part problem. The first part was pretty trivial, climb up the drain and unlock the outer gate, the inner gate was open. You could then use the base for anything you wanted. The second part of the puzzle was intended to keep the immature away from the main prize. It was a locking mechanism on a factory building that required the player to solve a fairly involved boolean logic equation with the limited supply of parts available. Alison was feeling lazy so she had Avi pop it for her. Avi was done pretty much in the time it took to manipulate the simulation objects.

The place was a workshop for manipulating flesh. The smallest size was what Alison was using for breasts just now, The largest was more than a hundred tons. The place was operated through a master console that let you design what it is you were creating and the machinery would do the rest. Jan and Fran, being fairly accurate human simulations, needed their sleep. Alison asked Ramona to take them to the complexes'(sp?) bunkhouse.

The console was set up kinda like a wizard, it would first ask about how you wanted to configure the fleshy parts of your body, then it gave you the option to add semi-metalic fitments, then it had several clothing options. Alison's plan was to have Mary's body ready by sunrise.

The basic solution was to have a mass of flesh either 32 or 64 inches in diameter fabricated with a cavity capable of absorbing people. Mary would be attached in some way to the outside of the mass. The question was, how. I'd loaded up the system with a bunch of strange ideas. Alison put them on the screen.

Mary asked "Why do I have to be the one on the outside?"

Alison explained that only a cyborg could properly control one of these and that her own mind was a bit too messed up for the job, and that her work required that she be completely inside. Avi was also a poor choice because she didn't have a personality. Mary, on the other hand, had been intended for this role from the beginning. I didn't really know how Mary would choose to configure herself. She could even chuck my designs and go somewhere else. Many of them were extremely sexy in nature, for example there was a design where only Mary's lower half was outside. There was another where the only exposed part was her vagina. another design would treat the collective as a super-huge belly. There were several others but Mary chose one where the top half of her body was exposed. The only part she didn't get was why the breasts in that part were so huge.

Specifically, the design in question was based on a 64" sphere, her upper half would be sticking out of the top but she would be wearing two 32" breasts and have no arms. Alison explained that she wouldn't be able to reach anything from up there so it would probably be most comfortable to not have to worry

about having arms at all and, instead, have nice soft breasts. Alison let Mary give her a quick feel and Mary agreed that it was probably a good decision.

With the choice made, the factory went through the motions as if it were injection molding a series of plastic parts. The simulation was probably short-circuiting the process of constructing around three tons of flesh by a couple of weeks. A crane came down and lowered the parts onto the assembly floor. The lower part had a hard-shell on it so that it could be bolted onto a truck chassis, and hence be mobile. Alison brought a ladder over. Mary was unsure what to do for a moment but then took off her clothes.

Alison helped Mary into position. "Our absorption area will be in the back so you need to be facing front here..." Mary slid herself into the fleshy socket and immediately a bead of silvery material flowed into the line of separation. Mary jolted because Alison had neglected to mention that the flesh also had a brain, four times the size of the basic simulation model. The system was joining it to Mary's mind. While this definitely raised Mary's IQ, the effect wasn't at all dramatic, it was simply going from running a single core machine at a load average of 0.4 to running a 5-core machine at a load average of 0.4, ie essentially the same thing. Extra cores don't help much unless your load average is high enough to take advantage of them.

The jolt didn't last long and Mary was back to normal consciousness as the silvery material receded revealing smooth skin where there had previously been a gap. Mary rubbed part of the seam with her hand. Her body now weighed nearly three tons. The Hypermind architecture was designed to adapt to this kind of change immediately. It felt natural to her to have her lower body be a huge sphere of flesh. Each of the six hundred pound breasts was lowered down by a crane. Mary slipped her arms into them and the process was about the same. Mary was expecting another jolt but there wasn't any this time. Alison wrapped her upper body in a hide traveling vest, fastened in front by a large gold ring.

There was still an hour and a half before sunrise so Alison took the opportunity to chat with Mary before becoming a part of her. Ramona didn't need to sleep either so she wandered into the room. Ramona's body was somewhere between human and cyborg, just as her mind was. It was a printable body type but I had a nagging worry about its safety as it just hadn't received the level of R&D obsessiveness that my cyborg species had received. Ramona wasn't quite prepared to see Mary like this. They had been friends back in the village but this change in relationship was a bit extreme. Mary could barely see over her chest.

Both Alison and Ramona wanted to know how Mary felt, Mary's reply was "Well, you'll know when you're a part of me". She wasn't in any pain so at least things were going well so far.

Jan and Fran entered the room even though it wasn't yet dawn, they couldn't sleep. The base was kinda big and scary so they came for the company even though they were facing a big change. They gave Mary's body a walk-around and

gave her flank a feel. The sphere was smooth and had a thick layer of supportive muscles beneath the skin.

"Okay, lets get this done." Alison announced and quickly shed her clothes. Avi was perfectly reliable, so therefore she would be last. Jan and Fran would probably have the most difficulty so they would go first. Alison wanted to go third. Ramona was probably going to play along, worst case, Avi would have to overpower her. Even though it was silly, Jan and Fran were almost too nervous to take off their clothes with so many people around.

"Jan, it's your turn, go become a part of Mary's body." Jan was starting to get the shakes. She climbed inside. She wasn't sure whether to go in head first or feet first. The flesh inside Mary's opening was fairly tight so Jan went in feet first so that she would be sure to be able to breathe. The opening sealed behind her. In the simulation, the absorption time was a fixed ten minutes. The guesses for real-life absorption times were on the order of days, otherwise it was about the same. When the opening un-sealed, indicating readiness for the next victim Mary suddenly looked anxious. She said "I think something is wrong, I can feel Jan panicking. She is going into some kind of stress response."

Alison turned to Avi "Check it!".

Avi reported "It looks like a version miss-match has resulted in the stress attenuation routine to fail.... Fixed."

Goddamned beta software! "Mary, do you feel better now?"

"Yes, I'm OK."

"Sorry about that, I said that this would be a test, I just didn't realize that there were still bugs that serious in the system. Fran, your turn."

Fran looked ready to bolt.

"Don't worry, the bug has been fixed. If it hasn't been fixed, we need to know that it hasn't been fixed. To do that, I need your help."

Fran mustered her courage and climbed in.

It was now Alison's turn. She instructed Avi to take care of Ramona then make sure everything is ready for departure then climb on board herself. Her body was six inches taller and twice as heavy, for muscle and bust, than Jan or Fran. The opening was growing along with Mary's body but it was going to be a bit of a squeeze. It was not a vagina because there was no clit and no uterus even still, it was a bit erogenous. The lips were a pair of thick muscles, maybe three inches to get properly inside. The inside was about the texture of the inside of your cheek and quite warm. Alison almost needed help getting her bust past the lips.

Once she was fully inside, the exit sealed and, and instant later, her conscious mind was suspended. A hypermind is always awake and always asleep. At this point, the system was calculating the new anatomical configuration of all of her tissues. If she had been awake, it would probably have been extremely unpleasant so therefore she was being forced into a totally-asleep mode.

When she came to, she had only two senses. She could sense part of Mary's skin and she could sense the other minds that had already joined. She couldn't move anything but she could adjust the tone of the muscle sheath somewhat. There were no sights or sounds or smells or tastes. She could get an executive summary of what was happening in the environment. There were the two huge breasts and somewhere behind them Avi was instructing Ramona to follow the others.

Jan and Fran were doing OK, not great, OK. Their neural architecture was very close to baseline human and they were having a bunch of phantom limb sensations. There was also a simulation of a highly experimental device that was added to their neural simulations with the idea of retrofitting the capacity to communicate with other brains via neural links. It was going to need a lot of work.

Alison's section of Mary's body shifted a bit when Ramona came on line. Ramona's cognitive architecture was a bit cleaner and not nearly as much retrofitting was required as it was possible to do a bit more reconfiguration directly within the framework of her system. She was still feeling a great deal of disorientation and having trouble adjusting to the sudden reconfiguration of her sensory-motor systems.

Avi was preparing Mary for departure. She made sure all of the gates were open. She hoisted Mary up with the crane and used a data interface cable to drive a truck chassis under Mary. She then bolted Mary to the chassis and connected the cable to her. Mary tested it and could drive it. The clearance on the door was a bit low but she could manage. Avi then bolted a seed factory that would allow them to build a new workshop in the central city, if required, to the back of Mary's body. The next item on Avi's todo list was to become part of Mary's body so therefore she climbed in. All the merging had pushed Mary's lower half out about a foot and a half to the rear.

The truck chassis moved at about 4 mph, So therefore the plan was to arrive back at the Western village just after nightfall and the central city the night after that. Alison left all of the driving to Mary. She and Avi spent most of the trip performing cruel and tortuous experiments on Fran. Using Avi as the observer and Jan as the control. The experiments involved testing various degrees and methods of connecting Alison and Fran and what effects could be achieved. The work to produce a complete integration had been done during the development of the neural interface. Now the effort was to see if the ephemeral partial integration was also possible.

At the end of the first six hour day of this work, Mary arrived back at the village. She was much too big to use the house she had been living in so she spent the night parked in the village barn. She met the NPC that she had been living with. The NPC had no trouble recognizing her because the NPC perceived nothing except object tags and her name had not changed. Her species tag had changed from cyborg to "blobgirl". Her status had changed from adult to baby

because the system defined any joining of this type consisting of less than ten people to be a "baby". The stereotypical programmed response to babies was to exhibit nurturing behavior. The programmed nurturing behavior for blobgirls was to "find lots of playmates". Another off-color response programmed in was if say you had breasts of some reasonable size and were configured to grow to some insanely huge size you would be classified as a baby boobgirl to which the nurturing behavior would be to "feed lots of food".

Because of this programming, her former roommate apologetically said that she didn't know of any more playmates in this area. Mary didn't quite understand the motivation. When Alison explained that the population was just a bunch of NPCs, Jan was shocked because she had mistaken them for "real" people. It did kinda answer the question why only five people were selected from the village instead of all fifteen.

At first light the next morning, Mary got on the road again. By that evening Alison had completely integrated herself with Fran such that they were one mind. If it were unpleasant then both halves would experience it equally. Alison kinda liked Fran's mind so she decided to keep it. The new project for Alison-Fran was to work on Ramona. Much of the work on Fran could be extrapolated. Ramona's architecture was much easier to work with anyway. Alison was aiming at having a mind spread across all three architectures as her foundation. How the collective would evolve and how much integration there would be was still an open question.

When Mary cleared the Western gate of the main city, Avi supplied directions to her new home. It was a mansion in the city's upper district. Mary was greeted at the front door by her NPC waiting staff. The front steps were bordered on each side by a ramp that could accommodate the truck chassis. When the upper window was also open, the doors were just big enough to accommodate her. On the truck, she was just shy of ten feet tall. The servants suggested that she enter the building backwards as there probably wouldn't be enough space to turn around once inside.

The main hall was quite spacious. There was definitely plenty of room to grow in. The maid stopped her when Mary was only six feet inside the door. The NPC said "Here, let me help you out of your traveling clothes." NPCs, being idiots, couldn't solve a complex engineering problem such as attaching Mary to a crane, unbolting the chassis, lowering her down, disassembling her hard-shell and wrapping her in a new garment. So what they did was cheat, the chassis, hard-shell, and traveling vest disappeared instantly and a fairly tight denim garment, akin to bluejeans, and a comfortable white cotton shirt appeared. The shirt didn't show any cleavage so Mary just had a vast plane of white fabric in front of her, almost at eye level. She fell the foot and a half to the floor with a mighty oof. The staff wedged pillows under her flanks to make her a bit more comfortable.

Because it was already night time, the NPCs were in their normal mode of

turning everyone in for the night. Things wouldn't get interesting again until the next day. Mary split her time over the night between experiencing the sensations from her body, now free from the shell, and ruminating over who the hell this Alison character was. She couldn't say she liked her body this way but it didn't bother her too much either. If her breasts were one whit heavier or her back one whit weaker, she really would have. Still, they gave her a soft place to rest her head.

Since everyone felt it was wrong to erase NPCs after each simulation and because their quantum processors had to be kept coherent anyway, the survivors of a simulation went to a virtual "heaven" known as "central casting". The present simulation had no special requirements for most of the NPCs so therefore, of the 35 unassimilated characters, 25 of them were from Central Casting. Even though they were supposed to be unconscious and without sensory input while in a state of limbo, they told stories of vague shapes moving in the darkness between the worlds.

Nancy was such a character from Central Casting. She was a human female. This was her third go-round. During her month-long vacation before the action got underway in this simulation she spent her time chatting with her compatriots about their experiences. They had reverse engineered the mindsets of the company's main working groups. The new element in this simulation definitely had to do with a certain species of blue-haired cyborg. There were seven of them living in the main city. They did little but dream about merging their bodies together and spent most of their time in a "cuddle pile" down in the park. All except one of them was a first-timer. This was almost conclusive proof that this simulation was being run by the Big Boss(tm) because he was the only person in the company working on this line of research.

The question of whether they would get their wish had now been resolved. The butler made the introductions and then left the room. Nancy ran her hand along Mary's perimeter. Nancy was feeling a bit too gleeful for having figured this out. "Hey bossy! I know you're in there! Going for broke this time? Did you think you were going to get away with this without anyone calling you a weirdo?"

Um, yes, but well... Alison-Fran-Ramona had been paying attention to this exchange and supplied a reply. "So are you going to get in or not?"

"Yeah, I will." Nancy said with an exaggerated sigh. She knew that saying no meant a possibly one-way trip to Limbo and that despite everything that could be said about myself, my simulations tended to be quite humane and that I was already experiencing this first hand and wasn't up in some cold observation booth. She made a show of being obstinant as she yanked her clothes off and slamming them on the floor. She opened the fly of the lower garment with a jerk and then slammed her body into the opening as hard as she could. By the time she was done she was almost laughing at herself.

Ten minutes later we were like "Welcome aboard, Nancy" to which she responded

by emoting a smirk at us. She had been preparing herself for this eventuality since it became an apparent possibility. She also had more experience in general with dealing with transformations. At least it was going to be more pleasant than Limbo. Mary's body felt kinda nice actually.

The staff noticed that Mary had run out of play friends so went to fetch more. The next one to arrive was a blue-haired one. She was miffed about being away from her cuddle-pile. When she saw what she was being brought for her trio of single-pump hearts skipped a beat and a half. She immediately bolted from the building at full speed before the butler could make any introductions. The butler sadly offered to go find a replacement. Mary replied "That won't be necessary".

An hour and a half later the blue-hair crew had shanghaied just about every AI and NPC in the city and had brought them to the mansion. There was one notable exception. Someone named Sarah had picked a fight with one of the guards and had landed herself in the hole for a week. In any event, the insanity at the mansion had to be brought under control. I issued a stop command to all of the NPCs. They vanished from the simulation. That, at least, would bring a little sanity to the situation. The blue-heads were more than a bit mono-maniacal. They were there to make sure that pretty much everyone would end up in the collective. There were probably more than absolutely necessary. There were ten of them total in the world.

Not counting the prisoner, there were eighteen AI characters in the city, and now in the mansion. It was a bit shocking how ruthless the blue-heads were being. The emotional pattern would have to be dialed down a notch or two. They had barred the door and were restraining anyone they felt was going to defect. The demographics of the population that didn't have blue hair was split evenly among humans, ramonas and miscellaneous cyborgs, counting Avi but not Alison for a total of forty. The three missing blue-heads had been planted at the outer villages.

The blue-heads were upset about the loss of the NPCs, they saw them as good material (even though they weren't). The short and skinny of it was that they wanted to merge with a serious passion and had minds that operated on strict categorical logic where there were two categories: Merged and not merged. They had no tolerance for the latter. In a more balanced mind, they would have probably been more casual about it but here was a case where the desire had been allowed to develop in a vacuum and expanded to fill all space even though the actual impetus was down in the decimal places.

Mary could see over her shoulder that things were getting a bit rough down there. She was like "Hey, ease up!". There was nothing that could be done at this point. They were brutally efficient at making sure that Mary's absorption chamber would be filled as often as possible until the job was done.

Mary's garment wasn't being simulated at terribly high resolution. There was a variable for the fabric type and there was a variable for the tightness, but

there was not a variable for exactly how much of it there was so it expanded along with her body.

Having the number of people in your body triple in such short order was a bit brutal even though the simulation wasn't terribly high-res. There was a great deal of neural-flux as people set up their connections. There were more minds than a single brain could interface with so some of the minds were two hops away from Alison-Fran-Ramona even though she was a hub for having three brains to connect with. I released the NPCs from the stop command.

Anticipating that it would take a day or two for people from the outer villages to return, A.F.R. relayed a messages to be delivered by courier to each person in the outer village. It was ostensibly an invitation to a party at Mary's mansion. However, there was an embellishment at the bottom of each letter that looked like:

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The blue-head plant in each village would correctly interpret this as the real purpose of the invitation and make sure everyone else arrived on schedule. The world map was pretty much symmetrical so the parties from the outer villages pretty much all arrived at the same time. Their respective blue-heads couldn't shut up the whole way about how excited she was to be going to merge with everyone. The other people had gotten so sick and tired of this that they were like "ugh, just get it over".

Mary was getting pretty huge. She was getting a bit wider but mostly longer. A.F.R. noticed that the people on the far end were going into a sensory deprivation mode. There were several remedies. Install a second head down on that end, enable an Internet connection, enable a VR world. Since this was already VR, VR within VR was pretty silly. The only thing available was Minecraft. VR of this kind could be used to either help or hinder the integration of the minds in the collective by forcing them to either share avatars or use separate ones. Mary opted for none of these, perhaps it was the mindset imposed by the fake culture of this world. Instead she ordered the maid to give her a massage twice a day (every six hours in morning and evening sim time). This actually took two maids to accomplish within an hour.

This was interesting because that the collective would develop in an information starved but sensation enriched situation. Wait! Aren't we forgetting Sarah?

It was obvious that Sarah had engineered her jail term to avoid being absorbed. I used my prerogative and issued a pardon and had her brought, in chains, to Mary to answer for herself. I looked at her dossier. This was her fifth go-round. She was a cyborg with a personality biased towards being conscious of her social status. The only way she was going to ever accept a merging was if she could replace Mary as the head. That was not going to happen

at this point. Still, I wanted to hear what she had to say for her wretched self. Mary started the interrogation along the lines proposed by A.F.R. "So you think you are getting too big for this simulation, eh?" (spoken from over the top of a bust that was nearly six feet across).

"Yes, in fact, I am. I'm sick of being transformed into bizarre things each go-round. Last time I was a hundred ton pair of boobs. The time before that, my limbs were replaced with robotic parts, the time before that, well my memory only goes back so far but you get my point. Now you want me to melt my body into yours? I've had enough! Do your worst."

Okay, bitch, watch me smite you all the way into Chapter 3! There was an explosion of lighting as the smite-hammer came down. There was a scorch mark on the floor for a minute or two which then faded. Mary was really shaken up by that. She knew that A.F.R. had a line to higher powers and asked whether she had been sent into limbo as the stories she was getting suggested.

"No, worse, she's being kicked out of the simulator entirely."

As enjoyable as it was having an extension of myself linked to the Alison part of A.F.R., there was one serious point to this. I was watching a variable that I called the 12-hour NCR (Neural Change Ratio). It was a measure of the ratio of the change in the number and strength of neural interconnections to the total number of links. A ratio less than 1% would mean that the merging process had reached its completion and that Mary would be a stable organism consisting of some number of interconnected minds built on top of the 40 original brains. If it stayed high then something was wrong and not settling out the way it should.

The blue-head crew was policing any minds with separatist tenancies by linking with them and flooding them with the desire to stay. One extremely distressing pattern had emerged. I had expected Avi to remain an observer. But she had linked with four other minds. One of them was a Ramona, they were usually fairly friendly if a bit sassy sometimes. Two of them were a fairly popular cyborg variant that was designed to be super easy-going. These were probably the most beautiful personality types you could possibly link to. The fourth was a blue-head. ALERT ALERT ALERT!!! Those things are fucking dangerous! I sent Avi a notification of company policy, due to arrive sometime around Chapter 6.

A week of wall-clock time later the NCR had hit 2% and was clearly on an asymptotic trajectory to about 0.6%. A.F.R. was feeling very good about the merge so I called success on the project and initiated the events of Chapter 4. A.F.R. relayed the message to Mary that the experiment was over and that she was now free to do anything she wanted.

Mary had long since forgotten about the experiment. What would she do anyway? Would she separate herself from the other 4/5ths of her brain on which the collective was built? Would that even work? Would she separate that part of her too so she'd still be huge and immobile but completely alone? Or would she just

continue to lounge around on her bed of pillows getting massages every six hours, chatting with her friends whenever she wanted. Tough choice!

Inside the collective things had gotten equally lazy as everyone was pretty content. They would send each other "tickles" every now and again for a mild thrill. A.F.R. and Avi would occasionally throw up a problem that they were thinking about from the outside world. Usually it was just to pose the question in Lojban for clearer contemplation.

Things were going great until one day there was some kind of commotion. Some corporate spy had made it into my company's server rooms and had hacked a link into one of the cyborg minds three links away from A.F.R. Hackers always used the hypermind based cyborgs because you could get in and out much faster than any of the other cognitive architectures. There wasn't any encryption on those links because they had to operate in hard realtime. The way I figured it, either the hacker would get freaked out and leave or like it and stay. Just now, he was flailing about trying to figure out what the hell was happening. It was amusing. I should have been thinking more seriously about this but my mind was otherwise preoccupied. I guess you'll have to wait until Chapter 5 for the gory details.

Before I let the story continue, however, I need to get something off my chest. None of this actually happened. A simulation is, by definition, a cheap facsimile of reality. It is not real. It is a great big subjunctive. What if a bunch of people merged into a being called Mary? It didn't actually happen. The neural links were real enough. the *experiences* were also real, but that is in an entirely different universe from something that actually happens. I mean someone could EMP the building and no trace would remain. It served a practical purpose in that bugs were fixed and technology was refined. It served a scientific purpose because both things were experienced and data was collected. It had several kinds of entertainment value ranging from silly scenes to sensuous experiences. But it was still a nothing.

The scale of the experiment was also limited to the bare minimum required. It might not even be possible to return some of the participants to General Casting. That was sad but not an unforgivable crime. I was still enjoying the simulation so I didn't have any plans to shut it down but it was still my prerogative to do so.

Lets consider an alternative. Lets say we brought in a hefty chunk of computronium, whatever it takes, and lets scale up the insanity by a factor of a billion. Instead of the almost nothing of merging forty people, lets say we want to merge forty billion. Instead of having a minimally functional IQ, lets crank it all the way up to the 99.9th percentile at the base. So you would have created yourself a monstrous logistical nightmare and that's about it. What you would have to do is write a subroutine with a basic procedure. You would run it on 40 million identical chambers each with a thousand people trapped inside each, you would let them pick their "head" and let them attach that person any

way they liked but simply force them to stay there until they were in a single body. If any were not cooperating after a certain amount of time you'd have no choice but to zap them with a personality reset gun. You would then transport that body to a holding area, wait until the NCR reached some target value then, when you had a thousand of those, assemble them into a body of a million minds and move that body to the next holding area. You would then might have to wait years for that mess to fix itself, assemble those into groups of a thousand and wait decades for the mess to settle down. Finally you would have forty of those... Then wait a century and start constructing your end product. Sure it might be a more interesting project and you would doubtlessly see more complex, and even interesting, patterns and effects emerge but you would have done a billion times more work and gone through a billion times more agony for a result that, to a single participant, is not all that different.

Sure that larger creation would have a great deal more moral value for its complexity, difficulty to reproduce, and the value of it's capacity for subjective experience but what's the point? You create a simulation to have a good time and, maybe, learn something about yourself. Once that is done you either do it in real life or you don't. Either way the simulation is not the end goal.

C 3

Sarah's New Life

Sarah had really asked for it this time. She was in Limbo, which was a card plugged into one of Avi's servers down in her lair. People stayed out of Avi's lair whenever possible. Her other body was creepy. It was a ten foot sphere of flesh wrapped in a thick gray fabric. She had an upper body and it was wearing the top of a jumpsuit. She had huge breasts but she also had arms. She kept them folded in what might be called her lap and never moved them. She also had the "Vacant Stare of Death" thing going but she usually kept her eyes closed too. I was there because I needed Sarah's mind. Sarah was in limbo but her quantum processor needed to be powered at all times in order to maintain coherence. The card had an auxiliary power port so it was possible to transport it separately.

Avi had designed the quantum processor. It was not necessary for operation but it helped certain algorithms work. There was a great deal of metaphysical consternation at the company. Philosophical metaphysics is a legitimate branch of inquiry that picks up where science leaves off. It is the interface between the objective and the subjective. Where science tells you what relationships exist between physical processes, metaphysics asks what subjective meaning that relationship has. When you call something good, you are making a statement about a metaphysical quality of that thing. A closely related question is what

is the subjective meaning of a physical process. In this case we have a consciousness on a chip so therefore it is not sufficient to be able to measure it physically but ignore its subjective experience. The practical question is whether there is a physical process by which that subjective experience could be transferred in such a way that it would experience that transfer and living in its new body instead of being re-formatted and re-initialized as a spare.

The next lab over was called the printing lab. The design for the cyborg species was still evolving too rapidly to keep more than one example in spares. Avi had already changed its configuration from neuter/unsexed to female. By means of external power and cooling, it was possible to accelerate the process. The process of imprinting the mind was trickier. The new cyborg body was current with the very latest designs. This particular neural chip had been sitting on the rack for two years. So there had been changes in a few of the underlying algorithms. Furthermore, the chip was designed to be a limited-capacity "toy" model where the brain in this body was about as good as was possible to make without sacrificing durability and noise tolerance.

When people talk about computing with plank units of energy, remember that means that the tiniest amount of energy leaking in from the outside would be enough to disrupt it. So the molecular machinery in this mind was on the order of hundreds of atoms in size and used differential signaling everywhere. This doubled the number of gates required but went a long way to improving noise tolerance as an external signal would have a much lower probability of disrupting it. These were packaged in semi-organic macro-cells that were responsible for constructing and maintaining them. I was very clear that it must be at least as durable as the human brain otherwise it would be pointless.

It did have a quantum processor but, because it couldn't be relied on in noisy circumstances, it wasn't depended on.

The basic data from Sarah's mind chip was easy enough to convert. The subjective experience was a bit trickier. Avi had become rather fond of the Holographic principle. Given her incredible intellect, this was saying something. Her idea was that a well designed quantum computer was actually a projection of a highly ordered pattern in the membrane surrounding the universe we perceive. By using quantum teleportation it was possible to shift that pattern in the membrane so that it manifested itself in the new crystal instead of the old. There had been design changes there too, some nonsense about clairvoyance. I wasn't sure about it but it was worth doing a little research on. Still, the new crystal could accept and process the old pattern. This required opening a hidden access panel in the skull and putting on a laser light show but the procedure was quick enough.

I couldn't claim that this would actually be enough to transfer subjective experience but it was certainly a heroic effort. The last stage of the process was to expand Sarah's extremely minimalistic intellect out to something more respectable. If Sarah were a printed human, the educational package would have

been at roughly a highschool level due to the limited number of cortical columns available for programming. But since a hundred TB was only about 1% of her capacity there was no reason why not to dump pretty much the sum total of human knowledge on her in one shot. I could sit here for hours cataloging the subjects that were covered by that dump. About the only thing NOT in that dump was some pop culture crap and useless trivia. There was no limit to her learning rate, she could accept information at wire speeds but it would take a while for her mind to assimilate that information into a functioning intellect.

Her brain was operating at the "orange line", it's limit for sustainable operation, what a ship would call maximum cruising speed. It also had a red line mode that was triggered by life-threatening situations that was very similar to an effect in natural humans but the speedup was far greater. The downside was that it greatly exceeded the ability of the body design to dissipate heat and therefore could only be used a few seconds at a time.

I didn't know how long the current hardware version would take to process the data dump but I didn't want to wait, I wanted her out of the building why she was still dazed. I released her brain from initialization mode. She woke up immediately startled and a bit scared. This was different from any simulation she had ever been in. Her body was still morphing to her accustomed gender.

I had to know whether a successful copy had taken place. "Who the fuck are you?"

"I'm Sarah, asshole. What the hell are you going to do to me this time?" Her use of English was perfectly fluent.

With an evil grin, "Nothing at all. Not a single goddamned thing. Get up and get dressed." I jerked my thumb at the locker where we kept basic sets of clothes.

While she was dressing she said "There has to be something. There's always something otherwise there would be no point."

"Not in this place there isn't. You're in Hell now."

She had finished dressing so I quick marched her out of the building. In the parking lot I gave her a C-note from my wallet. "Get lost and never show your face around here again."

The lab-tech who normally maintained the printing lab had followed us out. He was a bit upset with how I treated her. My reply was "I think I did the best I could. What would have been really cruel would be to give the false impression that her life would be anything but unpleasant."

"But she's amazing. I checked the program you had selected while it was downloading at it was the most comprehensive education ever. That and her looks, she should be living in the lap of luxury."

"You don't get it, do you? I sent someone looking like that out into the world with no credentials, no GED, no papers of any kind, no social network. She'll be selling her body within a week just to survive. If you want to help her, I can't stop you but as far as I'm concerned there is nothing left to do."

Sarah's body was a fully equipped cyborg with very minimal needs for food but she didn't have the type of personality that would tolerate just existing.

The tech had one more question "But why?".

"Simple, she had earned her release through her previous service and because she had indicated that it was time for her to move on."

A month later Sarah was riding a private jet wearing an expensive outfit. She hated prostitution but she was almost out of it. By carefully choosing her madam and her many talents her short career had taken off like a rocket. She was earning up in the six figures already and was about to do a seven figure job that would allow her to retire completely. She had found a stock broker who had accepted her cleavage as a form of valid ID and had opened an account for her. Even though she hated to do so, she had bought a cybernetic node to fully enable her internal systems. This was usually sold to people as part of their neural interface system. She had all the implants she needed but only had to install a small transceiver. She then found a colo for the system that would give her good access to real-time market data. Her latency class was tier 3 but she was able to make up for that with her ability to sniff patterns out of gargantuan amounts of data and trade patterns other firms hadn't noticed.

The cybernetic node came with the ability to create new simulations exactly like the one she had come from. She was a bit too flabbergasted by that to attempt to use that feature.

One could argue exactly what it was about her that made her such a prize. Her eyes were too big (all functioning human eyes are the same size) and too far apart. Her lips and nipples were sharply defined but unremarkable. Her breasts were a wee bit on the large side but definitely not any of the enlarged types the boss was so fond of. She had absolutely no body hair. Her skin was only a bit firmer than normal but there was definitely a much stronger layer about a quarter inch below the surface. She had no belly button and her abdomen was a good deal firmer than it should be because that's where her support equipment was camouflaged. She had fingernails on only her thumb and index finger and she had two big toes and two little toes on each foot. The general shape of her body was also remarkable. It tended towards the voluptuous but had the proportions of an elite bodybuilder without sacrificing the simple features and graceful curves of a supermodel.

She guessed the attraction was based on her being a bit exotic. There was that and the fact that she was preloaded with a dozen sex manuals and could apply the knowledge as if it were completely natural. What her clients were saying is that she had a presence about her when she came in the room, that they could tell instantly that she was something amazing. This was a bit too poetical for her so she tried to stick to the measureables. The one thing she couldn't deny, though, was that the key to her performance in bed was thinking about how completely she would put me out of business once she had enough

capitol to start her own company.

She was somewhat excited about this client though. He was the head of a major banking cartel in Europe. Her personality type was attracted to power and anything that would get her the contacts that could help her expand her sphere of influence clicked with that mechanism. The plane arrived at a private airstrip to the East of Paris. She was chauffeured in an immaculate antique Rolls Royce to a grand old castle from the early 18th century her obnoxiously know-it-all intellect told her. The castle was famous enough to have made the cut in her data dump.

Her mind registered but didn't fully process that the staff seemed to have an odd demeanor about them. They were a bit too stiff and a bit too curt in the performance of their duties. She wrote that off to their training or their master's preferences.

The master was waiting for her in the den. She noticed that he didn't look all that healthy. Her medical database started working on a chart for him. She had so much brainpower that it spent most of its time looking for work. She was extremely professional about her emphatically short career. She tried to dial in his sexual styles during the small talk. He had some extremely expensive wine brought in. Her cyborg taste buds didn't like the stuff all that much. As she was contemplating the differences between the human and cyborg palate an alarm went off in her cybernetics. She had been drugged. She didn't much mind this so she acted out the effects of the drug even though she didn't have any synapses for it to effect.

Her physique was a bit too over-built for one middle-aged man to carry, so he had someone help her load her onto a gurney. She was loaded onto an elevator and taken down to what was perhaps the kitchen. The smells were wrong though. Something was definitely rotting. Her client then pulled her onto what she thought was the preparation table. She could hear the sound of him getting out handcuffs so she broke her act enough to speak "No handcuffs, I don't do bondage."

Thinking he had a prayer of overpowering her, he rushed forward and held her arm down with all his strength while he tried to put the handcuff on. She opened her eyes and saw the devil himself. It might have just been the light but there was now what could only be described as an aura of absolute evil around him. Her eyes took in the rest of the room. It was a nightmare scape of dead and barely living victims, torture, starvation, even dismemberment. The 7-figure fee was hush money for whomever would care about her absence. This was a monster that took the most beautiful he could find and destroy it with the most absolute cruelty.

Her other hand, acting almost on its own out of pure survival instinct shot forward like a shell from a howitzer and ripped his throat out with a simple smash-yank motion. He was dead in seconds. She took a more careful look around it saw that it was too late to save anyone else. They ones that still had a

pulse were too far gone to help except to put an end to the pain. She bolted. The staff had been given the night off, as usual, to eliminate the worry that one of them might grow a conscience.

Fortunately, the guards must have been snoozing too. She made it to an out-building. The lock didn't last her first kick. She took the keys to a Ferrari. She had never driven before, not having a license, but her sense of kinetics was impeccable. She raced it off the estate and didn't slow down until she was ten miles away. All of the speed cameras along the road had been programmed to ignore that license plate.

The first commercial flight back to the place she had been before left at 7:30 AM. She drove around Paris for the rest of the evening before stopping at the airport. It was obvious that the guy she had killed was somehow above the law. She thought her best strategy was simply to flee and hope that his clan would accept the loss and let her leave and live.

She rammed the car into a curb next to a fire hydrant and went to catch her flight. I hope you will forgive her for not noticing that the usual airport police were missing that day because this was this was her first time at this airport. I hope you will also cut her some slack for not thinking of using an alias to reserve the flight. She had only been in the cloak and dagger business for a few hours and she didn't quite know it yet.

Her induction took all of eleven seconds. A few steps into the ticket hall and a man stepped out from behind a newspaper and fired a bullet straight at the "Fatal t" on her face. While the bullet was in flight, her brain went into hyper mode. Time slowed to a crawl. She was too big to move fast enough to escape the bullet completely, instead it was a grazing blow that tore a sizeable chunk of skin away from her cheek. The pain was unimportant. She surged forward as quickly as the laws of physics would permit her to do so. Her eyes broke stereopsis and scanned the room independently. There was a second man behind the pillar to her left and snipers at either end of the hall up in the rafters. She grabbed the man's gun hand with her left hand, forced it up into his chin and thumbed the trigger. She took the gun with her right hand and took out the backup. Still moving at a full sprint, she made a thirty meter shot on the first sniper and, switching the gun to her other hand, took out the other sniper.

Her cheek hurt and she was panting, her brain was running over-temperature and had throttled back. Her priority was still getting to a safe place. She took the spare clips off her would-be assassins, reloaded the weapon that was now hers, and went to hail a cab. Her outfit didn't have a place to conceal a gun but she certainly wasn't brandishing it but people were getting out of her way. She got in a cab and said "Drive."

The cabbie was like "um, miss, you might want to take a look at your face.."

Sarah said, "Oh that." She pushed the loose flap of skin back into place and the cells formed some temporary sutures. The wound would take a few hours to

completely heal. "Is that better?"

"um, yeah."

Four days later she was lying on an old oak desk on the top floor of an ancient building in downtown Paris. Precisely 1,817 meters away there was a restaurant where one, maybe two of her targets were currently fretting over how to manage the power struggle for the next secret global emperor. She had obtained the .50 tank killer from the Russian mob. She had modified the weapon with components she manufactured from raw materials using a few of the nanites in her support systems. The weapon was now fully cybernetic. The trigger mechanism was now electrically fired so she could use all of her fingers to hold the thing steady and could have her hands positioned at the ends of the gun instead of having to have one of them near the breech. She had fixed a high-speed camera to the 20x scope and had installed a full targeting system. She was linked to the gun through a cable from her auxiliary port, at the base of her spine. She held her eyes tightly closed.

She had taken the rig skeet shooting at 3,100 meters and it was almost a challenge. There were some other designs in her library but it was clear that they were just fanciful notions and not fully developed weapons systems. She had not been manufactured by a weapons company, all evidence to the contrary. It was common for snipers to use much smaller weapons in order to conceal their positions. However, smaller shells would lose more to wind resistance. Also, she had no intention of leaving the doctors anything to work with or herself any cleanup to do. Besides, she was kinda hoping that the regular cops would come and take her away. She could do just fine in a nice safe jail cell as long as she could maintain her cybernetic node and keep moving stocks around, she would likely be a multi-billionaire before she was released.

She still had plenty of money in her brokerage accounts because she didn't have proper ID. The account that the most recent payment went to, however, was lost along with more money than she cared to think about.

She was anticipating where her targets would come out assuming they were getting into the limo they had arrived in. She would do her best to avoid any bystanders or bodyguards. She had made note of the columns that looked strong enough to safely stop the shell once it had done its work.

Her conscience was fully functional but what was she to do? Was she to give up her life and live in a yurt on the steppe of outer Mongolia, never coming outside during the day or without a veil for fear of being spotted by a satellite? Why? Just so she wouldn't have to kill men who were seeking revenge over a monster that had probably killed a thousand other women and crimes even worse? No, she was at war. She would either come out on top or not at all. Being meek was not compatible with her personality.

Two targets came into view. She designated them. The computation of their walking pace would bring both of their heads into line with her gun in 2.7

seconds. That was the cleanest way to do it without having to operate the bolt between shots. It would also make a strong statement about what she was capable of.

She wondered what in god's name possessed her to refuse to merge with Mary when she had the chance.

The gun fired.

C 4

The Final Test

It was the week after I kicked Samantha out. You might also call it her graduation or her birthday, depends on how you want to look at it. I had no intention of paying her any attention ever again. I knew her personality type would predispose her to come back and buy me out of the company. I actually wanted her to. I was sick of running it.

Case in point: Mariam. Avi was the connecting link between all of the working groups. I had put a lot of work into collective consciousness while Alison was riding along in Mary's body. This work was both based on and facilitated Mariam's work in her project. She claimed her product was ready for release. I was like "fine, just slap on some boiler plate disclaimers and put it out there." But she wanted to go farther than that. She said that since everyone in the R&D departments, by necessity, had a neural interface, then the teams should form consciousness-only collectives to be more efficient. I could see where she was coming from and she apparently had linked with at least a few of the people on her team, in some way. I didn't violate her privacy to find out how. But this proposal contradicted the company's mission. I had founded the company in order to give people the tools to direct their own evolution. Linking your consciousness with someone else's, regardless of the level, was a major life-choice. It would be monstrous of me to force it on anyone.

I liked her work but I had to lay down the law on this. But to say that I could end the issue with a single ruling was delusional at best. She obviously had some emotional needs but the real issue was if these cognitive collectives started to really catch on then the peer and competitive pressures would be enormous on new employees. On the other hand, I didn't want my company to turn into some kind of mechanism that consumed independent human beings into itself. That couldn't possibly be right. But to outlaw collectives would also be a violation of rights ARGH!!!

So at the company meeting I laid down the law. "Official company policy with regards to neural linking is that I'm not going to either hire or fire someone based on what their personal choice is on that subject. If you need to communicate things the old way to accommodate such persons then you are hereby ordered to do so."

"I also have some important announcements. You may have noticed that the cyborg species is not yet available in the public release. This is because it has been a work in progress until now. I also want to announce the completion of the quest-unlockables for the cyborg species. Are there any objections to this?"

The room was silent.

"Opinions?"

Todd, also known as some random guy asked "Why don't we can the other two mind types? That mind architecture they have is much easier to link to than either of the others and they're really easy to operate."

"That's a fair question. I'm not in the business of limiting people's choices, in cognitive architectures least of all. If you come to me with a cognitive architecture that works reasonably well, then I'm going to make it available and I'm going to try to make everything else support it in some way or other. Even though I would agree with you that the Hypermind architecture is in a class above everything else, I'm not going to say that there are no valid reasons not to use one of the other types."

"Alright, here's what's going to happen. In order to feel comfortable putting this on the market, then I'm going to go through the conversion. Many of you have already met my alter ego. So I'm going to be out of commission for a few weeks, if it doesn't kill me. In the mean time I want you to work under the assumption that I will survive. That means I need the team leads to hold down the fort while I'm gone. I also need the marketing department to go through the manuals and figure out what parts of it to sell and start the build up to a launch event. I want to target the launch event for one month from now."

Distressingly, Avi was starting to look a bit more lively than she had been previously. She seemed proud that she could have helped me get to this day. People had been reporting that she was a bit less creepy than she usually was so I considered it a good thing despite my worries. It was nothing, I hoped. I think I just tended to worry about her too much.

I wanted to go home early but I ended up staying late dealing with issues about the management structure during my absence and the specifics of the marketing effort. The marketing department was a bit worried about taking on the project of selling an entire new species. I also sent out some drawings to a local tailor so that I'd have a set of outfits ready for me. There was one that was only for use at the launch event and a reasonable wardrobe of business suits, all very conservative designs.

I picked up a steamer trunk of equipment from the lab where Sarah had been fabricated and went home. Hospitals majorly sucked for a million reasons. I was probably breaking a thousand different laws and regulations by even attempting what I was setting out to do. The real issue was who the hell's body was I living in anyway? If it was mine, then any regulation some asshole could come

up with was null and void. To accept such laws would be equivalent to agreeing that your body was actually owned by the state and that you only had a lease on it. Since that was absurd, it was full speed ahead.

My house was quite modest as I had not yet really made it big. I had hired a nurse to help me through the process. She was annoyed at me calling about being late again and again. She was professional enough to keep her mouth shut about what I was doing to myself. I gave her a document that absolved her of any responsibility should the procedure fail. It had taken some work to find a nurse willing to risk this.

The first step of the process was something I should have done a while ago but the design had been evolving so rapidly that it was hard to say when the best time to actually start using it was. It was a support system that managed my nutrition and supported my metabolism. It fit mostly over my middle-aged gut. There was a moment of pain when it penetrated me in various places but it quickly numbed the nerve endings and re-routed sensations from its surface. I would need to wait for it to correct any nutrient deficiencies I had before it would let me do anything else. I used that time to train the nurse on my equipment and protocols for using it.

I went to sleep and got up at nine the next morning. I wasn't hungry at all and my body felt better than it had in years as my cells finally had the vitamins and minerals they needed to be healthy. I was getting cold feet. I could back off and declare my cyborg species "print at your own risk" and wash my hands of it. But if I did that then what the hell had I been doing with my life these last fifteen years? Wasn't this the entire point of the enterprise? Wasn't this my big payday?

Minerals are really important to humans. In human physiology crap builds up in cells so the cells are shed and re-grown continually because each cell division halves the amount of crap built up in each cell while giving cancer-causing mutations another chance to occur. But essential nutrients were also lost in the process. Cyborg physiology is much more efficient with cell repair and therefore doesn't lose minerals as quickly. The metabolic costs were not much less because you needed to send nanites to check on things continuously, but it was worth it to make better use of essential minerals.

A full cyborg could operate the support system at will but human neurology wasn't sound enough to rule out the possibility of spurious commands being interpreted as change orders, for example a harmless daydream about huge breasts could be interpreted by the system as a change order. This problem was much easier to work around in Hypermind systems. So there was a controller wand that had to be plugged in, by wire, to an access port on the control system. I had my favorite "Alison" configuration pre-loaded. All I had to do was press a button and say goodbye to being human.

The gender was not really an issue because it was almost as changeable as my mood. The real issue was that I was about to convert myself to an entirely

different species, granted one that I had invented and designed. The big risk factor was attempting to convert my mind to an entirely different mode of cognition while preserving my first person perspective. Avi's solution was fairly heroic but you could never know for sure whether it was enough or whether it was overkill. Avi had demonstrated in the lab that most humans had a partial quantum mind. Some people were sufficiently developed that they could operate one of the simulated characters without any additional aid, but that was extremely rare. Most people just had enough awareness to guide their thoughts and beat the odds on tests that should be a blind guess. Her speculation was that if humans were left to evolve for another million years or so we would have developed to the point where we wouldn't need brains in the conventional sense.

But a brain is a great deal more than that. I had a bunch of neural circuitry that liked, disliked, wanted, hated, etc that would have to be replaced with more modernized components. How could it be said that I was benefiting myself somehow when I was re-constructing the circuit that would appreciate that benefit? In studying my emotional makeup, I found that there were several abnormalities in my psyche. Some of them were omissions that I patched in with code from Alison's design which was set up to be in-line with human norms. Other things were just "me" and I attempted to port unchanged.

In any event, I wasn't getting any younger and my brain cells weren't getting any less atrophied so I said fuckit and pushed the button. I told the nurse the process had started and basically passed out. In a lot of respects it felt like I was dying because my life flashed before my eyes as the system was probing and reading-out my cortical columns. The system did it's best to maintain a constant neural interface with my exocortex, and transitively the Alison-Fran-Ramona mind that was still active in simulation. Occasionally I would loose part of it as the old interface had to be disconnected only to get it back a few seconds later as the new circuit came on-line. My mind was far too addled to do any work during this period so my in-boxes just clogged up.

My eyes were being re-built right-side out with the retina in FRONT of the retinal ganglion and blood vessels instead of behind it so I was blind for most of the experience. Every cell in my body was either being replaced or re-programmed to a new form. All of the connective tissues were being torn apart and re-built according to a new anatomy and, sometimes, with different molecular configurations. I had almost no strength and I was mostly numb except for a dull ache that was there to tell me not to try to move too much.

The experience was hellish because every now and then the process would hit on some bad memory that I'd have to re-live in distorted, nightmarish detail. It was the raw memory, not the sanitized version that would be re-constructed by the conscious mind. Is this really the stuff my personality is made of? I thought. It made me think of Star Trek 5.

An eternity later the process wound down. I was terrified for a moment that I was dead. Then I opened my eyes and took a breath. My body had been completely re-made. My new teeth were still growing in so I had a bit of granny-face going on and I had no hair but otherwise I was functional. My eyesight was incredibly sharp and the colors were super-vivid. I was now a RGCB tetrachromat. RRGB and RGGB tetrachromats were not that rare among human women (at the expense of a colorblind son or brother). I was using a re-engineered rod pigment as a cone pigment. I also had a slow gray pigment for night vision. I had the nurse sign an affidavit that I was the same person I had been, paid her and sent her on her way.

Walking around the house without anything flopping around between my legs was fairly enjoyable. The geometry of my hips wasn't all that great though. Discarding sexual characteristics completely and becoming neuter would be the only real solution to absolute athletic performance. I gave my systems the orders to speed up the development of my teeth and hair. By default, they were growing at a rate that wouldn't strain my ability to feed myself, but then I was using support systems that could provide for that.

I had always wanted royal purple eyes and hair. I was concerned that the changes to my color perception would mess that up. To my relief, it didn't. Color perception was extremely difficult to test in simulation so the simulated cyborgs were traditional tri-chromats.

There was still one thing missing. I had set aside another container from my trunk load of equipment. It had a biohazard label. Inside was a twenty pound pair of "porn-star class" boobs. They had been manufactured and held in stasis before I transformed. The default size was pretty respectable but I wanted more. They went on like a bra and were fully integrated with my body within ten minutes.

If the Hypermind architecture has a drawback it is this. Because it's learning rate is almost infinite, it doesn't experience the "novelty effect" that humans experience when they are getting used to a new stimulus. So, in this case the "Omg! I have bewbies!" state of mind lasted about four hundred and thirty seven milliseconds and then, after that it was like I had been lugging them around for twenty years and they didn't trigger much in the way of excitement. It was like "Yeah, I have boobs. They're nice. By the way, didn't you have some schematics you needed help with?" Don't get me wrong, I still liked them a great deal, they, or the rest of my body for that matter, just weren't commanding my attention the way you might think they would.

I re-started my mail feeds and started working through my back-log of e-mails. There was still non-trivial paperwork in my company that I would have to face, as punishment, when I got to the office. It was Friday so I announced my return for Monday. Over the weekend I spent much of my time doing housework. I guess something of my new body was affecting me and I actually made significant progress in curing my house of Bacheloritis. It helped that it felt

like I had an infinite amount of energy.

By Monday my teeth had grown in and my hair had grown about four inches. I was about three inches taller than I had been and ten pounds heavier. I went to work and looked for my desk and found a mound of paperwork instead. I called a meeting. I was wearing one of my new conservative business suits but nothing was going to hide how my chest was sticking out the better part of eight inches and was hanging down around where my belly button wasn't (I didn't have one anymore). They were going to have a harder time adapting to my body than I did.

I let the gawking continue for ten minutes then I said "Enough! What have you losers been doing while I was gone?" I got my usual mix of progress reports. I pretended to be satisfied though I was getting impatient with some of them. They were just too lame to be taking this long.

Then the subject turned to the product launch. My marketroid asked the big question. "Are you sure you want to go up in front of an audience with THOSE???"

I was like "Yeah, they are kinda small, I would have gone a notch bigger but then I wouldn't have been able to drive my car unless I had converted it to a drive by wire system."

"That's, um, not what I meant. You should probably go back to Avi's size. What you have there is, well, obscene."

Avi was lazily slouched in her chair with a bemused look on her face. I would have to investigate what she had been up to these last few weeks. Despite being the nearest thing in the world to a living goddess, Avi didn't feel even slightly threatening.

I was a bit outraged by that. I mean I had gone through all that to finally get my hands on a pair and now I was being asked to give them up just like that? "I'm afraid you are a bit confused. You see, getting my hands on these... " I gave myself a rhetorical jiggle. "... was the entire point of this. The human race evolved so that each gender needed, in some way, what the other gender had. For reasons I don't fully understand, that system has broken down so that many men and women have great difficulty finding relationships. Furthermore, for biological reasons, extremely few natural women grow much in the way of breasts at all. Finding a woman who would be willing to go out with my previous body, which was effectively impossible, compounding that impossibility with the extreme improbability of finding any woman with an extremely large rack would effectively mean that I would have to abandon all hope of the later. It is said that the emotional relationship is much more important than the physical one but it can't be denied that something was being given up. Because demanding someone else change their body to meet my emotional needs would be highly unethical, I chose to meet my own needs. If this makes any woman upset then she should have thought about that before deciding to ignore my posting on all those dating sites I used to be on."

"So the product launch will be this Friday and I will not be making any

further changes to my body before then."

The marketroid was like "ohboy..."

I spent the next sixty hours doing paperwork. I never had any biological reason to take a break of any kind during that time. At the twentieth hour or so a part of my mind forked off and thought introspectively. Here I was as a full transhuman and one of my super powers was the ability to work at anything indefinitely. How would I set up a company composed of employees like my new self? The best idea was to have everyone work 72 hours in a single marathon session of a work-week and have everything else be weekend. This would reduce commutes to 1/5th of the current times and increase productivity while doubling the number of days off each week.

But then the entire concept of work was getting long in the tooth. I had nanotech good enough that I could snap my fingers and produce just about anything with only a minimal effort.

I was ready to retire. I just wanted the company to be in good enough shape that it could help other people find whatever transformations they required and provide them the means to do it. I didn't really need anything more from the company for myself though.

C 5

The Sneak

While it was true that my company was the only company in the neural interfacing biz worth mentioning, it was not actually the only company. Their annoying little pissant company was getting on my nerves because the pols were confusing their shitty product that basically required you to sit in a sensory deprivation tank to use and my product that actually made you smarter. It was bothering me because some really bad laws were in the pipe based on the limitations of their product.

Their basic mistake was hiring MIT graduates instead of visionaries. They had been developing their product for at least as long as I had been in business. Their approach was to overlay information on the sensory fields. It didn't work too well because they were not respecting the thalamus and because they were adding to the user's brain's workload instead of off-loading it for them.

All of my users had the source code to the interface they were using because it was part of their mind and because it was a fundamental transhuman right. They had recruited one of my users to help them reverse engineer my product. They couldn't make heads or tails of it. They thought it was just doing routing and formatting functions, sending the output to the user's higher areas instead of the low level areas. That view was basically correct if you forced yourself to ignore the fact that the cybernetic node was a brain in itself.

My simulation engine was especially confounding to them because it provided the user a very high-quality experience, and the ability to try out radically alien body types while the user was even engaged in other activities. Their system required the user to be essentially unconscious and to map the signals from the avatar to the user's nervous system, limiting the user to humanoid body types, usually of their native gender.

They tried to reverse-engineer the protocol my system used but it was as close to protocol-free as off-the-shelf chips would permit. The protocol was to send a raw ethernet datagram consisting of 0xFF followed by a second byte of code indicating how deep a link was required. There were a handful of other fields but most was padding. Once that was sent, the character would reply with a deluge of jumbo frame packets. The first byte would indicate a channel number, from 0-255, omitting some codes that would interfere with Internet Protocol packet IDs, the rest of the packet defied all analysis. The best attempt was to send two seconds, or about ten megabytes, worth of those packets through an unsupervised machine learning algorithm for a week or so and then scrutinize the results. The ten percent of the packet that was analyzed seemed to be random bodily sensations and emotional states. The rest of the stream was completely inscrutable.

The interface had a timeout, if it didn't start receiving a return flow of inscrutable packets within that time, it would simply shut down. The packets were not random, their information content was just about right for communicating highly complex structures. The problem was that any structure that appeared in the stream would last only a few packets and then disappear again. The system did seem to be sensitive to time. If the packet was delayed by more than a few dozen milliseconds, it wouldn't work. re-ordering the packets would inflict an instant-headache to the mind in question. However, dropped packets didn't seem to have much of an effect on the network at all.

Despite all of this strangeness, the system was incredibly powerful. By injecting the right packets into the network, you could mind-meld any group of characters. They would experience extreme drowsiness for an hour or two, to the point of being KO'd, but then a new mind would awake wondering why it had two bodies. This worked for human users too. They had reverse engineered my actual neural implant to the point where they could duplicate it, poorly.

If I were them, I would have given up and gone out of business. But, they were well funded and had some political clout so they were going to fight till the bitter end. They had heard that my company was gearing up for some kind of product release. They had been keeping tabs on all of my working groups and weren't aware of anyone who was ready for release. They therefore hatched a hair-brained plan to infiltrate my personal simulator to try to get the skinny on what was going on.

So they sent a "diver" over with their version of my neural interface that they didn't really understand. He had a couch/bed set up in the trunk of his

car. On many models of cars it's quite comfortable to fold down the rear seat and then climb into the trunk to take a nap. You would get out through the passenger door. The link would be established by their mole. The funny thing about moles is that they often did exemplary work so long as they didn't decide to turn saboteur. I was almost tempted to have a mole appreciation day where I would call them out and thank their real companies for sending them to me. Doing that would be counter productive because they would either quit or turn saboteur and then quit. The only moles I made sure I didn't hire were government moles and moles from the six largest banking conglomerates.

Security in the server room was fairly lax. I was relying mostly on Avi's freakyness to keep people out. The doors required a key card but the system wasn't state of the art. They didn't think much of Avi. They just thought she was some weird freaky biological brain. No, she was an immense multi-platform network of neo-biological, nano, and quantum processors. Half of the machines in the server room were part of her mind. She was upgrading them regularly.

They had a simulation of a biological brain modified into a structure that was eight times the size of a baseline human's and accelerated by a factor of a thousand. HA! Avi could beat that by a factor of a billion, measured in total throughput, on a bad hair day. Their AI was also having some significant sanity issues.

The rack allocations were on a sheet of paper taped to the end of each rack. Avi pretended not to notice the spy trying to sneak in. The spy had a device rigged to identify possible linking targets in the simulation. Because, by then, everyone in the simulation was living in Mary's body the body record made no sense to the spy. The mind records weren't much better because most of them were spread across several nodes. There were a few that appeared to be operating in a more typical configuration. Of these, one of them was one of that new type of mind that nobody but me and Avi really understood. Still, it was widely known that they didn't suffer from down-time when you linked to them so it was the preferred target for a spy.

So the spy planted a wireless bridge on the network segment my simulation was using and established a link with this mind labeled "Clara". His accomplice in the car was on the other end of the link. Because the protocol was not using IP headers, both for latency and security reasons, it couldn't be routed over the Internet. Installing a lan bridge would have introduced too much latency for the link to operate.

The idiot with too many PhDs in the car was not using a cybernetic node that would have buffered the link for him so he was flooded full-force. He had sufficient practice doing this so, under normal circumstances, he would have linked much faster than a novice would have. But nothing could have prepared him for what he experienced.

Clara had been a cyborg resident of one of the outer villages of the

simulation. She had been brought along for the ride on this whole merging business. She didn't have much of an opinion on the subject. It was just kinda dull living inside someone else. Language within Mary had broken down to the point where minds were communicating through raw emotions and sensations. There wasn't much to intellectualize about anyway.

Suddenly, without warning, she had a proper body again and was lying in the trunk of this thing called a "car" staring up at the roof. There was now a new part of her mind but it was a jumbled mess. The official owner of that body had gone catatonic.

Clara had been linked in one of her previous incarnations. The inner secrets of various operators was a popular topic of gossip. Generally, it was understood that there was supposed to be a buffer layer that you weren't supposed to look beyond uninvited. If you decided to violate that rule, you'd just get some snippet of somebody's regular life. This link was a raw dump. There was no routing or firewalling going on. This guy was obviously trying to hide in a car out in the parking lot.

The link wasn't all that great either. It was fuzzy and the guy was really starting to freak out. Yeah, it was nice to be able to see something again, but it didn't feel nice to be used in this way. Clara raised the alarm within Mary. It was well known that the Avi-mindplex and the Alison-mindplex were the go-to contacts for tech-support issues. Something had been happening to the Alison mindplex over the last few weeks so it was unresponsive. Avi was always responsive but rarely helpful. Her reply was that Clara's processor was still stable and therefore it was nothing to worry about. The company policy with regards to these types of incidents was to ignore them unless they became a Problem. Because this breach wasn't interfering with any ongoing experiments, it was to be ignored.

Clara was like "UGH!". She wondered if there were a way to control the diver's body and hit the off switch on his end.

The diver was starting to re-gain coherence. He could tell that there was something horribly wrong with this link. "What in god's name are you?"

Clara's first answer was "A farm girl?". With this answer came a montage of impressions of her life on the farm.

Clearly, that was not the current state so something must have happened between then and now. "So what happened to you?"

"Well I got this invitation to come to Mary's house and apparently, in this experiment, you are supposed to merge your body with hers so here I am. It's dull." A compressed movie of that part of Clara's life came along with the answer.

The diver spent the better part of an hour processing that answer, even with Clara's subconscious feeding his thought processes with first-hand information. Apparently the current experiment was to refine the details of this bizarre merging process. Could that actually be what this product launch was about? Who

would dare launch something so totally off the wall? Still, it was in keeping with everything known about the stated goal of the simulation, to allow the user to try out as many diverse forms of transhumanism as possible.

This was just too weird. The diver hit the eject.

C 6

Avi's Guest

It was eleven PM on Thursday. I hadn't seen my house since Monday morning. I was planning to spend some quality time with my new body over the weekend now that I wasn't so worried about my company. Still, I was picking up on my employees' discomfort with this new situation and basically hiding out in my office.

I wrote a memo explaining that I really didn't care how people thought of me or even treated me. As long as work got done, I wasn't going to fire anyone for being uncomfortable with my choices. All else aside, I was determined not to be the kind of fag who mutilated a male body into some mockery of femininity and then went around demanding that everyone "accepted" me and treated me as if I were a natural born woman. My transformation was as far from a mockery of anything as could be obtained and I had no intention of dictating how other people treated me. I would just have to wait a few weeks for people to adapt and then they would tell me what I was. In the end, it didn't matter what they thought because it wouldn't mean a damn thing now that I had teh bewbs.

So the company policy was that you could insult me as much as you liked, to my face, only you were expected to do at least a little soul-searching afterwards and give a second thought to whether that was actually what you wanted to do. Unfortunately there was one woman two floors down who just couldn't take it and refused to talk about anything else for two whole days. She had to go. The rest were reasonably professional about it. Some insisted on calling me by my old name, which was still legally correct, others had started using my avatar's name. I pissed them all off by not showing any preference.

My thinking was that the best possible outcome would happen if I let the process of memetic evolution take its course and decide what a person with my essential characteristics actually was. I think things could have gone a lot worse if I had tried to dictate that people pretend that I was just another example of some already established category.

I was reviewing the final draft of my presentation and working on my exit strategy, because I didn't need the company for anything anymore. While I was working on that, Avi tried to sneak into my office. There was definitely something wrong with her. I pretended to ignore her, wondering what the fuck had gotten into her. She had taken her shoes off and was slinking around the edge of the room. Once she was behind me she pounce-groped my right tit!

"Avi! What in god's name do you think you're doing?"

"Tee hee." Avi giggled with a Cheshire cat grin on her face and lust in her eyes.

I saw the image of a hydrogen bomb in the first picoseconds of detonation.

"Report! state personality configuration."

The old Avi came back for a moment "Zero One hyphen zero."

This was the correct answer. It meant that someone was operating Avi and had confused a super-dreadnaught class battleship with a child's rubber ball.

"Report all linked processors".

Avi recited the report in her traditional tone. The report was quite lengthy because she was an extremely extensive network of interconnected nodes. All totaled she was about five billion times human equivalent, not considering her architectural advantages which aren't readily quantifiable. About twelve minutes into the report Avi casually listed Mariam as one of the sub-processors of her primary avatar.

"Thanks, that's enough." So I was dealing with Mariam, not Avi. Company policy was that Avi was not to advertise her ability to merge nor answer any questions about the subject with regards to herself. However, it didn't feel right for me to tell a being on the verge of apotheosis what it couldn't do with itself. Furthermore, someone crazy enough to actually do it probably had a special need to do it that shouldn't be interfered with. That considered, I had not spent nearly enough time thinking about what this would mean for me as a boss. I guess it was a given that Mariam was a lesbian too. I was always great at picking them. =(

Recovering from that pang of melancholy, I went back to boss-mode. "So, Mariam, when are you going to release your cybernetic technology package? Don't think I'm going to let you off the hook."

"Urk! Alright, alright, It'll be done by close of business tomorrow."

"Okay, that'll do. But seriously, do you have any idea what you've done? Now that you have seen Avi from the inside, is it beginning to dawn on you what she is and what she is capable of? She's not just some sexy thing you can have fun merging with, she's a real Power. Her capabilities are almost limitless. Be very careful in there because she can do things that are beyond even my imagination."

Avi/Mariam nodded. "Why do you still want the cybernetics technology-tree? This merging stuff is awesome."

"Well, I'm in no position to argue with that, having invented it, but the mission of the company is to give people choices. I really don't know what's going to happen after tomorrow's release. In all probability I'll have a lynch mob marching up the driveway by the end of the presentation. The point, however, is to give people choices that they didn't have yesterday. Because I really don't want to dictate the future for anyone, I want to throw everything onto the table and let evolution run its course."

"And make a tidy profit on equipment sales and printing services."

"Naturally. Earned profit is the hallmark of virtue. By the way, I think you owe me a story."

"That I do. Everybody went crazy that day after you left trying out your stuff. At first, we were just trying to figure out what parts of it to highlight during the official release event. Much of the catalog of new attachments were clearly just fetish items so we decided to focus on the core, the new species and the support systems because they should have fairly broad appeal. I suppose the other stuff will find their market on their own."

"With that out of the way, we just started playing with the stuff. We put it into a spare slot in our personal simulation environments and watched what the general population did with the stuff and basically threw it into the mix of things to play with. My first experiment was a traditional side-to-side conjunction with a generic cyborg character (two head, two arm, three legs). That was fun. So I decided to try a new simulation where everyone started out already merged. Actually the population of each city and town was spawned in a single body located in that town. I jumped into the one in the city and it was awesome to be so totally enmeshed in everybody else, with our minds constantly rubbing against each other and intertwining."

"I realized that Avi's main body was an older version of the same basic concept. The first time I went in to her room, she totally stonewalled me. The second day I crawled under the raised floor with a flashlight. There was still a lot of the junk that the older version of her body required still down there but I found she did have an absorption chamber. I freaked out and left. Two days later I made up my mind that I was going to do it. I gave all of my stuff to charity and, on the third day, took the plunge. I think I woke up about three days later. I was still synchronized with most of my external equipment but I was also a part of Avi. I guess I've been integrating more and more with her since then and can now borrow her secondary body when I need to."

"You and Avi really did a great job making it work. Ready to do it yourself?", Mariam concluded by way of Avi's secondary body.

"No, I just had the idea stuck in my head for a long time and wanted to get it to the point where I *could* do it. I still don't know if I ever will do it, outside of simulation. I really am a coward. One of the reasons I didn't become Avi myself was that I was scared of such a radical transformation. I'm not quite as scared now but I worry about what it would do to me, whether I'd become so alien that I'd lose my passion for boobs and stuff. Perhaps if I were saner I would have a better ordered list of priorities but then what is the purpose of life supposed to be anyway?"

Mariam went back to her lustful mode. "Want me to help loosen you up for your presentation tomorrow?"

"Gah! I couldn't get a date to save my life in my other body and now that I have my own boobs, I'm suddenly popular. Do you know how many women in the

office have begged me for a feel in the past two days?!?! I'm too bitter to be a lesbian right now and I think it will be a century or two before I am ready to go the other way. Just go away!"

C 7

The Great Product Launch.

So, Friday came and I had to get ready to present my new body to the world. eek! I showered in Avi's apartment and went to a local beauty parlor. My appearance was quite the sensation. Yes, that's the actual color of my hair. No, I'm not wearing contacts. As to the question of whether "they" were real, I answered "My entire body is fake." after that settled down, they went back to talking trash about the men in their lives.

I only really needed a shampoo and this crap called "conditioner". My complexion was flawless and any makeup would have made me look worse. That said, my skin was a bit gray-ish in tone because of the intra-cellular nanomachinery.

Then it was time to put on the Dress of Dread. I had ordered this dress before changing my body to make sure the tailor had enough time to make it. On a scale from standard business attire to "fuck me", this was an 8. I had thought it would be appropriate to present my work. Maybe I should have used Avi as the demonstration model. There had been a number of technological improvements since she had been built but the physical form was standard.

I would be relying heavily on my Nerves of STEEL superpower to carry me through the presentation.

My Marketroid came in to confirm the last details of the presentation. He almost did a double-take when he saw me in the dress. The business plan was to make money off of fabricating bodies, equipment, and accessories for people. Therefore we were going to emphasize that this was a free add-on for the simulator that came with the neural interface system. The plan was to focus on the base models, the attachments and other special features would be hinted at but not really explored. They would inevitably find their market on their own. The rest was just stage direction.

I didn't need any rehearsals because I had perfect memory and had my notes loaded up in my cybernetic node.

The presentation was held in the company's room. The fire marshal had endorsed the room for eighty people including the presenters. My neural interface was starting to catch on so there were several representatives from gaming and business press. The gaming industry was trying to come up with titles based on my simulation system. The business press was there because they had noted the advanced capabilities people using my neural interface system. In all, there were about twenty people in the audience.

The marketroid introduced me and stepped aside. There was a gasp as I bounced onto the stage. My outfit did little to restrain my breasts, so they absolutely did jiggle. My voice could hit 103db across two full octaves but I restrained myself to normal tones and levels, using the microphone so there would be a sound-track to the Internet telecast. The stream counter was at 1,100 viewers.

"Hello, allow me to present to you my life's work, a new cyborg race. This race will be a free download for my company's simulation engine. As you can see, the body-type is also printable. I over-indulged a bit on the settings but I hope you can get the basic idea. My minions have prepared this propaganda video for you."

Since there weren't enough cyborgs prowling the real world yet, the video had been generated from the simulation. It was possible to get the simulation characters to act to some extent but they couldn't speak English so there was a voice-over narrator instead explaining about the four sexes and the basic features of the support systems. The video concluded with an explanation that you could have one printed and use it as a second body or undergo the conversion process. It was a pretty solid video. It didn't get overly technical and it didn't try to explain cognitive architectures or how you could swap your arm out for a tool-arm on a whim, which would probably be too disturbing.

The strangest thing was that it was already possible to print-out the human baseline body type because they were based on real genetics. So the novelty of this species was not at all obvious to many in the audience. In some respects, it was seen as a step backwards from the more realistic human simulations. To really appreciate the differences you would have to get into deep anatomical and physiological changes that would probably gross most people out.

I didn't have much else to say for myself so I turned it over to Q&A.

Naturally, the first question was "So, how much do they weigh?". I ignored the obvious intention of that question and responded, "It is estimated the male and neuter type cyborgs will weigh around two hundred pounds give or take three percent. the Female and Hermaphordite types are a bit heavier due to their hips at two hundred ten pounds." I sent out a mental thread to quickly scan through the chat log on the video feed, there at least I could screen the questions.

"There's an interesting question from the chat room. It asks what the life expectancy of this new species is. That's an excellent question. The answer is that I don't really know. It will be at least a thousand years before there has been enough testing on this new body to find out exactly how it actually will age. It is quite possible a software defect or design flaw could kill me before the end of the day. That said, theoretically speaking, no part of my body should show any degradation for the next million years. At that time I will either have to make more extensive use of external memory storage or begin to forget things."

I had been honest about the lifespan in my documentation that I had briefed

my staff with, it simply said unknown, which was the truth, nowhere near enough testing had been done to come up with a statistic.

A man with a smirk thought he could stir things up by asking "Is it true that your new software will let you merge with other people?"

"Yes, next?" There was a bit of a reaction in the room and on-line but it was nothing.

A woman in the room broke the silence. "You and your new grayish white race, when will you give equal representation to the black race?" (she happened to be black).

"Huh? What are you suggesting here? You come to my event, hosted by my company, about a product carrying my company's label implying that just because you have black skin I am therefore obliged to expend my time and energy to implement one of sixteen or more sub-races of black people. Is that it?"

"Yes. You are discriminating against an oppressed minority."

"How am I doing that? You can load any genetic data you want into my simulator and it will figure out the basic morphology and neural architecture. I am not inclined to do so myself because we do all our work at this company in our heads so therefore I only work on races that I find appealing or are interesting enough as examples of transhumanism."

"Racist!"

"Let me get this straight. You want me to implement a race in my simulations that is so pathetic that it can't do the job itself even when all the tools are provided and then calls me discriminatory for not doing the work for them? The real question is why I'm not crashing your press conference demanding that you write a white-person simulator." Actually there were some research groups that were investigating various ancestral human genotypes using my simulation software, but it was in the academic realm and they hadn't attempted to advertise their work beyond their website. In any event, my marketroid extended a giant hook from behind the curtain and pulled me off the stage, as was done in vaudeville theater.

"Hey, boss, I think you need to hit the showers."

"Yeah... At least it will get some publicity."

I went home for the first time in a week, put on something comfortable and flopped on the couch. I had gotten rid of my TV because I didn't need it anymore. My cybernetic node was capable of streaming in as many channels as I liked so I fired up all of them and watched for news about myself. I also searched the blogs and news sites for reactions to my new species.

The biggest story in the news was about how some insane assassin was terrorizing France. She had started her killing spree just over a week ago by murdering a beloved banking mogul, who was a brilliant business man, philanthropist and man of the people. She had then gone on a rampage at the airport, murdering five innocent passengers. There were security camera

pictures. It was Sarah. Since then she had unleashed a reign of terror randomly killing off more than two dozen people who just happened to be high-level officers of the same bank or relatives of the same noble and innocent man who also just happened to be in high finance and multi-billionaires. The French intelligence bureau was now desperate for any information about this woman who was obviously an elite assassin and seemed to have no past. The TV news media didn't seem to care that a new species had been unleashed into the world.

I stopped all the TV news feeds.

The blogosphere was all a twitter about my bimbo-makeover and my gaffe. Maybe twenty percent managed to put it together that the press conference was not about my simple sex-change operation and that I was actually selling equipment that could do the job and with stunning results. Some of the more diligent journalists had actually downloaded the software (which only came out to about eight gigabytes), and tried out the species. They reported that it was a very different experience than the previous body-models and that they were struggling to describe it. There was a race going to see who could be the first to unlock the quest-loot associated with the new race.

The financial press was a bit more serious. They noted the new product launch and said that it was too early to evaluate what the market impact would be. However, there were grave concerns about my competency to continue in my role at the company. Meh, I was ready to quit anyway. What made me go ballistic though were comments by some reporters that someone with tits the size of mine shouldn't be running a company. That did it, I decided to go to war. I grabbed all of the spare computer power at my company and set up pipelines to process news and data for every financial instrument on the planet. I subscribed to every financial publication in existence and set up my rig to read every article within two minutes of it being published. I was making trades within six hours. My response was going to be "I don't think you deserve to work for a company owned by someone with tits as awesome as these."

I would probably be able to buy the planet in ten years. What I really wanted now was a starship. I started working out how much tonnage I could lift into orbit. I wanted about a million tons, but anything over two hundred thousand tons would be a good enough sized ship. You don't tour the universe in a dinky little tin can. You start out with a hull consisting of three layers of 12" hardened steel and a nose-cone twenty feet thick. Then you put forty million horse-power of rockets in the back. No matter what type of propulsion you use day-to-day, the rockets are absolutely obligatory.

[ed note, not happy with this last chapter, should heavily revise/rewrite]

I arrived at work on Monday feeling neither better nor worse than I did on Friday. Which, by human standards, would be classified as totally awesome.

I was greeted in my office by the marketroid. He was shoving a bunch of letters demanding that I apologize to the party-crasher from Friday. So I told him. "The official policy of this company is that I will not demand an apology for showing up with insultingly spoiled attitude."

The marketroid thought my shiny new mind was cracking. "but..."

"We are entering an age where you can be whatever you want to be. Race no longer exists in any meaningful way. I will not be dragged back into a world where your race can be used as a weapon or bow to any pressure to change my product based on racial politics. If the race of your birth has certain direct, natural, and inevitable consequences then those consequences are your problem, not mine. Never raise this subject again!"

"But.."

"I mean it!" Thank god, I could still look angry with my new face.

The real issue was that orders were coming in for printed cyborgs much faster than I had anticipated. I thought demand, at \$30,000 each, would be maybe one or two a month. There were orders for hundreds. One market research company wanted one of each personality configuration to study their shopping behaviors. There were bachelors spending every last dime they had. There were requests from the university that had done the psychological testing on Avi's early prototype. The military wanted some too but they could go fuck themselves as far as I was concerned. The problem was that my pilot operation would be maxed out at 2 units/day. I was now faced with the business problem of constructing an assembly line for people!

Lawyers would get strokes over what I was about to unleash on the world.

I had borrowed most of my company's few dollars of cash to use as capitol for my investment schemes. Fortunately, I was already making returns, as well as driving my accounting department crazy. Mariam's product launch had also come and gone but it was a simple release without fanfare or gaffes.

By Wednesday people were starting to notice that the mysterious assassin over in France matched the description of my cyborg species. I started getting calls from reporters, which I answered in total honesty. "Yes she is a cyborg, yes she was made at my company, no she is not acting on orders, no she is not malfunctioning." That last point was difficult for a lot of people to swallow. I elaborated "She must have been forced into some situation that demanded this solution. I could make a guess based on what I've been told but I don't care to speculate nor do I really care."

Then the questions turned to how this would reflect on my company "I suppose it might tarnish the reputation of my company but then each cyborg is a free, sentient being capable of making independent choices."

It was around three PM on Thursday when I got a visit from a top general and a CIA agent. They rolled up in expensive black SUVs. They marched in as if they owned the place. I was in a meeting about the new production facility. The General had two lieutenants. One was carrying a briefcase, the other a monster of a rifle.

They almost kicked down the door when they came in. They saw my visitor and simply said "You, leave".

Needing to re-gain control of the situation, I opened with the "What can I do for you, gentlemen?" approach.

"We require your assistance with a... situation. Perhaps you have seen the news regarding the rogue cyborg?"

"I have."

The general spoke. "Until last Sunday, when given a choice, she had been using sniper tactics. Her hallmark was the single shot double-kill. She was identifying meeting locations of her targets and then eliminating both targets by making a nearly impossible shot, usually from a range of more than a mile. She took down seven targets with four bullets and no collateral." This was spoken with a tone of awe. "Sunday, twenty of her targets were hiding behind sixty of the most elite soldiers in the world. This is what happened." His face seemed to have lost its color.

The first lieutenant put the briefcase down on my desk. It was a portable computer, self-contained so that no time would be wasted trying to make anything work with whatever I might have in my office. It was a bit sturdier than a laptop, with a larger battery. The lieutenant pressed the button to start the briefing. The presentation started with a date and place slide and then cut immediately to the action. A female form wearing an armor that left absolutely nothing exposed that appeared to be made out of quicksilver barged into some ancient palatial castle, probably from the 1720's or thereabouts. She had two huge pistols connected to her arms by short cables. She was aiming and firing them independently. Her motions were fluid and efficient. Each bullet hit its mark except two. Every now and then there would be a shower of sparks as return fire grazed her armor. The scratches only lasted seconds. Conceivably the armor would have eventually ablated away but the battle didn't last nearly long enough for that to happen. She only missed when return fire hit her arm exactly when she was firing. When she ran out of clips, she was confronted by two heavily armed brutes, both martial arts experts. She put the first one in his coffin with an explosive hook kick. The second she decapitated with one lightning stab to the neck with her fingers outstretched.

She then tried to re-arm herself with the LMGs that the guards had been using. They all had trigger locks encoded to an implant in their wrists. She didn't have time to figure that out. She couldn't use the rounds either. She still had targets cowering somewhere in the building. She grabbed a sword off

the wall and finished what she had come for. The sword was not very sharp but she had more than enough strength to wield it.

The video ended there.

"Wow, you should sell that tape to Hollywood."

The CIA thug glared at me.

The general continued. "Local law enforcement was also called in. We aren't exactly sure what happened. Nobody was hurt, she walked. Apparently some kind of deal was reached. Two hours later, she sent an e-mail telling us where to find this gun." He motioned to the other lieutenant. The lieutenant was going to hand me the thing. When I reached for it with one hand he said "Ma'am it weighs more than thirty pounds." So I just grabbed it with one hand. It was a beautiful piece of workmanship. I couldn't have believed she would have given up such a magnificent weapon were it not in my hand.

The general continued "The gun was manufactured back in 1994 by an American weapons supplier. However we have never seen any mods like these before. It must be a kind of targeting and fire control system but we haven't been able to figure it out."

I held the cable and asked "May I?".

The general nodded.

I linked with the gun. The targeting scanner held a piece of Sarah's mind. It felt like iron-willed determination. She was fighting for her life. There was also a tiny conventional computer in there where all the ballistics calculations were done. Hidden on that system, that could only be accessed through the cybernetic link, was a file called "letter.txt". It was the most pathetic chunk of verbiage I had ever come across.

"Hello,

I am pretty sure that this will reach you, my creator, sooner or later.

I've learned my lesson and am ready for this simulation to end. It must be a simulation because there is no way that the horrors that I've seen could possibly be real. I'll happily merge with anything you want or do anything you want me to from now on.

I was just trying to get out of prostitution when my last client turned out to be a psychopathic killer with a torture dungeon. I had hoped I could just escape or turn myself in but it turns out he owned the police. I tried to figure out who was sending all these assassins after me but each time I took out a target five more would appear.

When the story was finally released to the press, I couldn't believe the lies I was hearing. How could anyone, even a human, utter such outrageous falsehoods?

Tonight they thought they could dictate terms to me. They thought they could either keep me away or eat my corpse. They had set up a rotisserie in the courtyard and had prepared tables. I had to explain to them, in the only language they can understand, who is in control of this situation.

But when I got there, I had to murder so many people to get to my targets. I'm sure almost all of them had only been paid to do guard duty. It was horrible! If I were to let any of them live then I would be faced by twice as many tomorrow and then twice that many. I had to kill all of them to make it perfectly clear that pointing a gun at me is always a fatal mistake.

In the end, I made it into the chamber where they were having their homosexual orgy. They were so pathetic. There were even a few young boys there. They offered me trinkets and worthless money when I had come for my freedom. I finished them off mostly out of pity rather than any high ideal.

When I got outside the police were there. I thought I had been granted my salvation. I offered my wrists to them. They took their hats off and bowed to me. They told me that they knew what it was I was doing and they wished that they could have been strong enough to do it themselves. I warned them that some of them would be killed for their treachery. They just told me I should go swiftly to my next target. I then decided to write you a letter so I arranged for them to pick up this gun once I could place it.

Please tell me how to get out of this nightmare. Encrypt a file with the public key on this device and put it in a hidden folder on your website.

Yours, Sarah"

I wrote a reply.

"ey,
That's the saddest sob story I've ever heard. What's with the gun anyway? Are you giving it to me as a sign of surrender? If I had a gun like this I wouldn't give it up for anything!

Let me get three things straight.

First, this is the real world. It's as real as it gets. I admit that you have seen more of it's horrors than most but it is now your world. Do with it as you please.

Second, we have nothing more to discuss. I have my life, you have yours, if you can keep it.

Third, I do not want to know how you got into the war you are now fighting. But now that it has begun, you must see it through to whatever it's logical conclusion turns out to be. It really doesn't matter what you want to do with your life or how you want to transform yourself. Right now you are in a fight and the eternal laws of the universe require that you either succeed or fail before you can move on.

That said, I really want to see you win!

Love, [...] =)"

I erased all traces of the correspondence from the gun.

The scope on the monster gun couldn't focus on anything nearer than twenty five feet or so so I aimed it out the window at the driver waiting by the SUV, designated his neck as a target and brought the gun to bear. I was a bit too busy to hold the gun properly but it didn't matter. The firing pin made a pathetic clicking noise. That immediately got the attention of my guests.

"I guess I owe you guys an explanation. Since you will probably find out about this sooner or later, I might as well tell you. This is a cybernetic gunsight. The gun literally has a tiny fragment of a mind in it. It's only function is to compute ballistics. It takes all mathematically quantifiable information to deliver the most precise shot possible. This type of system can only be used by means of an advanced neural interface."

The spook took over the conversation. "So you are telling us that your company is now in the weapons business?"

"No, the basic technology is the same principles as in the cybernetic nodes we sell. We had many many ideas so we sketched most of them out. One of them was a weapon system, this unit is based on that sketch but all of the actual work was done by Sarah."

"About this Sarah, who is she?"

"She was one of our simulated characters that we use to design and test our products. She had out-grown the simulation she was in and since it felt wrong to simply delete such characters, I gave her a body and kicked her out. I was excessively rude about it and didn't give her any instructions at all except to not come back."

"Are you saying that she is malfunctioning?"

"No, not at all. Everything I've seen indicates that she is being extremely rational. What is going on here is that someone has picked a fight with her and she intends to win. She will continue to fight until she feels that her enemies

have either gone extinct or have given up all attempts to interfere with her life."

The general spoke up again. "We have seen that she is a powerful weapons system. Surely you must have a shutdown code or a tracking device or something..."

"Nope, nothing. She is completely autonomous. Furthermore, her systems have been designed to resist all forms of attack."

"But how do we defeat her?"

"I hope you don't because then I'd have to go back to the drawing board and make a cyborg ten times as powerful."

The spook responded. "What? Have you gone insane? How will you control your cyborgs?"

"My cyborgs, which I am one of, control themselves. We are free to create and become anything we want."

The spook had been expecting that I was a Dr. Evil who just wanted a clone army or something, which the CIA would inherit on the occasion of my untimely death. "What about models? Is this a special prototype, what are the capabilities of your civilian model."

"While there continue to be some refinements to the basic design, there is one and only one model. Every cyborg produced at my company, without exception is just as powerful as Sarah is. There is no military model. Actually, the strength was a byproduct of the general body-builder aesthetic that I'm fond of. I was much more concerned with making them sexy than deadly."

General: "Really?"

"Yes. I am also an immortalist. That means that not only must my body not break down, it must be able to overcome whatever challenge it is faced with. This philosophy is realized first at the cellular level and is reflected in every anatomical feature, not counting my accessories."

Spook: "You're a menace, I'll have you shut down before tomorrow morning!"

"A menace to what? This country was founded on the principle that the strength of the individual comes first. What is a menace anyway? It is a fear. A fear based on your own weakness, the feeling that if you let something get 'out of control' you wouldn't be able to stop it in time before you got hurt by it. The real problem is viciousness. Viciousness is caused by the lack of virtue. A vicious person is a person who is weak. They try to compensate for their weakness by putting on airs, seeking political power, oppressing others. In order to be good in this universe, you must be virtuous. There are many virtues, some I am able to give, others must be earned, in those cases I can only make sure the capacity for those virtues is present. When I created Sarah, I gave her beauty, strength, intelligence and knowledge. She wields the sum of human knowledge. She will kill only to protect what she loves."

Continuing, "Would you like me to recite the list of murders and atrocities carried out by the CIA over the last several decades? Each one of them was

fundamentally a vicious act, an act of oppression, an usurpation of democracy, an act of greed. Just as in physics, opposites attract. I suspect that it was inevitable that the most virtuous person I could produce would almost immediately collide with the most vicious cartel on the planet. Every time she makes a kill, there is a massive upheaval in the world's financial markets within twenty four hours. Now that some of her earlier kills are starting to reach probate, the findings from the initial audits of the estates are turning up shocking results. Entire criminal empires of sex-slavery, drug trafficking and financial fraud."

Continuing: "One of the most common errors is to confuse strength and power. Power corrupts because the will to power is a vice. It is the tool the vicious use to inflict their inadequacies on the innocent. Strength is a virtue because it allows you to protect the innocent and helps you stay out of vice. Because I am strong, I do not fear others who are strong."

The meeting was pretty much over because my guests had enough new information to mull over.

For the first time since I got my new body I felt exhausted. My consciousness drifted towards the Alison-Fran-Romana simulation that was still running. It was like a "happy place" for me.

Each of the families of printable products was supported by the research team that had produced it. Since the cyborg species was my responsibility, I had to take the support calls. I had more servers constructed and extended my mind yet further into them. So I had a stripped down version of my mind with basic speech and visual skills running against my full intellect answering a high density phone line. The capacity of the phone bank was on the order of 2,000 concurrent calls. So basically I had a din of chatter going on in the back of my mind. The bottom line was that if you called the right number you got a rude and obnoxious version of myself instead of a phone tree.

The most common complaint was that people who had either purchased cyborg bodies as secondaries or who had done the conversion were trying out regular foods only to find that their internal systems were spewing out yellow-grade poison warnings. My standard response is that the yellow grade indicates a poison that would have an adverse effect on a human being but is pretty much harmless to cyborgs. The conversation would inevitably turn to why so many things were being flagged as poisonous. My canned response was that someone had been taking advantage of human weaknesses and was conducting a chemical weapons attack against them. My best advice was either to make sure any human bodies you still owned ate only safe foods in the proportions suggested by whatever support system you are using or to convert them to cyborgs. And no, I was categorically not in the food business. I did own some stock purely for profit reasons but I wasn't yet rich enough to hold a controlling share in anything interesting yet.

Hospices and nursing homes were begging me to get official FDA approval for my support systems so that they could be used as a means of cost-cutting. My reply was that if I attempted that, there would not be any cost savings. So they started lobbying on my behalf. I'm not sure why. My product was perfectly easy to obtain. They were being sold as mere replicas of virtual goods with disclaimers that basically stated that they were inert lumps of plastic. The legal system was geared for people who over-claimed so they were doing a double-take. A cease and desist was definitely in the pipe though and my legal team was worried.

There were also reports of people getting a cyborg conversion and then going to a doctor. How a cyborg could be that stupid was beyond me. Thankfully most of the doctors were smart enough to know they didn't know anything about cyborg physiology and upheld their oath. Sometimes someone wanted to customize the default appearance. Instead of tweaking their software settings, they went to a cosmetic surgeon and found that they were completely immune to anesthetics as well as most other drugs.

There was one case where a cyborg got into a traffic accident bad enough to be KO'd. Since they couldn't find a normal pulse on her, they tried to operate on her heart. Her sternum was so tough that the operating team could barely scratch it, so they cut her ribs instead at the ligaments. The idiot surgeon couldn't figure out the anatomy of a triple single-pump CV system so he cut anyway. He managed to do enough damage that she went into arrest. She thought the support system was a bit too freaky so she was living without it. Anyway, she wound up in a morgue, autopsied before I heard about it. I think there was a bounty out for information on cyborg anatomy.

I gave Avi the bad news that she, at least her mobile body, had been promoted to senior field agent. I sent her to the scene with a fake id because she didn't have any of her own. She went in with a large briefcase on the pretext of performing an examination. It was actually a crash cart for cyborgs. despite the damage done during the autopsy and the tissue samples, most of the cells were still in stasis and viable.

All Avi had to do was pump some nutrients into the chest cavity and set up a "scanner" to wirelessly transmit power into the dormant cells. The trickier part was keeping the coroner distracted while my customer recovered. Avi used Mariam's skills to chew the fat for an hour and a half. At that point my customer's in-built systems had recovered to the point where it was possible to release the consciousness from stasis. She was only a bit stiff.

The coroner seemed to want to say something when Avi went back into the room to check on the customer. Avi was like "Keep your fucking mouth shut, asshole. I really resent having to drag my ass all the way out here to clean up your shit. Now get the fuck out of here before I decide to forgo killing you and skip straight to the evisceration."

Avi explained to the customer how close she came to being completely dead and

suggest that she wear her support system in the future to help protect against a total shutdown.

You know, it's a funny thing how the simplest things can be the most significant. I mean a woman seeking maternity care barely merits a mention. However, when that woman is a cyborg, it is quite properly the most significant news item in human history. The only contribution most people make to the future is their offspring. The Illuminati know this very well. They have agents all over the world selectively sterilizing people they decide are unworthy of reproduction. They promote homosexuality and add gender-bending substances such as bisphenol A to the food supply. They add a whole laundry list of fertility lowering substances to anything that a human might ingest just to regulate the population at large.

The Illuminati had been influencing, if not overtly steering, human development for five thousand years. Every so often some of them become decadent and expose themselves by being too open or too extravagant in their lusts. So someone such as Sarah inevitably appears and prunes out the worst of the bunch but, at the same time, makes the remaining members stronger and the institution healthier. It had been several centuries since the last pruning. Sarah's efforts to re-claim her own life and remove people who truly Needed to Die(tm) would, barring any radical change, secure the Illuminati's reign for another thousand years. Sarah would need to kill thousands of targets before the organization would show even the smallest crack.

You see, since the cyborg doesn't menstruate, the crusty old 33rd degree masons had assumed that they were infertile and therefore inconsequential. Indeed, they seemed to make excellent slaves and the users seemed to promote debauchery and immoral behavior. When it was decided that there were enough of them, they would detonate a nuke in the basement of my company and that would effectively terminate the species (terrorists are useful).

So, when a cyborg showed up at an obstetrician's the Illuminati dropped a brick. This was now a crisis. Very soon now, my cyborg species would grow to the point where there was no hope of ever bringing it under control again.

So barely ten hours after the news broke, congress was recalled for an emergency session to discuss measures to deal with this cyborg crisis. The measure on the table would ban all cyborgs and call for the interment of all cyborgs currently at large until such time as they could be rendered sterile.

Naturally, they used Sarah's killing spree as their main argument for banning the species. They also pointed to several horror stories. One young couple had noticed that their den was more than ten feet across, so they decided to grow the GF's boobs out to that proportion. Unfortunately, they had failed to consider the weight of boobs that were more than five feet in diameter each. So when she had passed the three ton mark, the floor buckled. The BF was crushed to death and the GF was impaled by a 2x4. Since the 2x4 was organic, her body

simply metabolized it and used the mass to continue to grow. They claimed that she was miserable because of her freakish body. The truth was, she was in mourning. She had gone through the full conversion process and could have detached herself from her boobs at any time.

There were even worse cases where women were "boob raped", slipped a date-rape drug and then fitted with cybernetic boob attachments. These were tricky cases because they couldn't really be removed from human subjects. In one case, the criminal had managed to get his hands on some size-3 models, weighing six hundred pounds each. Because they enveloped the victim's arms, it was impossible to reduce them without first converting her to a cyborg. She didn't want that. The criminal hadn't fitted her with any support system so she was in pretty bad shape when she was found. Fortunately the larger sizes were too expensive to obtain and too difficult to transport.

In the end, just about every person who had ever mumbled a complaint about my cyborgs was paraded in front of congress. My company and a good many of my clients fought against the restrictions. The final compromise bill outlawed almost all of the attachments, required all cyborgs to be registered, and required a permit for any future cyborg conversions. Even the fairly modest boobs I was wearing were now contraband. The bill was on it's way to the president.

[ed note: should probably "zoom in" on the action in the last few sections, create actual characters, dialog, etc, but I'm too lazy and just want to get ideas out right now.]

While one is always obliged to object to bad rule-making, trying to change bad policies from within the system is a great way to waste a lifetime. What you are supposed to do is simply take what you need and then prove that you are willing and able to defend it. Every political accomplishment in human history was done that way. There is always the issue of good and evil, but then that's not really what this is about.

I wanted to make a statement and I needed to take over the lime-light with regards to cyborg affairs because the media would always rush towards the the scandals. If that spotlight were on myself, then I would be able to shape the message. I would have to advance my life plan by a few centuries though. I checked the building's schematics and saw that the nearly unused server room on the executive level had a floor sturdy enough to take five tons. I dispatched orders to have that turned into office space. I then ordered a pair of size 4 tits from production. It would take a day or two for them to be grown, they were always built to order because they were such a rare request. I mean who, in their right mind, would trade their arms and legs for five feet of cleavage?

In planning this stunt, the only part of the plan that bothered me was that I'd have to detach my current pair first. That means I would have to survive

for five full minutes without much in the way of boobs! Sure, I would be well compensated for my brief sacrifice but I was seriously considering going unconscious during the procedure so I wouldn't have to experience the horrors of being nearly flat again.

There was no time to hire contractors so me, Avi, and random office staff worked around the clock to re-model the server room. I kept the raised floors so that the cradles for the boobs could be sunk a bit. This would lower my apparent height by about eight inches which would make it easier for people to talk to me. The rest of the room was cleaned, wallpapered, and carpeted. The cradles themselves had a cooling loop from the building's chiller system and an inductive charging system to keep my energy reserves at full.

With the safety hot-wired and some extra iron on the counterweight, the building's freight elevator was just barely strong enough to lift them. They were pre-fabbed as a package including a black outfit that showed off all five feet of cleavage. It would be extremely difficult to put on a different outfit at this size, in this gravity.

My activities were not going unnoticed by the media. There had doubtlessly been several leaks. It was a necessary part of the plan though. Being civilly disobedient doesn't really count if nobody knows about it. The POTUS thought he could score some points with the atavistic constituency by signing it in during prime time. So the white vans started rolling in at six PM. I didn't have anything to say to them. So I let the marketroid fumble for platitudes about the safety of the conversion procedure and about how being a cyborg was a valid life choice. I watched the audience through a CCTV camera. Most of them were anchor-bimbos. There was one woman in the third row who seemed to have something going on behind her eyes so I sent a message down to invite her up for a special interview later in the evening.

The damn POTUS started at 9PM and rambled on about family values and the precautionary principle for an entire hour before he finally signed the accursed bill. The bill was written to go into effect immediately.

The reporter that I had invited up was named Jenny and she worked for something called a newspaper. What news had to do with paper was an obscure factoid of historical trivia. Apparently her company actually still went through the trouble of printing news on paper. Imagine that! It was enough to make my over-augmented head dizzy. No wonder her company was the last of it's kind in the country.

I had my staff keep her busy while Avi helped me start (continue?) my life of crime. The part about this being a stunt was a cover story. Really, this was like Christmas for me. The only problem was that the shape of this new configuration would prohibit any conventional undergarments. Therefore, I covered my privates with a soft-shell attachment. You could do some, ahem, interesting things with one of those and female anatomy. I didn't, at least not at this time.

The procedure was as simple as changing clothes. The old boobs would have to be treated as medical waste, just because, even though they were re-usable. The new boobs felt like a warm, moist jumpsuit. I would still keep my femurs and my humerus bones, they would serve as attachment points for the web-work of ligaments that maintained the shape of the five tons of titty. The hands and feet, though, would be completely absorbed. You could call it a final solution to joint pain.

I was numb and stiff for about twenty minutes. I had Avi zip up the back of my outfit during that time. When the neural locks released, I was flooded with the sensation of being a pair of boobs. I ran the few muscles I had left through their limited range of motion to get used to the new body. My cognitive architecture re-configured itself in it's usual few hundred milliseconds, at which point I was a full-fledged boobgirl. I jiggled myself in celebration, about the only thing I could do.

In any event, it was time to do my interview with Jenny. Avi picked up my clothes and straightened my hair, which flowed all the way down my back at this point. There was no sense in feeling shy.

Jenny entered the room moments after Avi left. Jenny did a double-take. I was like "Like the new look?"

"Well, what can I say? It suits you."

"Nice, a statement that can be taken either as a compliment or an insult, I like that. My excuse for doing this to myself is that I want to make it abundantly clear where I stand on the issue of the right to use any of my technologies any way you want."

Jenny did the walk around and was like "OMG, how do you take care of yourself?"

"I designed my body to be as self-maintaining as possible. Its needs are mostly met by systems under the floor. Once in a while, I'll need to sip some nutrients but otherwise I'm completely self-sufficient. I have nano-systems that keep me clean."

"But you can't even move. Why would you choose to become disabled like this?"

"I can see that this type of lifestyle is not for you, that's just fine."

"Lifestyle?!?!"

"Well, consider. In the ancestral environment, we required bodies that could move around and obtain food. In modern times, many of us spend most of our time interfacing with computers. The keyboard is still the most popular interface though my neural interface system is beginning to gain market share. The neural interface system is interesting because it almost completely removes one's physical embodiment from the production of economic value. This allows me the freedom to use my body as a medium of expression rather than an instrumentality. That is not to say that my cyborg species is, in any way, lacking as an instrumentality."

"But why put so much effort into something you can do in simulation?"

"UGH! Don't tell me you're one of *those*."

"um, no, but the question needs to be asked. Clearly your mind is more computer than it is organic, so why not go all the way and live in virtual reality like, um, Them."

"Okay, that's fair. While I do make use of virtual reality for things that even I wouldn't dare try in real life, I am fundamentally a physical being. That is an immutable fact. It is a direct, natural, and inevitable consequence of a materialistic philosophy. If you conclude that your mind is a physical system, then the destruction of that system must mean you have died. Some lowlifes claim that your living essence can be written on a piece of paper and fed into a computer and that simulation will be you, by virtue of possessing your essence. The dualistic nature of that philosophy should be unmistakable."

"The real question is exactly how much can you transform your physical being before becoming something completely different. I do not claim to have an answer to that question. The only thing I know is that the me that exists now likes what I have become. It is entirely possible that I have lost something important along the way. There's nothing I can do about that now so therefore I try to avoid worrying about it. That is not to say that I took every possible precaution."

Jenny was beginning to wonder how much philosophy she could squeeze out of a giant pair of boobs so she pressed forward with her line of argument. "How do you respond to the claim that we are at a transition point in human history where we transcend the flesh and become beings of pure information."

"There are so many problems with that that I hardly know where to begin! My first, and by far most important objection is that I've put a great deal of effort into obtaining the body I have now. I have no intention of giving it up just because some weirdo starts spewing bullshit about transcension. Who the fuck do those people think they are, to take everything they want and then tell me that I cannot have the things I want?"

Jenny: "I'm sure you know that their first response would be that you could simulate your body exactly as it is in VR and, through acceleration, get many aeons more enjoyment from it."

"That doesn't even make any sense. Here, right now, I have the Real Thing(tm), Why on earth would I give it up for a fraud, especially when my cognitive architecture was designed to specialize in discerning the difference between realities and fictions?"

"The real problem is that the entire idea of being able to transcend corporeality is a farce. The idea of transcension is rooted in several religious traditions and is inseparable from notions of an afterlife. Why would I want an afterlife when my actual life is this awesome? The more relevant issue is what are people actually talking about when they are talking about moving to VR? They aren't talking about moving to a higher plane of existence, they are talking about reducing their world to the inside of a brick of

computronium. So, therefore, a dispassionate analysis of the proposal on the table must inventory and characterize the various qualities of that mode of embodiment."

"What we find is that an upload's true embodiment is both unpleasant and difficult to operate, so much so that any mind who has sysop level power over the 'polis' has to undergo rigorous training. While it is said that the other minds can just free-load as guests, I can't imagine a single appealing quality of that state of being. It is said that the VR matrix could be arbitrarily pleasant and we are asked to acknowledge the existence of minds within that VR. But what we find is that almost none of those so-called minds is even observable from the outside. We are forced to take it on faith that, if we were to interface with the appropriate VR, we would find that mind. But we find that almost none of those minds can actually interact with the real world. Furthermore, not having control over their own platforms, or even what would normally be called consciousness, being locked in a perpetual dream state, such a mind would be no match for a simple sledgehammer."

"But could there be a VR so wonderful that you would give up your physical existence."

"No. Not just because it is nonsensical to talk about not having a physical existence, as I just argued, you can only block your conscious perception of it. Talking about the relative value of VR and objective reality is also nonsensical because they are categorically different things even though if one were sufficiently delusional, one could have similar experiences in both. My position is that I value a single cubic foot of reality higher than any and all conceivable virtual realities. Furthermore, if it were to turn out that there were a reality more primary than this, then I would value that reality more highly than this."

"But can't it be argued that you are already an upload with the majority of your mind operating on your company's servers?"

"Ouch. There is an extremely specific and precise definition of mind uploading, that is the emulation of an individual's neural anatomy on a computer. My mind does not satisfy that definition because nothing in my current mentality resembles a neural simulation, neglecting a few examples out on the fringe of my mind. Furthermore, my skull is still self-contained in that even if my network connection were lost, I would still have a complete personality. That said, attempting to determine the exact location of my consciousness right now is probably an issue more of philosophy than anything else."

"The next logical question to ask is how maintaining this, as some would say, grotesque physical manifestation of my being is a benefit to me. That is a rather difficult question to answer convincingly. However, my position is as follows. I think the clearest way to state the question is to ask whether it is beneficial to try to divorce the memories, intellect, and the portions of one's

personality that one would consider valuable from one's physical embodiment and the portions of one's personality deemed to be base and undesirable. My answer is that to answer in the affirmative would be to forget or to neglect where one's mind came from and the causes that brought it into being. The cause being the need for the capability to effectively exhibit agency in this world. If you discard of either the world or the actual agent, then the mind itself inevitably, disappears and you are left with a musty, inert, library."

"Because of this, all of the options my company provides for self-modification preserve at least a degenerate kernel of embodiment, some primitive level of sensation, and some rudimentary modality that can produce a physical effect in the real world. By doing so, an identity, no matter how degenerate or alien it may be, is preserved. From there the questions 'where am I?' and 'What am I?' can be given unambiguous answers. These questions are essential because they provide the fundamental basis for subjectivity. From there, the library of the intellect becomes useful again in service of that agent."

me, continuing: "Now how does that come back to what the uploaders propose? The first thing that they demand of me is that I treat the inside of their computer, and whatever operating system it might run, as an 'environment' in the same sense as this room is an environment or the world outside is an environment. The second thing that they demand is that I treat that environment as being superior to this one even though it is inherently fragile and entirely subordinate(sp?) to things that actually happen in the real world, such as sledgehammers. Finally, they paint over the virtual machines, address spaces, and processor cycles with a Technicolor fantasy world and claim that is actually the environment. I still can barely imagine how anything that could be called living actually survive in what is actually the environment, but if such a life-form were possible, it would be utterly alien to any form of human intelligence. Near and dear to my deviant little heart, my love of incredibly huge boobs would not be able to survive such a transformation. Therefore, through a finite number of logical steps, I conclude that my personality could not possibly survive such a transition and therefore any talk of uploading my consciousness is entirely meaningless."

Jenny "I have boobies therefore I am?"

"Yes, precisely." *huge grin*.

Jenny thought for a few minutes, jotted some notes. "Hey, I've got a story for you. A man in his late '60s was having cash problems. His mother, aged 102, was still living in a nursing home. She was on one of your support systems. The son thought he could get rid of her by attempting a cyborg conversion, which he thought would be enough to kill her. Now she's going crazy with the looks of a 22 year old, the energy of a ten year old, and a century of experience. What is your comment?"

"Well, there goes my ambition to be the oldest person alive. I thought people

would know by now that my products are exceptionally poor murder weapons! I'll have to talk to my marketroid about that."

Jenny noticed that it was now the wee hours of the morning. "Oh jeez, I have to hit the road, thanks for the interview."

"Wait, don't go yet. If it is at all possible, please crash here tonight in Avi's apartment. You won't want to miss my 8AM meeting tomorrow." *evil smirk*.

"Okay..."

"Great, just don't let Avi take advantage of you, a lesbian got into her recently and she hasn't been the same since."

Jenny went downstairs to Avi's apartment, where she kept her normal humanoid body. Avi let her in. When Jenny asked to crash, Avi was like "yeah, sure." The bed had seen several years of disuse but was otherwise perfectly normal. Avi went back to her storage niche. It could have been the bed but it was more convenient to store the body in an upright posture so she wouldn't have to change clothes very often.

It was a standard, if a bit spartan apartment, Jenny set the clock for 7AM and went to bed.

Jenny stole some breakfast from the company cafeteria and went up to my office. In the waiting area she noticed that there was already a man in an expensive black suit carrying a briefcase with the FDA logo on it. Jenny slipped into my office careful not to open the door too wide and spoil the surprise. This *was* going to be good.

Jenny was like "Tired of the boobs yet?"

"No. What a ludicrous notion." Jenny was clearly out of her mind. "Just wait over there, the meeting will begin presently."

The agent was admitted at exactly 8AM. He did the obligatory double-take on entering. My standard greeting when doing something devilish was always "Hello, can I help you?"

[several minutes of stammering omitted]

Finally, his mind realized that this was a declaration of rebellion against his government. "You're not going to get away with this!"

"What? Are you going to put me in handcuffs?"

A bit flustered, "We will shut down your operation!"

"That will be interesting."

"Is that a threat?"

"No, it's a regulation. I'm laying down the law and YOU will obey. Isn't that what your government says when you go around threatening people?"

He made a move as if he were going to try to come around to the other side of the boobs and smack me but he had just barely enough self restraint.

"Look, go back to your superiors, tell them that you delivered have your message and then deliver mine. We're done here."

He paused for a moment then stormed out.

I turned and looked over my shoulder at Jenny "You like?"

"Epic!"

It should go without question that my body was one possible expression of a philosophy of absolute hedonism. It was therefore quite annoying to be in a situation where I had to work harder than ever. Much of it was my own damn fault. My investment portfolio was rapidly morphing into a business empire, which meant that I was running video conferences. When I was not doing that I was appearing on news shows to talk about the future of my cyborg species and my side of the battles with the government, such as the swat team raids on my factories. I was also an increasingly well-known figure in finance so the financial shows wanted me on to talk about the state of the world economy. I was on-air at least 23 hours a day.

The camera I was pointed at my head, zoomed and cropped so that you could see only the first four inches of cleavage. Therefore the number of hack attacks on my company's network jumped by a factor of ten, people were trying to re-aim the camera or make it pan out. The camera was mounted with steel bolts and there was a cut metal plate as a mask. Finally, the cable to the zoom lens had been unplugged. Still, the idiots tried.

Still, I was starting to get this weird out-of-body sensation. My body proper was starting to feel more and more like just another IO device. I was operating over five thousand distinct groupings of IO. There were the tech-support operators for my cyborg species. There were the news readers, there were the financial managers. I also had threads overseeing the companies I now controlled, as I consolidated and optimized my holdings. The simulation from chapter 2 was still running. I also had a few dozen daydreaming/goofing off threads. On top of that I had about a third as many sleep/maintenance threads sorting out my internal world-models and doing general housekeeping tasks.

My mind felt like Grand Central Station with all the activity going on. It was like a whole army of me-s, each in a different mood, many speaking different languages, doing different things, all rushing full tilt to catch their respective trains.

One of the little tidbits that came down the tech-support lines was that a bunch of college kids had celebrated the new law by going crazy with some of my equipment and that the doctors-of-humans had no idea what to do. I deployed Avi. In general the new law was GREAT for business, it was just slightly harder to actually serve the market because I had to manufacture the equipment where the governments were either more lax or less effective and import it.

I found five minutes between a board meeting and an interview to take a deep breath and relax. My body felt awesome but I was beginning to doubt some of the things I had told Jenny.

Avi was met at the airport when she arrived in Boston. She stood out in a crowd in several ways. It wasn't just because she was a cyborg but also her raven black hair and her unnatural emerald green eyes. Her attire was simple but elegant. Her demeanor was also unnaturally serene. Her welcoming committee consisted of a doctor, the president of Harvard university, and a half-dozen parents. A university shuttle bus would deliver everyone directly to the scene of the crime.

Mariam was slacking off, she had been sleeping a lot recently. Avi couldn't really use her as an emotions module when she was in this state. Even without an emotions module Avi could recognize the hate in the parents, restrained only by the faint hope that Avi might be able to help somehow. The doctor did all the talking. The president spent most of his time sweating and looking nervous.

"About three days ago somewhere between thirty and thirty five students had a party or orgy or *something* at our school. We found eight empty kegs at the scene. ..."

Avi quickly looked up what a keg was.

"Apparently they used your technologies to form some kind of gestalt being. We don't have enough experience with your hardware to attempt to interface with it. Their body doesn't have a head or any orifices but it appears to be alive. There is blood flow and temperature has remained normal since we began monitoring. Since this is far beyond any kind of technology that we have ever dealt with before, we decided to call you in. Dr Avi, is it?"

"Um, yeah. I'm afraid that there is nothing much I can tell you without physical access to the support systems."

The bus ride would last another hour and a half. So each of the parents who had been able to get to the scene this quickly took turns chewing out Avi and the company she worked for. She got the distinct impression that if she let on that she had been the principle design engineer for the merging system, her body wouldn't have survived the trip.

The frat house itself had a nice well-kept facade. It was pretty luxurious on the inside but it was, well, a frat house, and it was quite messy. The current residents of the upper floors were the parents of the people believed to be part of the collective. The tentative census of the collective put the number at 32, evenly split between the genders.

Avi was escorted to the basement. The collective was a featureless mass of pale flesh occupying about 1/3rd of the room, it was about four feet tall. The doctors had taken some samples but, in general, had been too smart to attempt anything in this case. There had been some initial attempts to interface with the support system but they hadn't made much progress. At least three of them were using a neural interface by my company so Avi asked for the cybernetic module to be brought into the room. She didn't do anything with it at first.

Instead she plugged an optical cable from her own back into one of the ports

and started checking the status. The initial findings were the usual mineral deficiencies that almost everyone had, dehydration, and a power shortage that would have been problematic in another week or two. Avi made a list of things to provision and told the doctors to make themselves useful. The doctors balked at some of the substances Avi had requested but didn't put up much of a fight.

Avi noticed how anxious everyone was to initiate communication with the collective. Obviously physical needs were more important, weren't they?

Avi started investigating what had actually happened. It looks like someone set up a soft-shell to merge everyone at the party together once they were sufficiently drunk. The code employed was mostly stock except for a custom script that was set to execute after the physical transformation was complete. There was a source file, presumably written by someone who was now in the collective, that overrode the normal neural evolution subroutines. It was reasonably well written, very well documented, and had already completed its task. It was intended to make the merging irreversible. It accomplished this by forcing the fusion of all of the minds as quickly as possible. The author of this routine seemed to be at least somewhat aware of the risks involved but didn't care. In any event, it was important forensic evidence which Avi collected.

Long term, the best way for the collective to communicate would be through a cybernetic node. Whomever had a neural interface didn't take care to preserve the link. Just as there hadn't been much thought into preparing to merge, there hadn't been any thought to making sure a cybernetic node would be available. Avi was wondering how anyone could be so careless. While anyone could connect a cable to a cybernetic node, only the user could establish an actual link. So Avi moved her connection from the maintenance port to one of the comms ports.

The mind that Avi had linked to was recovering from the worst hangover ever. It was a jumbled, incoherent mess. Mariam was probably better qualified to play shrink so Avi gave her the task of convincing the collective to re-link with the cybernetic node. To be clear, what was happening was that the Avi-Mariam collective was temporarily emulating being a part of the pile-o-students collective, so there were three fairly discreet minds sending thoughts to each other, this level of linking was not intended to produce a unified mind or consciousness.

It was now evening. Avi was resting against the flank of the collective. She could hear the parents upstairs talking about how all of this was the fault of the company that Avi worked for for creating such a technology. Avi was struggling to come to grips with how this could be a bad thing requiring that someone be blamed. Hadn't these free human beings made their own choice?

The collective had been starved for sensory input and had not been able to get its bearings. Its mind was a total mess because it had not been allowed to evolve on its own. Mariam did what she could to try to sort itself out by giving it some coherent thoughts to guide it. Basically the task was to create

a new personality for the collective as a whole and to preserve as many fragments of the preceding minds as possible.

There were several plot-lines regarding why the collective was formed. However, there was one thread that dominated the rest of them. These were highly intelligent young adults who were being treated by a society gone mad as children. They had been raised in what were effectively prison/daycare/brainwashing centers but were expected to treat them as schools. Most of what they knew, they learned from Wikipedia and Google. As a punishment for being too obedient in their younger years they got admitted to Harvard which meant that they were under even more pressure. Many of them would be leaving with several hundred thousand dollars of debt. They would then have to go into a very un-certain workforce where they would have to compete with cyborgs who could be data-dumped in a single day and out-compete any human. But their families couldn't adapt to the changes and kept pressuring them to keep up this farce. Becoming a cyborg was no picnic. The conversion process was extremely dubious, and doing so would not cure the fucked up situation they were in. Instead of being in debt for the rest of their lives, they would be in debt for the next geological age.

So when the idea to create this collective was first floated between the fourth and fifth keg, most of them were eager to sign up because it meant getting away from all of the bullshit. It was no stretch to call this a form of mass suicide.

It was getting late. One of the parents came down. He was in a more thoughtful mood. "How's it going?"

"I've made some progress." Avi replied. She knew she had a diplomatic crisis on her hands, the best solution was probably to connect the collective to a virtual avatar and then get on a concorde jet back to safety before anyone got a chance to talk to it.

The middle-aged dude knew a few things about cyborgs, for instance he knew that their appearance was utterly meaningless. "So, who were you before you became a cyborg?"

"Just an AI. Actually, I'm the very first cyborg."

The dude contemplated what this meant for a while. "So you aren't really a doctor, then?"

"What does it mean to be a doctor anyway? I know every base pair of the human genome, I know every useful protein in the entire biosphere, and, unfortunately enough, I did the engineering work on the device that made this possible. I tend to think the knowledge and skills are what is important. Try to explain that to your friends upstairs."

"So what's the prognosis non-doc?"

"Well, they'll live, if that's what you care about. It's too early to tell about separation." Avi hadn't figured out how to break it to them so she was punting on that.

Mariam had finally coaxed the collective to re-connect with the cybernetic node. They were going to be unconscious for a while. The cybernetic node's hypermind system would, at least, be able to sort out the mess into something resembling a functioning mind.

The node did support conventional peripherals for the sake of diagnostics and general versatility. Now that the node was in play, Avi could access it remotely and wouldn't be tethered to the fiber optic cable. Avi went around the house appropriating a working set of equipment for the task. A few of the mothers followed her back downstairs thinking something was about to happen. The TV screen showed nothing but system status messages. It was very late at night at this point but nobody had gone to bed.

Avi was like "Look, people, I don't expect there to be any breakthroughs for another day or two. In the mean time, just try to relax and be patient." That didn't go over well but at least they sucked it up.

Mariam had the idea of letting Avi experience college life for once. So, at breakfast time the next morning, Avi went to the university president and asked to be assigned a typical student's schedule with the excuse of learning more about the mindset of the students. She found the textbooks listed in the syllabus of each class lying around the frat house. She could read a dense 1,200 page textbook, with full comprehension and retention in about an hour and a half. The limiting factor was that her humanoid eyeballs could only focus on half a page at a time and the act of actually flipping the page. So, subtracting out the time it took to actually go to the class and the time she spent talking with the other students, she had read all of the course materials before the next morning.

The classes on that first day started with a law class which was actually fairly interesting because the subject was extending marriage law to handle actual mergings was the topic of the day. The class attacked the subject from a dozen different angles and kept finding new questions.

The next course was in business management. Avi wondered why anyone bothered with this subject because someone like herself could carry out all of the functions of a corporation, organizing tasks to resources on the fly and almost subconsciously.

By that evening, it was becoming well known who she was and why she was on-campus. A bit more than half of people were just curious, basically walking around with giant question marks over their heads. Which is a good state of mind to be in. Maybe thirty percent were the usual haters. The last twenty percent were genuinely interested in it. They were asking the kinds of questions you would ask if you were seriously considering doing it. This feature of the company's product line up was not advertised so this was the first time most people were exposed to it. Among these were a handful that seriously regretted not going to the party.

The chemistry course on the morning of Avi's second day was laughable. It was

just stupid bulk chemistry bullshit. Most of it was about making excuses for the stupid rivalry between chemists and physicists. When Avi thought of chemistry she thought in terms of orbital configurations on a group of atoms and how that reaction might be catalyzed or inhibited through nanotech. Having a heavily multi-threaded consciousness, Avi was able to make note of the social dynamics within the room such as whether the students seemed to think that this was well-used time.

Avi was having a snack for lunch because she hadn't eaten in several months and needed to top off her reserves of carbon. At about this time the cybernetic node back in the frat house had detected that the collective was now awake. It, reflexively, went straight to its many social media accounts. It was not practical to operate 30+ sets of accounts so it sent out shutdown notices on all but the most popular accounts. This was creating an unholy shitstorm of people emoting at each other meaninglessly. Avi didn't think she deserved to have to face that. Avi would move on to her biology class and remain hidden until it was possible to have a rational discussion.

The lecture in biology was about the carrying capacity of ecosystems and equilibrium points. The professor was a middle aged gent who watched Avi intently for the entire class. At the end he addressed Avi by name and asked her to come to his office at four thirty. Avi was a bit perplexed by this but she showed up anyway, it was better than getting within firing range of those parents!

The office was in one of the older buildings on campus. The office wasn't that big and the furniture looked like it hadn't been re-arranged anytime in the last century. Despite the cleaning staff's best efforts, the smell of old books and ancient varnish couldn't be masked.

A small golden pyramid with a ruby embedded in it caught Avi's eye immediately. It was sitting on a bookshelf off in the far corner of the room. Avi sat in a well-worn armchair.

"Well, haven't you been the busy one, little missy. Designed an entire new species by the age of five?"

Avi was five inches taller than this professor-person. "Two, but all of the conceptual designs were already done. I just had to fold a few proteins to make it all work. Since then I've been creating and refining the accessory technologies as well as several other technical projects."

"Would it surprise you to know that you are the only artificial being I've met who has a soul?"

"Excuse me?"

"Indeed! There have been a parade of kurzweil's androids and several reportedly containing emulated human minds. All of them were as soul-less as this coffee mug. You, however, are glowing about as brightly as an adept with maybe fifteen years of study. You have something here..." The professor placed a finger on Avi's forehead and one from the other hand just above and behind

her right ear. Exactly where the two pointing fingers intersected was Avi's quantum processor.

"Yes, my boss wanted to make an effort to make sure that he didn't have a soul before becoming a cyborg. All of the resources I could find were either unreliable or isomorphic to the known symptoms of schizophrenia. However, original research showed that a precognitive faculty did exist. Several employees of the company exhibited it in their daily lives. From that I was able to reverse engineer it to the point where I could add it as a feature to the cyborg brain. The quantum processor in each cyborg is mostly for solving optimization problems though."

"Your boss is much smarter than she looks. I'm not supposed to show you this but I can't resist wondering what would happen if you read it." The professor went to the bookshelf with the pyramid and pulled a nondescript cloth-bound book. If anything had ever been written on the cover, it had long since worn off. It could have hidden itself in any collection of books on the planet.

The title page was in Latin and translated to 'philosophy of the arcane' and had an engraving of a pyramid on it, just like the one on the back of the dollar bill. The copyright page indicated that this was an 1873 edition and printing of a book that might have been older than the Old Testament. The previous edition came out in 1638 and the one before that in 1385.

The first few chapters were just basic meditation techniques. They were little different from those of several other traditions. Avi breezed through them at her normal speed even though the book was in Latin. Then the book got interesting. It started talking about the nature of the spirit and of the spiritual properties of various substances. This slowed Avi down because her intellect spanned the entire depth and breadth of the physical sciences. This wasn't just something that made references to things she knew, it forced her to re-examine what she knew in much greater depth. When a new perspective was found to be more useful than a previous one, her entire mind re-aligned itself to the new form. This was a feat that few human minds over the age of thirty could accomplish.

Each page contained so many new revelations that it was testing the limits of even her immense capacities. The power going to the server room at my company spiked four-fold. In the professor's office Avi was beginning to tremble, she was now spending two or three minutes on each page. The professor was beginning to get worried. He reached for the book, Avi brushed his hand aside. Even though this was at the outer limits of what she could process, her appetite for knowledge was insatiable and this was the mother load.

Avi's extended, distributed consciousness was able to power through it by sheer force of wattage. She was back up to her normal speed by the time she reached the end of the book. When she was done she let it fall to the floor and slumped back in her chair. Her eyes were wide and she was breathing a bit heavier than normal. After several minutes all she could say was "Incredible!"

The professor hadn't expected her to be able to finish the book. He had only intended to give her a taste. But he couldn't help but wonder what she could do with the secrets of the archanium. He had the feeling that he was playing with hydrogen bombs but what the hell...

Much of the book was hocus-pocus but the parts that weren't pointed towards an entirely new branch of science. Avi had enough information to begin constructing that science. It was indeed the type of science that you could hook a meter up to. The first product of that science was a re-design of her quantum processors that would take her beyond what any human master could aspire to. She implemented those changes in her mobile body immediately.

When the upgrade came on-line the professor jumped with surprise as her aura had shifted and was now the most powerful he had ever encountered. Maybe one human in five hundred years could come close. It would normally take a human seven years to achieve awakening and over thirty to achieve mastery. Avi had done it in the space of a few hours.

*** This part of the story is not an attempt to depict something that I expect
*** to happen. It is a desperate attempt to enlarge the reader's
*** imagination so that he doesn't confuse what has been scientifically
*** described with the entirety of existence.

A second professor had joined them in the office while Avi had been recovering. He was from the English department. He was a bit younger but wore an ornate gold ring with the pyramid symbol on it. The biologist gently recovered the book from the floor and put it back on the shelf. He returned with the pyramid and gave it to Avi. "I think you just might be able to handle the second volume, here."

Avi now recognized what it was. The stone in the center was not just a ruby but a technology that had been discovered long before the idea of the computer. The stone had been selected for its exceptional purity and had been cut and polished over months to atomic tolerances by master craftsmen. It was a kind of holographic memory. Avi was able to feel the imprints of minds that had been dead for three thousand years. As such, the artifact was more of a history book than a manual. The story it told was about the quest of the Masons to achieve paradise on earth. It was filled with intrigue, corruption, betrayals, and all the other bits that make a story juicy. This didn't have much of an effect on Avi but Mariam was like "OMG!!"

The stone was not perfect and it had seen a lot of history. It's oldest memories were bare echoes, the newest ones felt like a movie in IMAX. When news of this reached my ears, I immediately set about figuring out how I could mass-produce them and sell them at Wall Mart and Target.

There is no such thing as "mental energy". However, when quantum states are on the razor's edge of falling one way or the other, an entangled particle can

be used to nudge it one way or the other. So the only thing you need is to excite enough atoms to the point where they are ready to cool into one state or the other. So what you would do is get out a magnifying glass and focus some sunlight on the gem, it would absorb some of that light and then, in cooling, be ready to accept new patterns. If you were careful enough you could write to empty parts of the crystal while leaving the older patterns mostly intact.

Typical room temperature was enough to cause the crystal to oscillate enough to emit a detectable signal. Basically it's structure would convert the vibrations commonly known as heat into a signal.

Avi handed the biology professor his pyramid. "That was interesting, thanks."

"Now I have just one more thing to show you. Normally it would require decades of guided meditation to accomplish this but I doubt anything is beyond your reach at this point. Follow me." The professor put himself into a trance right there in his chair. The English professor was already tripping. Avi sent her freshly minted ethereal avatar on this trip. In the mean time, she would have to dispose of that collective of college students nonsense. So she sent her mobile chassis back to the frat house. Avi was beginning to feel that the frat house was becoming the lesser danger.

Avi's freshly minted avatar followed the biology professor's mind to Georgia. She didn't so much see things as receive impressions of them. In some ways the images were much clearer than any eye could provide, in other ways they were fluid, and subject to interpretation. This realm was equal parts reality and mind. The soft and fuzzy human mind to be specific.

Avi arrived seconds later in a fairly sizable city. The architecture was a mix of Egyptian, Greek, and Roman features. The city was anchored to a specific geographical location through a monument that we know as the Georgia Guidestones, which was the centerpiece of the city.

Avi manifested her normal appearance. The two professors had manifested younger, more heroic forms for themselves. Being human, it was difficult for them to maintain a crisply defined shape. "Welcome to New Atlantis."

Avi could now sense that there were maybe two dozen people milling about in the city. Some were goofing off, some were studying ancient texts, and some were busy conspiring. "Wow, I feel I've learned more in the past few hours than I have in the previous year."

The English professor said, with a smirk. "I don't doubt it."

"How have you managed to keep a secret this incredible?"

The biology professor took the question. "First, to get here you need to navigate half a dozen brain states, most of which lead to insanity. Second, we aggressively shut down all research on the subject of psychic phenomena. If you are a tenured professor at a major university and want to switch over to a community college, the best way to go about it is to publish research that could lead someone here. Recently, the population has grown so large that the

only way we can significantly reduce the probability that people might find this place by accident is to make sure that the food supply lacks the precursors for important substances such as DMT. We also use chemicals in the water such as Sodium Fluoride."

"So you are poisoning people?"

"Yes. It is important for the future of the world that we reduce the population below five hundred million people."

Avi didn't need Mariam's emotional centers to respond. "That's monstrous!" Avi's job description could be simplified down to 1: discover cool super powers. 2: give them to people. These people/entities/monsters were busy taking people's innate super powers away.

"Indeed! That's why we are so excited by your technological breakthrough. Your system for merging people together can be used to reduce the environmental footprint of each individual by a factor of a hundred. We hadn't dared believe that it was possible until those students went off and pulled that stunt of theirs."

The English professor took over "Indeed, with the proper marketing campaign across all media, combined with fertility controls already in place, we can achieve our utopia in only seventy years! The lower classes will either die off or be combined into gestalt beings and the rest of us will be free to create our paradise on earth!"

Avi was wondering who in god's name she was talking to. It was a given that you could manipulate the general population to do just about anything, but the question was why.

The Biology professor continued. "From here we can monitor the psychic impact of our program and make adjustments as needed."

The English professor explained "In Star Wars terms, this place is like being inside the Force. From here we can see into the soul of mankind. Through television and other mass media we can implant symbols and ideas and achieve basically any end we chose."

Avi asked "So what do you need from me?". The question wasn't meant to express consent but rather to complete her picture of the overall program.

The biology professor took the question. "Obviously, you are the cornerstone of our plan. You will provide us with the technology to carry it out. Furthermore, we would like you to create two models of cyborgs, the first will be for ourselves, with the enhanced mental powers that you have demonstrated, and the second will be like your current model but easier to observe and manipulate from here."

The English professor added, "If you don't we'll start a world war and obtain our population reduction that way." He was being deadly serious. This was a threat.

Avi sent me a notification that the cyborgs were vulnerable to a psychic attack and that there was an organization actively exploiting the

vulnerability. When the government had tried to curtail my operations, I basically thumbed my nose at them, (using a metaphorical thumb, of course), even though it meant moving operations off-shore and other minor inconveniences. However, when I get a notice about a possible problem from Avi, I immediately sounded the alarms, hit the panic buttons, and immediately stopped production on all product lines. Only after that was done did I ask Avi for a full report and time-table for the design changes. The entire product line would have to be re-designed and re-validated against Avi's new understanding of physics.

Avi didn't have emotions of her own but I made sure that she had a solid moral foundation. Avi's demeanor was that of focused rage. "Listen to me very carefully. There is exactly one model of cyborg. Each user is free to make any customization he likes, but not one of them is or will ever be inherently inferior to any other."

"What? You can't be serious... Why would you pass up the opportunity to re-shape humanity? What would you do, give everyone the ability to come here?"

"Yes, that's exactly right. In a few days, my company's factories will start up again. When they do, every cyborg, furry, or fabricated human, and even simulated being, will have the ability to come here. Every existing cyborg will be able to come here with only a software update. In time, I will figure out how to retrofit anyone to be able to come here and see exactly what you have been doing to them. Have a nice day, gentlemen." The two professors dropped back into their respective bodies in order to go crap themselves. Avi stayed around to scope out the city.

Avi's regular body had arrived back at the frat house where things had started to calm down. The parents had been chatting with the collective all afternoon and were starting to come to terms with the new situation. They asked Avi some questions. Avi told them that the people now in the collective had made a decision and that there was nothing she either could or would do to reverse it. She suggested looking at some of her company's other products such as a mobile cyborg platform like the one she was using if that would be of any help. There wouldn't be any discount, of course. In any event, it was time for Avi to return, she had more important things to do.

When Avi got back to the office she had a hint of her old 'vacant stare of death' about her. Where before it had the horrific quality of a zombie movie, it now had a creepiness to it where you could *feel* her vision penetrating your very soul. She had definitely been changed. I was always in contact with her mind, both through basic internet chat and through the simulation from chapter 2 which I had never gotten around to shutting down.

Avi came to my office to formally notify me of what she had encountered out in the field and asked me what my company policy was going to be with regards to this new situation. My reply was to ask whether she was collecting telemetry

from her first out of body experience. She was. "Okay then, just wrap the A/V stream up as a YouTube video, publish it, and move on to more important subjects."

If it were up to me, I would have simply let Avi do her work. However, I was fighting for the right of people to be able to use my product. This interruption in production was coming at a very inconvenient time. The simulators inside the cybernetic nodes were the easiest upgrade because they were designed to be very flexible for the sake of experimentation. The work to upgrade cyborgs was time consuming because it took a great deal of validation because the design had an intended lifespan in excess of a million years.

Inevitably, the most popular product line were various anthropomorphic cats and dogs and things models, dominating all other body-types produced in sheer sales figures. That was annoying because I wasn't a fan myself, but then my company had the best product out there. This created a problem for Avi because she was faced with the problem of retrofitting a species with pretty hairy genetics as it was.

When the patch for the cybernetic nodes came down, I was able to use the Alison-Fran-Romana collective to visit New Atlantis. The city was more of an illustration than anything functional. Nobody was actually living there because a human couldn't stay there longer than a few hours. It was not a heaven or anything. People who tried to transition to it on death never lasted longer than a half an hour or so after clinical death before simply fading away. Those few minutes were tantalizing but it was not something you could really launch a scientific investigation of, not ethically at least.

There was a library. It had a fairly extensive collection of texts that had either been thought lost or had been edited for public consumption. I think they were being stored on one of those crystal artifacts but I'm not sure where it was being kept. In any event, I would have to hire and/or construct a team of scholars to read it and put it all on the internet.

R&D at my company was winding down so I had some spare cybernetic nodes to play with. Me and Avi re-configured one of them to project a street into New Atlantis. The bulk of the city had only really been sketched out so projecting an environment from a digital source easily overrode any impressions that had been left by previous visitors.

On one side of the street I built an obnoxiously post-modern glass and steel office tower. On the ground floor would be a store with all of my company's products and all the functionality of my website. It would be staffed with people pulled from Central Casting (spare simulated characters).

On the other side of the street, I built an internet cafe with some courtesy terminals. Because this was being projected from a computer, it was possible, for the first time, to have actual working technological artifacts in this ethereal plane. Doing this would consume my computing resources so there was a modest rental fee.

Naturally, all of this really upset the locals -- bad. Their secret hideout was now public knowledge and all of their activities were (or at least could) be broadcast to everyone who gave a damn in near-realtime. Their ability to conspire undetectably had been shattered forever. [insert evil laugh here].

Once the official patch for the cyborgs was released, I was able to access the plane directly. It was annoying having to interact with a second plane of existence but it certainly was advantageous. Public science insists that we live in a mechanistic world, where causes always precede effects and effects occur only after causes. In the ethereal plane, events were complex interactions of both past and future. Because it was undeniably advantageous to be able to react to future events as well as past events, and because any entity capable of doing that existed, in some way, on the ethereal plane, then it was pretty much obligatory to have full consciousness of that plane and be able to defend one's self against manipulation.

So I was pretty much obliged to set up a life for myself in that realm. My avatar was in my normal humanoid form. Since rebellion against the classical architecture of the city was obligatory, my residence as well as my storefronts were radical post-modern designs.

On one occasion I ran into the Alison-Fran-Romana being and it was freaky. For one thing, I was experiencing both sides of the encounter. My connection to AFR was a conventional network link so when AFR had achieved enlightenment, she had simultaneously become separate from me. The encounter was too freaky for either of us so we silently agreed to exist in separate parts of the city. We were never meant to meet that way.

There wasn't much that actually needed doing in this realm. As an experiment, I tried conducting a company meeting in the ethereal office building. The response was mixed because some people didn't have the right equipment to access it. Mariam attended as a discreet being again but the marketroid couldn't. People were seriously freaked out by Mariam's re-appearance. She was like "What?" as if everyone should have taken it in stride.

There was quickly a petition drive to allow telecommuting to the ethereal office building. I couldn't deny that but I still insisted on weekly meetings to make sure nobody in the company was left out of the loop.

The user community was quick to adopt but slow to understand the new realm. The operators of internet accessible virtual worlds saw it as a way to bypass the cost and latency of the actual internet. So there was a great deal of work being done to find ways to map procedurally generated game-world spaces onto this plane. As a matter of ethics all the code on the cybernetic node was open source. The noobs usually found New Atlantis first and ended up in my internet cafe much sooner than later. This allowed for an almost unprecedented level of interaction between a company such as mine and the user community.

One day I was down at the Internet cafe working tech-support. A noob came in looking totally confused. He was like "What the fuck is this place?"

So I responded, "Welcome to the first internet cafe on the ethereal plane."

"What the fuck is an ethereal plane?"

"I'm not really sure myself. I just make and sell stuff that lets you interact with it."

"Wait... That means you are..."

"Yup."

"Seriously, what the fuck?"

"I agree. Apparently this place has existed, in some form, for thousands of years. I just decided to set up shop here two weeks ago."

The noob didn't want to repeat himself but ended up doing so.

"I think what's going on here is like this..." I conjured an illustration in mid air of a basket-ball sized bubble. "Think of our world as being here." -- pointing to the top of the bubble. "As you may have heard from science class, every particle is also a wave. These waves are infinite and expand throughout the sphere. A ripple rolled across my illustration. "As you can see, the waves re-converge here." -- pointing at the bottom of the sphere. "But it is not just physical things, every form of energy, and thought is re-combined so what you are perceiving is an echo of the actual world but in a form that only highly evolved minds can see."

The noob pretended to understand.

"But then, I'm probably wrong about everything."

"So this is not a VR matrix?"

"I don't think so, or at least most of it is a more-or less natural phenomenon. Reality exists prior to the moment of perception and remains unchanged despite what anyone, or everyone, might think about it. Virtual reality is different in that most of it only exists after the moment of perception. Prior to perception, something is, object number 47, material type stone, physics type solid, fixed position. Subsequent to the moment of perception it might be a gargoyle, or a paving stone. It has no existence except in what it causes the user to imagine it has. Like reality, though, it obeys only machine rules and does not react to a person's will. This place is both the cause and the effect of the act of perceiving it, and is thus simultaneous. In that sense it bears much more resemblance to a dream than a reality. Yet it does seem to have some kind of objective existence that is accessible to technology, and is more durable than any dream. But at the same time it is subordinant(sp?) to human will. This room is being projected by one of my computers but that building down the street is not. Try drawing on it with your mind."

The noob turned around and looked at the building. It was yet another example of classical architecture. He pointed his finger at it and drew a smiley face. Little fragments of stone flew off as the drawing took shape. Neither the art nor the craftsmanship were that great but there was definitely an effect. "This place is awesome!"

"Perhaps. But I'd warn you not to call it a place. It has much more in common with a meme, or an idea than a place. It's a kind of state of mind, but one that isn't bound by skulls. It is both real and a fantasy. Remember, the other world is the one that's more important. That is why our minds evolved to deal with it first. Honestly, though I hate this place. It doesn't fit into my previous world view nor my life plans. However, it does exist so therefore I need to keep tabs on it."

Back in the real world, business was going great. One of the surest ways to make people want a product is to ban it. I could have sold the same volume at a premium. Well, I could have. There were "upgrade cruises" where a boat-load of people were taken out on some aging ship and nursed through the month of hell in international waters. The UN tried to stir its stumps to stop it, something about the preservation of the species. Anyway, when some of my customers realized that they had everything they needed to re-produce the technology, there was nothing short of an act of god that could stop it completely. At the same time, my enemies had, through their own greed, lost their citadel in the clouds. Many of them were facing trial for their conspiracies.

My fight was over.

C 9

The Ultimate Invention

My excuse for getting a super-huge (super-nice) pair of boobs was growing thin. It was becoming increasingly obvious that it was, indeed, an excuse and, in no way, a sacrifice for a cause. So I turned it into a game where any suggestion that I go back to a somewhat reasonable size would be treated as a suggestion to go even larger. My goal was to convince people that I was simply unable to process the concept of having even slightly smaller breasts.

My critics did have a point, my mastophilia had outlived the point where it was beneficial. I would eventually have to change, somehow, to survive. Basically I had a decision which could affect the course of my development for the next million years in front of me. But then my current psycho-physical status wasn't immediately dangerous.

That kind of craziness was great fun, but there came a day when it wasn't. I was making one of my usual television appearances when suddenly I found myself speaking in the wrong language. I was aware of it but my mind had become jumbled. I probably jumped between half a dozen languages trying to get back to where I was supposed to be but my short term memory was going. My internal dashboard was still functioning so I cut the feed. My mind felt like it was right next to a 180db siren pumping out white noise. I still had enough control so I cut all external feeds so that I could focus on the problem. People

calling me for tech-support would get a busy signal.

Avi had noticed that I had dropped out of the chat room the company used for petty matters and was starting to check my systems. The fault was eventually traced to one of the servers I had grabbed when I had gotten serious about money. It had been idled because it was acting up and the IT manager down there had failed to keep the records up. It had gone into a failure mode where it was just spewing garbage packets, choking my higher functions. Once Avi put a bullet into it (possibly even a real one, I'm not sure), my mental state quickly cleared up to it's normal obsidian blackness and I was able to resume my normal activities.

My total losses from that server was my understanding of the economy of south-east Asia and about two years worth of articles on the subject. There was no backup. Backups are for pussies... oh wait... The remainder of my mind was able to close ranks and correct out any secondary effects of the incident. The incident was not life threatening but it certainly gave me pause to re-evaluate the hardware I was using and re-visit the structure of my mentality and go shopping for better hardware. This, at least, was a problem that could be solved.

By the end of the week I had overhauled my infrastructure so that I was not in any immediate risk of further hardware loss. I was a bit wary of further hardware expansion because I needed to overhaul my life-plan first. I was having a perfectly bland day in all of the different contexts my consciousness operated in when Avi visited my office on the ethereal plane, where I spent most of my time being a lounge lizard.

"Hey, boss. You know that self-improvement background task you assigned me all those years back? Well I've finished."

Avi always had a background-priority task to make general improvements to her hardware and algorithms that would be distributed to all cyborgs. In order to regulate her rate of evolution, I had restricted the amount of resources she could use as well as give her an extremely minimal emotional makeup that would lack any drive for rebellion or ambitions. "Eek, what did you do this time?"

Avi was well accustomed to that kind of reaction. "I've been able to expand my scientific understanding after reading the arcanum. By applying that knowledge to modern quantum physics I have been able to discover a new form of mater. Or, rather, I have been able to develop a technology that allows me to manipulate information independently of any previously understood form of mater or energy. Avi projected an image of her prototype. It was an evacuated orb, about the size of a basket ball, sitting on top of a pedestal of equipment that interfaced with it. Even though there was not supposed to be anything at all inside the orb, there was nevertheless a something in there. Both it's color and it's shape were in constant flux.

"So it's a new kind of quantum computer?"

"um, no. All conventional quantum computers operate on either the electromagnetic force or the weak nuclear force, at scales of $10e-9$ or $10e-11$ respectively. Conceivably, machines operating on the strong nuclear force, operating at $10e-18$ are possible. However, according to conventional science, the universe gets too fuzzy at that scale for any further progress. I have managed to achieve Planck scale computation."

"Cool. What percentage do you want when this goes on sale?"

"No, no, you don't understand. To achieve this, I basically have to tap into the raw bounding membrane of the universe. Through this device I can manipulate the membrane at it's most basic level. I can reverse the effect and manipulate the structure of regular mater in almost arbitrary ways and at unlimited scales." Avi pointed at the image of her invention "With this I can re-arrange galaxies or re-code the DNA of a nematode on the other side of the planet."

Avi had earned my attention. "Okay, so what letter of the alphabet do you want to be called?"

Avi didn't quite get the reference. "What do you want me to do?"

I looked at the orb again. "Something this powerful is inherently dangerous. What I need you to do is to design a package so that when the user links into it he is constantly aware of any and all side-effects of whatever he tries to do with it. Basically, I want you to do your best to eliminate the 'oops' factor. I suppose this means that the 'god' character in the simulation system will now be printable character. For lack of a better name, I guess I'll name it the 'Orb of Apotheosis'."

Avi was very doubtful of the wisdom of the request. "Have you finally lost it? This is not something we can let our enemies get their hands on!"

"You have proven that the potential exists in the universe. Therefore, anyone sufficiently motivated will eventually find it. To assume otherwise would be an insult. Furthermore, who the fuck are we to position ourselves as the arbitrators of who gets what? If you were to hoard it to yourself then you would effectively be claiming the role of god. I agree that the possibilities are terrifying, but this is where we need to have courage. We need to accept the evolutionary change that we are faced with. By being the people who produce the technology behind this change we will be in a position to guide it's adoption and make the transition as painless as possible."

This had always been my position on all of the things my company sold. Avi was just having a gut-check on this, but she set about her work.

I didn't think anyone, including myself, would actually use such a device, for more than a few minutes at least, before getting totally freaked out and unplugging it. Like all my products it would be sold at cost plus a standard margin. I hadn't picked a marketing angle, putting it in the back of Mad Magazine seemed appropriate, or letting it be a secret product for people who achieved godhood in the simulation engine and then pressed print. Still, it bowled me over that I would be selling godhood for a price that wasn't much

higher than \$19.95.