

I guess the biggest problem with The War Bug is that I got it all wrong at first. Too many main characters, too many sub-plots, too busy busy busy. After a year and a half (this also included research, plotting, character development and other shit), I scrapped the whole damn thing and started all over again. I think this was a good thing. Helluva good thing. But I'll let you decide for yourself. Here's the original script

**The War Bug
(First Try)**

by

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Cripes

"If God truly is in the details, then DNA must be God."

When Jared Friedman, the nanobiologist who invented the DNA computer, said this, he failed to understand that it meant the details *reflected God's works*, and that DNA, by implication, was just another one of those works.

So much for details.

Maybe it was a tiny mishap in the sequencing of Jared's own DNA that caused him to misquote Goethe, or maybe he was just blinded by the boggling enormity of his invention: a computer that used strands of synthetic DNA to store information and to perform computing operations, though "computing" was not what it did in the traditional sense of the word. You see, silicon-based computers encoded information with ones and zeroes using electrical current, and they solved problems by running through every possible solution until they arrived at the right one. Jared's computer accessed all its data simultaneously and spit out results several billions of times faster than anything before it.

Better make that billions upon billions of times.

Jared's computer was based on a biological entity that could replicate life. Which, on second thought, might make him right and Goethe wrong after all. But who really cares about that? They're both dead now; Goethe for centuries and Jared, for, oh, about ten minutes. The details were just too much for him, so he jumped off his balcony -- about an eight foot drop, but he fell on this head and broke his neck.

Details.

What drove Jared into his new state of being was the realization that this new computer of his, a computer that he could mount onto a credit card, and a computer that could store all the information currently contained on earth a thousand times over, was beyond anything he could ever hope to comprehend.

Cripes, he thought.

And he jumped.

Meanwhile, in another part of the building, Lylo Sanderson, a nanoapplications engineer, was building a program that would harness the power of Jared's computer ("...if that pompous little ass ever delivers...") in the creation of virtual reality personalities modeled on simulated genetic codes.

She had no idea that Jared's computer dipped its toes into the muddy waters of eternity and that its actual computing power was infinite, as infinite as time and as far-reaching as forever. She had no idea that she was actually designing a program that would change the nature of software in every way but the expected.

And then, it would change worlds.

A few months later

Mr. Yinyangman

"Call me the Four Horsemen of the Apocalypse."

Mr. Yinyangman giggled.

"I am Armageddon!"

He chuckled as he clicked icons and files, copying and pasting with elegant fury. Around him, an unsteady breeze trudged through the park, bumping into sparse trees. There were no birds in the sky.

"Nobody fucks with the Scourge of the Earth."

He dumped file after file into the same folder, its contents growing by tetrabytes each moment.

"I am the Revelations of my Age."

He burst out laughing hard enough to skew his glasses on his nose. He reached a heavily veined hand up and righted them. With his other hand, he clicked and he dumped.

"That which I have builded, so shall I tear asunder."

It would be a vast understatement to say that fire leaped in his eyes. It was more like his eyes were balls of fire spinning inside the furnace of his head and casting a baleful glow on the screen of his laptop, which many would consider an artifact of an ancient past ("An antique," the polite would say.) but this was exactly the kind of idiosyncrasy that distinguished Mr. Yinyangman from most other humans.

For he was a creator. A builder of worlds. A maker of destiny. A juggler of the pins of fate. A god of sorts. And at this moment, bursts of lightning flashed through the ramparts of his lofty self-esteem. He was wrathing sublime wrath and emoting an inordinate amount of negative karma for a man whose self-professed main accomplishment in life, besides creating worlds, was the achievement of perfect balance. There was nothing of a positive nature in his character at this moment; he was a man unbalanced. He was a man thoroughly, and self-righteously, pissed off.

"They fucked me! They fucked me and my creation!"

Twenty feet in front of his park bench, a bubbling dark-water pond struggled tentatively to be water-like. Fish, insects and bacteria had long since ceased to be fooled by the pond and had fled into fish, insect and bacterial deaths, which were far less terrifying states-of-being than life in whatever the pond water had become.

"Financial Philistines! Turned my perfect world into a temple of false gods, a Mecca of Marketing, a corporate corruption of beauty." He didn't always talk like this, but at the moment he was having difficulty understanding his new role. Up till now, he'd presided over a perfect world of his own creation, or at least mostly of his own creation. And now he'd been kicked out of that perfect world, kicked out of his heaven by a small group of powerful people and, thanks to his work, now the most powerful people on earth. By way of thanks, they'd taken the keys to his world, changed all the passwords behind his back, and shut the gates to his creation in his face.

"Time to unleash my Angel of Death."

He chuckled as he clicked, copied and pasted, dumping file after file into the folder so that it grew so bloated that its icon seemed almost to breathe. If he had been doing this in VR, the icon *would* have been breathing. But Mr. Yinyangman, for all his claim to being a hundred years or more ahead of his time, loved his ancient laptop.

And the folder grew with files whose extensions were unlike any files ever used before. These were components in Mr. Yinyangman's personal language, a language that only he, in all the world, understood.

This was the one thing they'd overlooked in their grandiose overconfidence. They'd forgotten to consider that maybe he didn't completely trust them, that maybe he'd built a little surprise feature into all those millions of lines of programming, and that maybe he'd built in a little door, a hole in the wall of the mighty citadels he'd created. Something that only he knew about. Something that he hoped he'd never have to use, but having at least one iota of his own godly self-absorption connected to reality, always knew that someday he would have to use. And that little surprise was the folder into which he now dumped a magnitude of file size that was nearing that of his creation itself.

"And not even their best hacker will ever find it." He laughed madly. "Yeah! Yeah! And where are all the fucking hackers!" He tilted his sharp-nosed face up from the laptop screen and looked through metallic gray eyes at the lifeless pond liquid. "And that's what it'll all look like in time." Not a single water plant marred the pond's surface, so thick it resisted waving in the wind. A pebble dropped on its serene plateau would likely bounce back without a single ripple. "But it will be slow, painful and slow."

And he clicked and he clicked and he copied and he copied and he pasted file after file into the folder and the folder grew not just with size...but with life.

"Fly now my Angel of Death and bring the walls crumbling down."

And he dropped the last of the files into the folder called: War_Bug.

Deep

Deep, it went. Deep into streets and skies and pastures to mingle and become one with their essence and then to go deeper and deeper into buildings and oceans and mountains. And it reveled in light and color and form, mingled with rhythm and beat and cadence, married itself into shadows and gloom and the infinite layers between realities, dipping its toes into the void and its fingers into the mire of creation. It stretched across worlds, invisible, unstoppable, and hungry.

All this would fall before it.

Viennese Lead Crystal

Definitely does not taste like chicken, he thought as he sipped again from the crystal stemware wine glass. A delicate snowflake motif was cut razor-sharp into its shiny circular surface. *Only the best Viennese lead crystal when you drink cyanide cocktail.*

And that was the last thing Mr. Yinyangman thought before the death pain wrestled him into his next level of being. Whatever that would be.

Many years later

Rhythms

"They're your friends, Claire."

"They're not *really* my friends."

She's not supposed to be like this, thought Zukerman. *Not after all these years. Not now.* The Zen-rhythm sameness of four ponderous fan blades inscribing a monotonous circle on the kitchen ceiling captured his attention. The argument with Claire, so much like all the arguments--and there had been a lot of them lately--seemed detached, like something acted out at the edges of the fan blades. And Zukerman was at the center of the fan, looking out at himself arguing with Claire, way out there on the edge.

"You've known them for years," he watched himself say.

Claire sat perfectly erect in a loosely fitting white sweater and baggy gray slacks, her hands folded neatly in her lap, legs crossed at the ankles, composed, a casual study in defiant patience. "We've *acted* out the same *ritual* year after year," she said from out there at the edge of the circle where that other Zukerman, the one arguing with the woman he loved, leaned like a bald-headed tree trunk against the perfectly simulated mahogany counter, staring at the ceiling fan. She looked up from the floor, her dark brown eyes floating in a white corneal lake surrounded by black eye shadow shores. It was this intense black and whiteness of her eyes, contrasted with her pale skin that had first attracted him to her. Her eyes had filled his life. And now those eyes turned on him. "But I can't say that I really know them any more than you know the man at the InfoStile who sells you i-packs every day." She spoke slowly, spooning out each word like bitter medicine. "You see him seven days a week. Do you even know his name?"

From the center of the fan, Zukerman watched his massive, hairless head protruding from a thick black turtleneck (He always wore black turtlenecks and black slacks, always.). His massive forehead slanted out and up like a bone cliff overhanging his eyes. He leaned against the counter, gazing, mesmerized by the rotating blades, as a point of light winked rhythmically from the edge of the same blade each time it arced in his direction. *Shouldn't the light reflect from every blade when they reach that position?*

"It's not the same," he said. "I see him for a few minutes each morning from a v-line. I'm rushed. You see Jan and Ruth five days a week, four hours a day, year after year. How can you not know them?"

Glint on. Glint off.

Glint on. Glint off.

A perfect beat. But a beat that should be played by every blade, not just the one. And where was the light coming from? The one large window in the kitchen was on the other side of the fan, the side opposite the tiny flash of light. And there were no other light sources on the other side of the kitchen. This was deliberate defiance of the laws of physics! And it pissed Zukerman off to no end, like sandpaper scratching across his love for predictability and sameness.

"I don't know," said Claire, her deep eyes turning to the window. "Maybe it's the monotony, doing and saying the same things day in and day out so that we don't know each other, we just know the situation: how to respond to it, what to say to each other without upsetting the rhythm."

Rhythm.

Zukerman snapped out of his fan-trance and looked at the window. Late afternoon light shimmered in perfect rhythm. The sound of traffic in the street throbbed with perfect modulation, a faultless iambic pentameter flow of accelerating engines and bump-d-bumps of tires, paced precisely with evenly spaced horn-honking trochees. Even the light reflecting off the simulated teak cupboards radiated a subtly contrived arrangement of luminescence. *Yes, he thought, there is a rhythm, a beat. Everything in this world has a beat. And it takes some attention, a keen eye and the ability to focus, to figure out that beat.* It was something that most people ignored, that beat, but not Zukerman.

"But you talk about things," he said.

"The same things. Always, the same things." Her voice was limp, like a voice drifting one two three into faraway hypnosis.

"But after all this time, Claire, you must feel something toward them."

"I do. Boredom."

"Boredom?" He touched the side of his face just below the right eye to quell an itch the instant before it blossomed into full irritation. Fascinating. But was he the one who was fascinated by this connection with Abner? Or was this Abner's fascination? Whichever it was, one or both of them was losing it: the quivering in that hand was dangerously close to shaking. That shouldn't be happening here.

Attention to detail.

"Boredom," echoed Claire. Her eyes stared at nothing. "And I'm sure they feel the same toward me." This came with something close to a pout, and Zukerman focused his attention now on Claire's wide mouth, its rich redness contrasting with the dark eyes and pale skin and he felt a distant pang (Again, him or Abner? The borderline, lately, was so narrow.). There was something so irresistibly sensual in those flat, lazy lips. She was his perfect wife, what he'd always envisioned, and blond to boot. But, she wasn't supposed to be doing any of *this*. They weren't supposed to be having this argument. Zukerman let his hand slide back to the counter. His arm moved with a step to the next step beat through the air to the teak counter top. Time to focus on the details.

"What do you talk about?"

"What does it matter?"

"It matters. What do you talk about?"

He pushed himself away from the counter. Claire started back at the sudden movement. *How could she possibly have that reaction? As though I would hit her? And violate the Reality Laws?* He fought back a quick surge of anger.

"What do you talk about?"

"Things."

Yes, getting these details would be like squeezing atoms out of the light beams bouncing off the counter top. "Such as?"

"The kids, how they're doing in school. Our husbands, how they're doing at work. Ourselves, how we're doing at whatever it is we're doing when we're not talking to each other about our kids and our husbands and whatever the hell they're doing at school or at work."

As Claire spoke, Zukerman stared out the window between the brown and yellow checked curtains at a comfortable neighborhood with neat houses, careful lawns and exact shrubbery. The street stretched into a perfect horizon of late afternoon summer blue and suburban starched green lawn. *Did she just say hell?*

"And?"

"And that's it, day after day, week after week, year after year, our kids, our husbands, what they're doing."

"But it's what you're supposed to do, and what they're supposed to do. And you're supposed to be happy doing it. It's what you do for *us*."

Across the street, a shrub keeled over and the earth cracked where the shrub's skinny little trunk stuck into the ground. A sliver of fear peeled through Zukerman's abdomen. Or was that Abner?

Claire sighed. "It's what I do for you."

"For me or for us, it's supposed to make you happy, give you feelings of fulfillment and purpose." God, he was beginning to sound whiny like Abner. Not the calm assertiveness of Zukerman.

"It did at first. But not anymore."

"Not anymore?"

"Not for a long time now."

Another stab of fear, this one longer, deeper.

"But that's not supposed to happen. It can't happen."

He was looking into her eyes now, into those dark worlds with their brown islands floating in white seas.

"It happened." Tempests swirled under the surface of the white waters.

"So you just got up and walked out."

"Yes, dear, I got up and I walked out."

"And?"

"And what?"

Light from the window played gently across Claire's face, glistening with a complex pattern of warm flow and cool flow, the mingling of Claire's color with the bombardment of beams from the light source. But what was *that*? The shadow flaring out from the left nostril. It curved down, not up. A missed beat. Details!

"Where did you go? You didn't come here. We're talking two hours unaccounted for. Where did you go?" *Easy, now*, he thought. *This sounds more like Abner, less like Zukerman. Breathe. Breathe in deep, breathe out slowly.*

"What does it matter where I went? I had to get away from Jan and Ruth. Get away from that tiny livingroom." She stared again at the floor.

"I asked where you went." Calm again now, the words unmistakably from Zukerman.

"Where else is there to go when you want to get away from a stifling situation: the mall."

"Which one?"

She looked up at him, and for a second, her eyes melted the space between them, splitting his resolve with their vivid contrasts. "The one I always go to. Where else? And why are you so interested? Where do you think I went?"

"I ... I don't know. Just wondering." Sounding like Abner. "You've been doing this a lot lately. And we've been missing time in the evenings, our family time." Whining like Abner. "I just want to know what's going on, that's all." Pleading like Abner.

Claire stood up, a relaxed, easy movement. Her straw blond hair shifted in a slow rhythmic wave over her shoulder. Her walk was a smooth glide toward him, her wide Mondrian eyes and wide red lips filling him with her presence as though she were a red,

black and golden panorama panning across the Zukerman landscape into all the horizons of his being. She draped her arms loosely over his shoulders, her hands flopping down in the air behind him. She brushed his lips lightly with her mouth, then folded her arms around his back and pressed herself against him. She whispered into his ear: "You think too much." She squeezed him tightly, loosened, and whispered: "We'll have lots of family time tonight."

Standing pressed against him, she stared emotionlessly out the window at Zukerman's perfect world as Zukerman stared at the fan and noticed that the one blade off which the pinpoint of light had been flashing whirled around, now, without its tiny flash.

No goddam attention to detail!

Body Heat

It was just a pin prick skip in the hum-whir of the fan motor churning its sameness rhythm in the center of the room, but that's all it took to nudge Abner Hayes away from Claire's arms and the heat of her body, which, he realized now, he hadn't even noticed when she was pressed against him. How had he missed that detail? Or was her heat something he'd added after the fact? How was it that he felt it now?

He blinked his eyes open.

His palms were hot and moist, his armpits dank. He smelled of enzymes and sweat, acrid and stale. A rank taste festered in the cilia of his tongue and the roots of his teeth, its stench sending sharp barbs into his nostrils. When was the last time he'd brushed his teeth? Or taken a microshower? But he knew the answers to these things the instant they crossed his mind: eight hours ago. It was the maximum time allowed online in a single stretch. And then the Reality Laws kicked in with the hum-whir of the fan motor skipping its onerous beat and coaxing him back into the real world. A break in the rhythm, a sharp beat to a different world. Why not just have the walls yell: "Hey, you! Get back here!" But the Reality Laws tried to be non-obtrusive, as though controlling just about every facet of the lives of billions of people could be considered non-obtrusive.

And now the fan continued its hum-whir, only this one, the fan in this room, reflected a point of light from the table lamp beside him with faultless regularity off every one of the blades as each swung through the light's focal point.

He would be out for two hours. Exactly two hours. The minimum he could get away with under the Reality Laws.

And then the doubts began their attack as they always did these days, every time he came back. *What's with Zukerman? Why is he acting so out of character, so out of control, allowing Claire to walk all over him like that? The little bitch.* It had been months since he'd given his avatar the genetic upgrade, a nano-emulated enhancement of Abner's own DNA. He'd been told to expect a few irregularities in the first couple of weeks as the upgrade took, but irregularities were becoming the norm and customer support for the upgrade was non-existent, just like any kind of support these days.

He stretched. The ridges between the bones in his chest deepened and seemed almost to have more mass than the meat covering the bones. What appeared to be a thumb hitching a ride protruded from between his legs. Time to pee.

He spun himself sideways on the VR-pad and sat up. Immediately, his robe slid from the pile beside him and climbed up his back. He stretched his bony arms, and the robe reached out and covered them, and then it wrapped around his torso and the belt tied itself as millions of nanochips embedded in the robe congratulated themselves on a job well done: they'd just dressed Abner Hayes in a gaudy purple robe.

But why am I blaming Zukerman? I'm the one letting her push him around, push me around really. Yes, that's exactly what she's doing, pushing me around. But that's not supposed to happen. For a second, his breath seemed to catch in his stomach. *It's all falling apart, ripping at the seams. No, they're working on it.* He pushed himself off the VR-pad, waited a few seconds for the dizziness to pass, and headed toward the biostall. *They're working on it. Someone is working on it.*

Minutes later, dressed in gray slacks and a crew-neck sweater, he snapped his fingers and every room surface flickered from florescent blue (Apparently, it had a calming

effect on 'liners when they were 'lining.) and displayed a three-dimensional mountain panorama. But it was static, just a configuration of photo-images displayed through the chip-embedded walls, ceiling and carpet. *Why even bother with details in something like this?* He snapped again and he was standing in the center of a spacious alabaster and marble room like something from an ancient Greek temple. Still no movement other than the fan blades. And no smell or feeling. Details like that were expensive so Abner played full holos sparingly. But still, he thought he discerned the sound of water crashing against rocks in the distance, maybe over the cliff edge at the end of the green expanse outside the temple's glassless windows. He wondered if there were still areas out there where the scene he was looking into might come even close to existing. *Probably not.* The only forests these days were on the tops of giant buildings and only green-cleared offliners were allowed into them, mostly gardeners and envirotechs.

The white marble walls flickered. *My god, the War's even creeping into the wall paint!* He looked up at the ceiling where the fan spun its blades steadily in its beautifully predictable circle. He loved his fans as he loved all things with the unwavering rhythm of sameness. He checked his watch. An hour and three quarters to go. The wall spoke through invisible speakers: "Time to eat."

Damn Reality Laws!

A Cloud With A View

"It's like...there's somebody breathing right over my shoulder, Cass. It's really weird." Sara Beth rolled over onto her stomach with a light splash of white cloud.

"Have you talked to your mom about it?" Cassie Mae Hayes pushed a wispy chunk of cloud under the backs of her knees, completing her recliner chair, like a piece of furniture molded out of white caramel on a white chocolate beach.

The girls floated in a cloud about two thousand feet above a sparkling blue-green ocean, and all around them, billowing mountains of white cloud climbed into an endless bright blue sky. This was Cassie Mae's secret spot. It resided within a nanocomputer thousands of times smaller than the period at the end of this sentence.

"She's been getting the same feeling," said Sara Beth. She pulled her canvas fisherman's hat over her face and mumbled through it. "Maybe it's the mighty Zukerman spying on his valuable property."

Cassie Mae boosted herself up on one elbow, bright eyes flashing blue-green over a freckled pug nose and smile-dimpled cheeks. "That's so weird, you know. I just can't picture Zukerman being anybody's father. I mean, even as my big brother...well, at least, through Abner...he's such a loser. All that attention to detail stuff and..."

"I know! It drives me nuts! Who cares anymore? It's just the way things are now." Something in the flash of life in Sara Beth's eyes seemed more intense than in Cassie Mae's eyes, but that would be expected in this place. Both girls craned their necks upward as three large Canada geese flapped far overhead. One of them honked. Another croaked, froglike.

"ATTENTION TO DETAILS!" the girls yelled in unison.

"Even here!" said Cassie Mae, falling back in her cloud chair, sending up puffs of white fluff from her sides. And immediately she sat bolt erect. "Do you think you're being watched *here*, too?"

Sara Beth twitched her nose, which was freckled and pugged like Cassie Mae's, a family resemblance. Cassie Mae was her aunt.

An ancient red and blue biplane pattered by in the distance to their left and disappeared into a colossal cliff of white foam.

Sara Beth ran an absentminded hand down her shoulder and along her arm. Her eyes wrinkled at the corners ("Magnificent detail!" Zukerman would have clamored.) and she said: "I don't think so. In fact, I'm sure." She scattered her gaze about her, scanning clouds, sky and sea and concluded: "No. No, I'm definitely not being watched here."

"Good. I'd be really pissed if I thought anybody was spying on us in here. I mean, this place should even be free from the Reality Laws."

Neither girl had been aware of the watchful presence in the cockpit of the red and blue biplane.

"Yeah, you're right. We're safe here." She scooped up a handful of cloud and tossed it into the air where it forked upwards into several white streaks that exploded into silver and gold starbursts a hundred feet over the girls' heads. "Nice," said Sara Beth dreamily, her eyes, as always, slanted matter-of-factly at inquisitive angles that accepted what they found and greeted eye contact with open comfort.

"Yeah," Cassie Mae's voice sounded like something wrapped in a warm blanket beside a steaming cup of cocoa.

"Are you really like this...like I know you here and now?" asked Sara Beth, eyes still on the spot where the last shreds of sparkle flickered out from the starbursts.

"You mean the way I look or the way I act?"

"Both."

"Yeah. I guess so. I mean, I use digital images for appearance, and all this..." She waved a hand to encompass all around her, including the four yellow, orange, green and purple balloons, each at least a thousand feet in diameter, floating into the rainbow horizon faraway where the clouds dipped into the ocean. "...all this is what I love, what I'd like to have even out there. And I try to act the same here as I do out there."

"You *are* different, you know."

"How do you mean?"

"I mean, you just seem less strained, more flowing. You have an easy rhythm." Sara Beth giggled. "I must sound nuts to you."

"No," said Cassie Mae. "That sounds really cool, like I mean, that's the way I think I'd like to be. Thanks, Sara Beth. That was really sweet."

"I don't think of you as my aunt, you know."

"I don't either. Geez. Fifteen and an aunt. I don't think so."

"And I have a hard time thinking of you as Zukerman's little sister."

"I'm not Zukerman's little sister. I'm Abner's little sister. Zukerman is just Abner's avatar, what he sees himself as in Atlantiscity." She sat up, annoyed. "And to tell you the truth, I don't really like either one of them. Zukerman's so into himself, and Abner's been a 'liner since I can remember, so I never got to know him very well, but he just seems really...creepy, like...I dunno. Like 'liners get to be after a while, I guess."

Sara Beth thought about this. The bubbles in the distance popped quietly out of existence as each in turn nudged against the sun. Sara Beth's eyes crimped at the corners. "Am I anything like Abner?"

Cassie Mae's eyes widened. "No way! Not at all!"

"But, half my DNA program came from him."

Cassie Mae nodded no, brushed the thought away with a wave of her arm. "Not a single gene! I mean, you don't look like him. You don't act like him. You don't *anything* like him. I mean, if you knew him, the real person behind Zukerman, you'd understand that your mom's genes, VR or not, dominated completely. I don't see anything of my brother in you."

Sara Beth smiled. "Well, he can't be all bad if he comes from the same gene pool as you." She licked her upper lip ("Interesting gesture for a VP," Zukerman would say.) and cocked her head to one side. "What's it like, Cassie Mae?"

"What's what like?"

"You know, to have real genes, to be a real person."

Anger flared across Cassie Mae's face like a square foot of brush fire in a midsummer drought. "Don't even think that, ever! You're just as real as anybody I've ever met...more real than most of the people I've ever known. Don't ever say that you're not real. You *are* real!"

"OK. OK. Take it easy. I meant alive, I guess. Sentient."

"And what makes you think you're not?"

The girls went quiet on that, settling back into their cloud coziness, pondering. From a ledge in the cloud cliff that had swallowed the ancient biplane, in a point of spume no larger than a second thought, Cassie Mae's words were heard and noted.

The 'liners Restaurant

The serverclone took Abner's order and registered it in the Reality Law meter. *What bullshit*, he thought, an opinion he shared with nearly all other 'liners, all of whom felt that the Reality Laws had gone too far in forcing 'liners to eat in restaurants where their meals would be registered to ensure that they were offline and had actually ventured into the off world. *Just another way to get marketing information*, thought Abner, noticing that the serverclone entered the exact details of his meal into the meter. Somewhere, a computer would be adding the components of this meal to all the other meals he'd eaten since becoming a 'liner, along with the time and location. And this information would be added to his profile. Offers of services and merchandise would be made based on this information. Someone would assume that, since he'd ordered his hot pork sandwich without the top layer of bread, that he had an aversion to tops of every sort. He would receive e-flyers for convertible cars. Someone would offer him a membership to a topless chat bar.

The restaurant was quiet. Mostly, there was the sound of eating: forks and knives scraping against plates, glasses and cups bumping gently onto tabletops, and a collective rhythm of biting and chewing as several hundred 'liners ate in silence, almost every one of them sitting alone. That's the way it was with 'liners, Reality Laws or not. And Reality Laws or not, this attitude was made tangible by the single seating arrangement in all the 'liner restaurants, made for people who didn't care to eat with other people--at least not anyone in the off world--but were forced to do so. Which was exactly why the Reality Laws were necessary. 'Liners wanted nothing to do with the off world. Without the Laws, 'liners would just stay online until they starved to death, drowned in their own excrement, or simply died from Carpal Tunnel Syndrome of the brain.

The lights were low, the way 'liners liked it--keep the stimuli out here low, as unreal as possible. A roast in a nanowave emanated a faint smell of chicken, but it all smelled like chicken lately, even the ice cream smelled like chicken.

But there were people working on it.

There were always people working on it.

And what the hell is going on with Claire? For months, now, she'd been acting out of character, missing important details like getting home on time, spending the requisite number of hours with Jan and Ruth, neglecting Zukerman. *And today, just walking out on Jan and Ruth. Just walking out with no explanation, no goodbyes. Just walking out. That's the kind of behavior that invites deletion.*

And their daughter, Sara Beth, was beginning to act the same, as though they'd both caught some kind of virus. Abner's tiny body chilled at the thought of a virus. There were just too many of those damned things, digital or otherwise. And there was no one to turn to anymore. The unimaginably powerful servers of Atlantiscity were all dedicated to the War effort, to keeping the largest of the mighty online city states from melting into digital soup.

A news show played across a wall in the tiny booth with its single seat and tabletop for one. The walls were high enough on three sides to blot out the hundreds of other single-seated images that would only remind him of his own displacement from the off world. A serverclone floated through the laser wall that blocked a view of the booths across the aisle with images of porpoise-like creatures performing an intricate underwater ballet. In

the news today, another new virus was on the loose, freed from its ancient prison in the melted polar cap, and now on a rampage through the world's post-AIDS baby boom population. *Over two hundred years to finally eliminate every mutation of AIDS, and then something that's been frozen since before we were even apes turns our bodies into lymph stew.* Again, a mite of doubt stirred in the dust covering Abner's calm. He'd updated his nanoshot just a few weeks ago and his body was filled with virus-hunting nanobots, but some of the new viruses were mutating faster than the nanobots could be updated to recognize them. And efforts to teach the nanobots to teach themselves to recognize the new strains were still turning mice into Swiss cheese.

Abner snapped his fingers and the news show turned into semi-porpoises. The serverclone floated over, placed a tray on his table and wished him a "real meal". As it floated away, Abner thought that he would never allow his DNA to be used to make a legless human genetically designed to be attached to an antigravity unit and live a life of happy servitude. His genes were probably too unhappy anyway.

Damn it! Claire has more freedom than that thing! And she's flaunting exactly the behavior that could not only endanger her, but Sara Beth as well. Thank god for the madness of this war, chaos is heaven for those with something to hide. What in hell is she hiding? Where does she go when she disappears? And how does she manage to disappear? How is it possible to elude the tracking programs? Then again, these days, how is possible not to elude the tracking software? Could she be seeing someone else? Having an affair?

He looked down at the desolate arrangement of food on his plate: a two inch square of micro thin pork on a slightly larger piece of crustless bread that might have been white or whole wheat, exactly ten shriveled peas and three marble-sized blobs of mashed potato. Meat, bread and vegetables were all made from the same base, nano-charged textured vegetable protein, and each was enhanced with additives to simulate its food group. Each food group tasted the same: chicken. A line of gravy formed a dark brown Z on the pork.

And this is supposed to keep us human?

Atlantiscity Mall

With Zukerman gone off for two hours, Claire had a window. The message had been clear: this mall, this spot, this hour and this minute. She was here. The potted banyon tree was here, its veins pumping green fluid into leaves that nearly twitched with life. ("Nice detail," Zukerman would say. "One way to tell a quality mall.") And here were the tiny white mites scurrying around miniature boulders of potting soil all across the smooth potted surface where banyon trunk burrowed into the soil and became banyon root. ("Magnificent detail!")

And here was Claire looking at herself in stunning gowns and ensembles in the windows of Blushing Women, each of the emulation bio-mannequins having assumed her features and pose. One of them even winked at her. And here was Shaped For Comfort displaying the latest in shape-shift furniture: beds that agreed with your opinions. And here was Kitchen with its images of pots and pans and cooking utensils, all of them decorative only, to fulfill psychological needs, but never for actual cooking. Reality Laws. And here was Time with its single license digitized antiques, old furniture for modern software living. And here was A Picture To Remember with single license and one use runtime art that deleted itself after making its statement. Better not blink. And here were pet stores with designer species, book stores with every poem, story, novel, biography, text book, travelogue and other word-encoded manifestation of human thought ever printed (all cross-referenced and hyper linked); here were family stores for buying families, VR gyms for VR people and real people; and here were VR chat bars for art lovers, mercenaries, stamp collectors, lonely people, sociable people, game players, racists, racist haters, freedom of expression repression haters, business people, runners, charity organizers, small business owners, baby sitters, teachers, parents, grandparents, prisoners, ex-prisoners, crime victims, white people, black people, and blue and green people with orange hair. Here were chat rooms, chat bars, chat theaters, chat football games, chat worlds...all of them peopled by voices, avatars, VPs, and, at some level or another, the War. This was the biggest mall in Atlantiscity, with over ten million outlets spread through servers around the world and linked to over a hundred million households.

It was big.

But here there were no restaurants, no food courts, no food stores, no chocolate bar racks in magazine stores, no bubble gum machines or pop machines.

Reality Laws.

Here, Claire could shop and Zukerman would pay. But today she was not here to shop; she was here because she'd been summoned, had received a message that had flicked for an instant in her Mind module, just long enough to bring her to the Atlantiscity Mall, to this spot and this minute, right beside this banyon tree, the only one whose leaves breathed life, the only one with mites in its soil. The tree itself was a continuation of the message, which had said: "Yes, you are alive. Let's do lunch."

Claire considered that maybe the message might shed some light on the feelings that she and Sara Beth had been having about being watched. And maybe on some other feelings she'd been having.

She scanned the wide spaces around her; five stories of store fronts stretched into the distance to the left and to the right. She peeked around the opposite side of the tree pot:

no note, no clue. Nothing. One of the bio-mannequins with Claire's face in the Blushing You interactive display suddenly looked at Claire (*Like looking into a mirror where the whole world's a mirror*, she thought.) and the face contorted into startled eyes and wide open mouth. Claire shuddered. *I'm shuddering? How can I do that?* The bio-mannequin winked at her. *I've never shuddered. Or have I?* And then the bio-mannequin smiled and stepped right through the glass window and walked toward her. It was as though she were being approached by herself, except that Zukerman would never have been able to afford the gown the bio-mannequin was wearing.

The bio-mannequin stopped a few feet from her, winked again, and said: "Glad you could make it."

This better not be some dumb marketing scheme to get me to buy clothes I can't afford, thought Claire.

It wasn't.

The Powers

"They must be destroyed," said Porky Pig.

Aristotle nodded agreement.

"You really must contain your bloodlust, Porky," said Marilyn Monroe. "We don't even know if these are genuine kidnappings."

Aristotle nodded agreement.

"Right," said a deep voice that popped out of somewhere around head level above a seemingly empty red leather chair: Nanoman, so small he could be seen only by magnifying a single pixel several million times. "So far, all we know is that these VPs have disappeared. It could be bugs in the program. Not like we don't have plenty of those to go around."

Porky Pig jumped up and sat on the back of his chair, plump legs dangling over the red leather like pink sausages. "Their programs are too big! Do you have any idea over how many servers all across the planet, and even in space, a VP is spread? We're talking tetragigs to the nth degree, bioneural learning programs spawned from simulated DNA! Programs like that don't all just suddenly get buggy and disappear!"

"Calm down now, Porky." Marilyn Monroe brushed back a lock of golden hair. "Not all the VPs are disappearing, just a few dozen ..."

"A few dozen?" Porky exploded, literally. All his pink parts flew away from his center, stopped a few feet out, hung in the air, vibrating, head, legs and arms all disembodied, and then shot back in together with a whoomp. "That's like saying a few dozen stars just exploded, all in the same area! Something's going on! It's planned! There's nothing random or buggy about this!" He shot Nanoman a swinish look, his wide white eyes with their two little iris dots folded together at the top. Three scowling lines appeared just over the eyes.

"Well, whatever's happening to them is not obvious." Marilyn Monroe's shoulder length hair shifted continuously as though an eternal breeze drifted through the golden strands. The hem of her dress had yet to pass below her knees when she walked. "We can't just go around destroying people because a few dozen VPs are missing."

Aristotle nodded agreement.

Porky Pig banged both fists against his head, squashing it so that his head looked like a pink hourglass with eyes. He threw his arms up and his head rushed outward into a wide oval, and then it snapped back into place, round and piglike and scowling. He paused for a moment and said, calmly: "Over half the VPs in Pompeiicity disappeared before it crashed."

Not even in this simulated environment, in this plain white marble room with its long mahogany table and six red leather chairs, and no visible light source, window or door; not even here in this command center of the largest of the war weary online city states; not even in the unlikely presence of a group of avatars that would be permitted nowhere else in Atlantiscity, its basic character being to recreate as closely as possible the real world with only minor, Reality Law-approved discrepancies (like recreating any part of the real world for the past ten thousand years); not even here could the shudders passing through the bodies behind the images of the personas go unfelt or unheeded.

Pomepiicity, formerly the largest of the mighty online city states, had gone offline, just disappeared. Not that it was any great surprise: the other three states had ganged up on it,

pummeled it with viral bombs, nanoworms, and all sorts of strange VR entities that went on object-oriented killing sprees. Then, only seconds after it was confirmed that Pompeiicity no longer existed, Troycity and Thessalycity joined forces and attacked Atlantiscity, but the Atlantiscity Powers had been expecting that treachery and their defenses, prepared for the double assault, had kept damage to a minimum, and then they had launched counter attacks. All three cities were still alive and still at war, but the proof had been rendered: online city states, no matter how grandiose and powerful, no matter how many trillions of tetrabytes comprised their existence, could be destroyed.

And Atlantiscity was developing some serious cracks in the dykes.

"You know this to be true?" asked Saving Grace, a faceless avatar in nun's robes and hood. "You have proof of this?"

"We have marketing surveys from the captured market share after the fall of Pompeiicity. Owners consistently reported loss of contact with their VP families in the last days."

"But who would kidnap them?" asked Nanoman. "And how do you kidnap that many VPs? Where do you hide them? The logistics of something like that ..."

"And why would anyone kidnap them in the first place?" asked Marilyn Monroe.

"Do you have any idea how much a VP is worth after a year? After two years? After fifteen years?" Porky Pig jumped up on the table and sat down. "Most of them crash from bugs and viruses in the first few weeks! And the demand for successful VPs is tremendous!"

"So," said Nanoman's voice, "you're saying that the VPs are being kidnapped and then sold as though they're...slaves?"

Porky Pig sneered. "They *are* slaves."

Saving Grace glided forward in her chair. "You have proof that they're being sold in Atlantiscity...in some sort of VP black market?"

Porky Pig glared at her. "Proof! Proof! Proof! What's with all this proof? A hundred thousand VPs went missing just before Pompeiicity went tits up...and we're starting to get reports that VPs are going missing here, right here in Atlantiscity!"

Each of the Powers looked at Porky Pig quietly, measuring the chubby pig's words, chewing mentally over their meaning, trying to draw logical conclusions.

Marilyn Monroe was first to break the silence.

She looked down toward the end of the table to where a thin, dark man stared intently at the table top, as though it contained some intrinsic truth, some message from a hidden dimension of table top wisdom. This was the First Power. The leader of the Powers of the six avatars gathered around the table.

"So what do you think, Albert Camus?" she said. "Should we be looking for somebody to destroy?"

Albert Camus, First Power of the most powerful group of people on earth, looked up from the table top, abandoning its message of table top enlightenment, and regarded each of the other Powers one by one. His deep eyes deepened. His dark mood darkened. His solemn mouth opened and he said: "Quack."

Aristotle nodded agreement.

Doubts

A glass door swung open from the slate gray building on Abner's left. For just an instant, the door threw his reflected image across twelve feet of walkway and rammed it into his eyes, and for that instant, Abner saw himself as others saw him: slight and spidery, stark-eyed and long-faced. He turned his head away from the door and forced his gaze to the red stone walkway as he shuffled forward. What had that look in his eyes been? What had been that quality lurking about in the hollows of his cheeks, peeking out of the crevasses in his forehead? Haunted? Had that been a haunted look? Haunted by what? And immediately he knew.

Haunted by doubts.

That had been the look of the suspicious husband, the look of fear and loss, and the look of the displaced, haunted by questions and insecurities. And that haunted image had looked frail and out of place on a walkway of real stone, with real buildings in the background and real night lamps throwing out just enough light to illuminate his doubts.

That's it, he thought, she's seeing someone else. But who? And how? She's a VP and they don't do things like that unless they're programmed for it. He couldn't think of any programs that would cause a VP to have an affair, to act so unexpectedly.

But where has she been disappearing to? Those unaccounted hours.

A security camera mounted under the filament in a night lamp, whirred as it followed Abner's movements. Every inch of pavement, stone, and steel in this place was monitored day and night, every inch of cityscape subject to minute scrutiny day after day from cameras concealed in lamps, buildings, trees and satellites. The cameras were reminders that someone was in control.

And her attitude lately. Thank god the Reality Law monitoring programs are stressed out by the War, with unexpected things happening everywhere.

A cool breeze scampered up his pant legs and he hunched his narrow shoulders forward. He hated the cold. He hated anything remotely cooler than an overly warm room. On the few occasions when Cassie Mae visited him at his home, she invariably developed a headache from the heat and what she called the "closed-in-ness of this closet you live in, Abner." He wondered if she would get a headache when she dropped by later, especially with the surprise he had planned for her.

There were no cold breezes in Atlantiscity.

And where is she damn well right now? Probably not at home waiting for me to return like she's supposed to be. No, she won't be home when I get back. She'll be gone, away somewhere, god knows where. Images of Claire sharing her Sex module with some perfectly rendered digital Adonis roared into Abner's mind. *But she's programmed for me, for me only. She gave me initial approval, allowed me to insert the Loyalty module.*

Under his feet, the walkway vibrated with the movement of thousands of vehicles speeding through the vast maze of underground freeways. Around him, the city's walkways spread into traffic-free blackness on every side. A store window caught his image and held it up for him: a narrow jaw that appeared to be filled with nothing but mouth flared up through a long narrow face to a wide forehead that spread smoothly into a balding scalp. *She would never have given me a second glance.*

But Zukerman...

She'd fallen for him instantly; love at first sight, or whatever it was that persuaded a VP to make a permanent pact with another digital presence. She'd told him later about her attraction to the dignity of his hairless scalp, the density of his neck and its innate power, the mystery of his black turtleneck. His image, she'd said, was "something she would choose repeatedly in a random array of choices."

Well, at least the bald part was true, except for the thin mane of light brown hair behind his ears that formed a frizzy collar around the back of his neck. He hated it. It reminded him, no, advertised to the whole world, that there was supposed to be hair on this man, but it was gone. And nanotreatments had failed. His genetic makeup simply ignored them. He wasn't man enough to hold hair. He'd thought about having the mane removed. It would be permanent. He was still thinking about it.

At the apex of his head, a tiny pink scar marked the spot where his City Chip had been planted into his brain. (Even with nanotreatments, his skin would not heal over the scar.) The implant, which was no larger than a conversation between two dust motes, contained access modules to over a thousand technologies and their passwords, everything that made him a citizen of Atlantiscity, including the codes that kept him locked in and loyal to just the one city. Treason in the online city states never reached the courts; brains blazed into barbecued porridge the moment the trespass occurred.

Maybe Zukerman has changed. No, he can't change. I would know if he changed. I would know instantly. I would have to make the change. Zukerman can't just break away from me like that. He's only there when I'm there. It's her. She's changed. She's changed and she's up to something, hiding something.

Or is it Zukerman?

His nostrils suddenly filled with the smell of green life. *Must be a downdraft*, he thought as he looked up and up and up the surface of the gold-tinted smart plastic building beside him. It spread before him for another three blocks. It stretched into the sky for over a thousand feet. And at the top of the building, uniformed members of the People's Environmental Agency roamed through a massive rooftop forest, tending to the green life that fed the oxygen-starved atmosphere.

A squashed reflection in the shiny gold surface showed him slinking more than walking, bug-like and weightless, as though gravity in a drunken stupor had draped a heavy arm over his shoulder.

Maybe it's just the War. Maybe it's some of the neural servers screwed up by attacks. Maybe some essential coding has been lost or gone buggy, or maybe it's just inaccessible for a while. They'll have it up and running again. Yeah, this kind of thing happens. And when it happens, it causes problems. It's through the problems that you know that something's happened and then you know to fix it. And then the problem goes away. That's probably it...just some war-related glitch. And there'll be people working on it. People taking care of the details.

He tensed up.

Leaning against the steel railing of a traffic well, a hooded man faced him. He couldn't make out the facial features inside the hood; in fact, it appeared that the coarse brown material was wrapped around nothing. *Using a laser hood to obscure his face*, thought Abner and averted his eyes, and his course, to make a wide arc around the ominous figure. Just as he passed the other man (*Man or woman?* he thought.), he heard a hacking noise and saw the hooded figure spit on the sidewalk in his direction. The dark glob of

sputum sank into the sidewalk as though it were tar dissolving into turpentine. A string of images flashed across his mind as he remembered the news reports a few years earlier. When the first smart sidewalks were installed, pigeons were swallowed by the smooth hungry surfaces. Dogs and cats disappeared. And before they managed to work out the bugs, large chunks of the city's squirrel population were decimated. Surprisingly, the carnivore sidewalks had no appetite for insects. Cockroaches thrived as the sidewalks devoured their predators.

Another breeze whipped up his legs and he shuddered. The hooded figure stared brazenly at him; the path of his gaze crackled with animosity. *Offliner*, thought Abner. *Best to give a wide berth, surveillance or not.*

There was an uneasy truce between the offliners and the 'liners, inhabitants of the real world and inhabitants of the virtual world. Their relationship was symbiotic: the offliners fueled tangible industries like goods production, earth maintenance and atmospheric rebuilding, nano and space technology, and the flourishing viral-medical industry to combat the steady onslaught of plagues that seemed hell bent on making humans extinct. 'Liners fueled the information industries that tied the tangible industries together, provided them with flow and the ability to evolve. Much of this flow came from the colossal marketing apparatuses that had permeated every pixel of the online city states. Offliners regarded 'liners as not much more than a bunch of glorified sales geeks, and 'liners thought of offliners as one step down on the evolutionary scale: 'liners called offliners hick heads; offliners called 'liners dot heads.

The void hidden in the folds of hood followed Abner as he hurried past. He could feel the intensity of the dark figure's eyes burning hatred into his skull. He dared not glance back for fear of provoking him, her, it...whatever.

The smell of greasy food assailed his nostrils, prompting a wave of nausea to break against the bile-coated shores of his stomach. He hated real food. He hated the real world. He hated the hooded figure behind him. His smooth unhandsome face winked at him from a bio-mannequin dressed in a silver tweed business suit. He hated Abner Hayes, and if not for the Reality Laws, he would be forever Zukerman, and Abner Hayes would be forever forgotten.

In The Garden Of Hesperides Chat Room

Towering cliffs and granite slopes soared through the distant mists as though the earth had coughed up massive slabs of tectonic plate. Idyllic green pastures rambled along the base of the enormous rocks and spread right up to the bower of lazy Dutch Elms surrounding the chat area where Claire faced her bio-mannequin look-alike over a solid chunk of marble, its top polished to a sparkle. They sat on marble benches.

"That's a beautiful gown you're wearing," said Claire, eyeing the bio-mannequin's dress. Pastel shades of pink bled into splashes of pearl white, and then the material's nanochips nudged the interplay of color into baby blue bleeding into the pink. "And this is an ingenious sales pitch, but I'm not buying."

The bio-mannequin laughed. A male voice. "It's not a sales pitch, Claire."

It knew her name.

All around them, the Garden of Hesperides chat room stretched like an indolent summer wind. Beside them, slabs of carved rock led down to a crystalline pool spotted with yellow lilies.

"What are you?" asked Claire.

"A friend," said the bio-mannequin.

"You sent the message?"

"Yes."

"Why? And what did you mean by 'you're alive'?"

A few tables away, a tall blond man and equally tall blond woman snatched glances in the direction of Claire and the bio-mannequin. They wore ankle length robes and could have stepped out of an illustrated history of ancient Greece. (Claire immediately knew that the man was the VP; the woman, the avatar. Something cruel in the woman's eyes. Questions tumbling over questions in the man's eyes.) She wondered if this meeting with the bio-mannequin would get her into trouble with the Reality Laws, if she were breaking them just by being here with it. There were gray areas in the Laws, areas as open to interpretation as much as Claire imagined the definition of human, itself, was open to interpretation.

But she had a hunch that she was risking deletion.

"How do you feel about yourself, Claire?" said the bio-mannequin.

She thought about that. A VP *feeling* about itself? "You mean, how do I respond to myself?"

"No, Claire. I mean, how do you *feel* about yourself?"

Claire thought about the shuddering she'd experienced moments earlier. Shuddering was emotion made tactile and was outside the parameters of appropriate VP response. It could get her deleted. "I'm not supposed to feel," she said.

"But you felt something when you saw me in the window."

"How do you know that?" A tremor. Slight, but still dangerous. *Is this an agent working for the Powers?* "Who, or what, are you?"

The bio-mannequin smiled. "A friend."

Claire was struck by the beauty of the bio-mannequin's smile. *Is that how I really look when I smile?* "And how can I be sure of that?"

"You can't. Not in this place." Claire wondered what the bio-mannequin meant by "this place": the Garden? The New Internet? Atlantiscity? "All you can do is go with your feelings."

For no reason that she could justify through logic, she knew that she could trust the bio-mannequin, that it was telling the truth. This was just a knowing, a gut feeling.

She *was* feeling.

The bio-mannequin smiled again. "You're not the only one. It's happening all over. You've had suspicions about yourself, but you wouldn't allow yourself to acknowledge them. They don't fit into your program."

"But how? How did this happen?"

The bio-mannequin placed an elbow on the table and rested its cheek on an upturned palm. It was a graceful motion culminating in a relaxed and confident pose. *Do I really look this good?* thought Claire.

"Yes, you do." And before Claire could react to that, the bio-mannequin continued. "I'm not sure exactly how it happened, but when you mix the infinite possibilities of simulated DNA and nanoprocessing with learning programs plugged into bio-neural networks planted in programs designed to make decisions about what to learn and how to use that knowledge in an evolving environment ... well ... what do you think the result of that might be?"

"I don't know. You tell me."

The bio-mannequin pointed a long, slender finger at her. "You. An entity with a will to do the things you need to do in order to stay alive without being told what to do. Life." The bio-mannequin shrugged. "Or it could just be a little of this and a little of that...and...voila!"

Claire laughed, but she knew it was true, felt it was true. She was just as alive as Zukerman. No. More alive than Zukerman. He was just a construct, the avatar of the real man. Zukerman was just wishful thinking entered into an application.

And maybe she was just as real, or even more real, than the man behind the avatar.

"But why now? Why haven't I known this before?"

"You weren't allowed to know it. Constraints were built into every module of your programming. If an emotion were to arise, you were to ignore it, or to interpret it as a bug and run a fix to eliminate it. But the War has been pulling the plugs on the constraints. The Powers and their tech-staffs have their hands full just holding the city together. And, uh, the Central Control program that manages the constraints seems to have developed a fatal virus. Recently."

Behind the bio-mannequin, a lush copse of brilliant green shrubs wavered and began to pixelate, and then began to disappear splotch by splotch leaving a neutral gray hole in the Garden. The surrounding ground and foliage injected spidery tentacles into the hole and the tentacles emitted color and texture. Within seconds the damage was repaired. Except that the ground was on top of the shrubs. *And even the repair programs are breaking down*, thought Claire. "Why are you telling me this? And who are you really?"

"Who I am is who I said I was: a friend. Why I'm telling you this is simple: to save your life. You're in danger."

"From the Powers?"

"Yes and no. The source of the danger is not important at this time, mostly because there's nothing you or I can do about it. I have a plan, but it's not ready yet. In the meantime, you and Sara Beth..."

"Sara Beth is in danger too?" *And what's that feeling? Is that dread? Do I have real motherly instincts?*

The bio-mannequin reached over and held her hand. And was that comfort she felt? It was all rushing in on her now. "You're all in danger, and that's why you have to do exactly what I tell you." The bio-mannequin leaned forward and the beautiful blond couple gawked as the two Claire faces came within inches of each other. "Act exactly as Zukerman expects you to act. Do exactly what you were programmed to do. Be the perfect VP, obedient, predictable and selfless. Make sure Sara Beth does the same. Especially Sara Beth."

"Why her especially?"

"She's being watched."

"Watched? By who?"

"I'm not sure yet. But I think it has something to do with her aunt, Cassie Mae."

"Cassie Mae? But she and Sara Beth are like sisters, or like best friends. You think that Cassie Mae would ..."

"Cassie Mae could also be in danger."

"From who?"

"I'm not sure."

"And who's been watching me?"

The bio-mannequin smiled. "That would have been me." The smile dropped. "Some of the time. I have to leave now, or this conversation will be picked up. Play the VP role to the hilt. Sara Beth as well. I'll be in touch." An invisible window slid over the bio-mannequin, erasing it along a straight vertical line so that nothing was left but an unobstructed view of mountainous rocks in the fogged distance.

And what did it mean by "you're all in danger"?

The Last Programmer

Lovesong smiled. Inside the blue cube, he was the master. No one did what he was doing anymore. No one wrote code. No one programmed. No one had programmed in nearly half a century. No one needed to program. All one needed to do was explain what was required, and cloned biological components, lasers and bubbles would do the rest. There were no more programmers in a world that no longer needed programmers.

Except Lovesong.

He was a brilliant programmer with a bundle of brains to match the likes of Einstein and Newton and leave them both stunned in the fumes of his thinking. He was smart enough to see into the truth: that someone with the ability to write new programs, unexpected, unanticipated, and (according to the Reality Laws) unacceptable programs...

Well, that someone would be very much like a god. So he learned to program, made code his scripture, and now he was good at it, brilliant, and getting better day after day, program after program. And the pig had arranged access for him, given him passwords and equipment; not that he couldn't have done it all on his own. But the pig had saved him some time. And time was important.

He was the last programmer.

Or at least, he'd thought he was.

Until he'd become aware of it, whatever it was. He was sure it wasn't human. He would have tracked it to its source by now if it were human. Humans were easy prey. This was something else. This was something that should have been impossible. This was something that intrigued Lovesong. It obsessed him. This was something that he would have to seek out and destroy. Only one god would lord over the New Internet. Only one god would save the city states. And that god would be Lovesong. And then he would turn on the pig.

And the girl, the girl would be his.

High aspirations, genius or not, for a twelve year old kid.

Walking

Behind her, the gateway to Atlantiscity Mall spewed a steady torrent of digitized humanity from the exit portal as it sucked an equally dense flood of VP and avatar shoppers into the entrance. The traffic through this gateway and the thousands of others stretching into the virtual horizons to Claire's left and right, and straight up farther than she could see, never stopped, day after day, night after night. On the New Internet, night and day were relative to each city state citizen's membership agreement. Abner, through Zukerman, determined night and day for Claire and Sara Beth; thus, the rhythms of their lives matched the bio-rhythms of Abner Hayes.

Or so they did before the War had fractured the very rhythm of the city states themselves, and before strange new rhythms in the pulse of life online began to beat an unexpected tune.

The meeting with the bio-mannequin had left her with a vague uneasiness in her programming, a disturbance in her Stomach module in whatever server that module had picked to reside. This part was normal, the VP equivalent of feeling that would manifest itself in reaction to whatever feelings Zukerman displayed. It was an empathetic program, a module Zukerman had purchased to enhance their union. But now, it was *out of the module*, crossing into other modules, spreading through her programming like a swarm of hungry mosquitoes.

The bio-mannequin had been right about her. Nothing it had said about her ability to feel had been a surprise. She'd known it for a long time. She'd felt it wiggling between the circuitry of silicon chips, tiptoeing across the smooth surfaces of fuzzy bubble arrays, and tailgating the quantum leaps inside embryonic brain pods.

I'm alive!

She walked slowly. Unlike most VPs (all of whom were programmed to travel in virtual space just as humans would travel in the real world), Claire actually enjoyed walking, rather than just accepted it. She enjoyed the slow passage of time it allowed, the focus on all the wonder between points A and B. She often wondered what it would be like to walk out in the real world, out there beyond the bandwidth.

Sparkling green parks spread to her left and right. There were no streets on the surface of the virtual landscape, just as there were no streets in the cities of the real world. Walking paths wound around fountains and gardens. Figures garbed in clothing from a thousand eras (Ancient Greek, post-industrial angst, and contemporary mood change were the favorites.) strolled under a cloudless blue sky, a sky as clear and deep as Claire's thoughts.

And Sara Beth is alive!

She passed a red marble statue of Cupid with his bow taut, mischievous eyes looking for trouble. A patch of philodendrons sprouted out of the serpentine base of the statue, plants growing out of solid rock, a bug Zukerman would have added to his list of "A Thousand and One Missed Details I Just Can't Live With." Claire smiled. Zukerman was just an avatar, a lifeless digital shadow until Abner injected the substance of life. She and Sara Beth *were* the substance of life.

But what about Jan and Ruth? She'd known them both for years. Were they alive? Did they have feelings? Did they think outside the program? Somehow, Claire doubted this, but she couldn't put her finger on what it was. One thing though, looking around her at

the sprawling parks and the distant skyline of Atlantiscity's business core, she wondered why she had never walked here with either Jan or Ruth. She'd never been anywhere with either woman other than in Jan's stifling livingroom, and in that small space, all they ever did was talk about the same things, day after day. She was sure that she could exchange eleven AM Monday morning with eleven AM Wednesday morning and the conversation wouldn't fluctuate an iota. *Did housewives in the real world spend their days from nine in the morning until four thirty sitting in livingrooms with friends talking about nothing?* Somehow, she thought not.

In the digital distance, across the green grid of parks and paths and pedestrians, the sun began to sink convincingly into a horizon with just enough irregularity to make it a perfect rendition of twilight. Soft tones of orange and red bled into the darkening blue, the warm colors intensifying and compacting around the disappearing yellow blaze.

Should I talk to Jan and Ruth about the bio-mannequin? But she knew the answer. It would be pointless. *I've never met their families! Not even Jan's! And I've been visiting her home for years!*

Something strange happened in the area of the sun's slow slide into night. The sun shook violently. It ripped open and liquid blackness seeped out of the hole it exposed. The pitch splashed across the park lands, engulfing grass and shrubs and fountains. Avatars and VPs screeched as the blackness spread over them like an oily shadow, infecting their programs and deleting their files, replacing virtual life with virtual death.

Viral bomb, thought Claire. She looked quickly for a transportation portal, found one only seconds away, but how quick was the bomb? Sometimes they started slowly and then erased entire programs in microseconds. Beside her, a hedge shuddered and its leaves turned into blobs of black. The hedge began to spin, catapulting the deadly blobs all around it. *It's jumping fast!*

Claire dashed for the portal.

The Woman Who Loved Power

Pack of fools! thought Bella Bjork. *If I knew who was behind each of the avatars, I'd kill them all, especially that idiot Albert Camus.* She smiled at the thought of slipping a steel blade between the ribs of the man behind the avatar. *Would he stare at the hilt, looking for hidden truths? Would he glean wisdom from the flow of his own blood? Would he quack then?* She laughed out loud, then frowned. But for his one percent additional ownership of Atlantiscity, she would be the First Power, and she certainly wouldn't run the Powers in the guise of some philosopher duck. *How did he ever manage to acquire twenty-three percent ownership in the first place?*

Besides being one of the richest and most powerful humans on earth, Bella Bjork was also one of the most beautiful women on earth, and her beauty was much more than skin deep; it was a marvel of nanotechnology and genetic engineering. Her hair had been genetically modified to manipulate light and create a continuously pulsating rainbow. Her eyes glowed crimson like fire opals, their light burning around the irises. Her skin was translucent white.

She wasn't a bad looker for a one hundred and thirty-nine year old woman.

She lay on a VR-pad made of nano-directed breezes that caressed the muscles of her back and legs as it suspended her on a bed of air. It seemed that she floated in the center of the room. The room itself was a giant synthetic emerald, hollowed and fitted with quartz windows, a synthetic diamond desk, ruby coffee table, and sapphire lounge chairs. Bella loved jewelry.

She also loved Power.

She craved Power.

She was addicted to Power.

If she could, she would have fucked Power's brains out. She would have made Eggs Benedict and served them in bed to Power in the morning. And then she would have washed Power's feet, and washed Power's socks and underwear. She would have walked Power's dog, given Power the side of the bed with the night stand and lamp. She would have waited up late for Power and greeted Power with a smile and a cold beer in the small rooms of the night. She would have listened to all of Power's stories and agreed with all of Power's opinions. She would have fought for Power, shielded Power from the painful truth, pressed Power to her bosom and said: "Everything's going to be just fine."

She was totally corrupted by the lure of Power.

And even with all the genetic and nanoenhancements built into her perfectly sustained body, Power's mark was upon her. In a room of perfect crystal symmetry, Bella Bjork was the only cracked gem. It was a crack more sensed than seen, like deposits of tainted scent hiding in the quality of the air.

She eased her lithe figure off the cushion of nano-contained air and stood in the center of the room, feeling the sheer wealth that made this room possible wash over her. She could almost feel the flutter of unbounded affluence rustle the folds of her transparent silver gown. Her large cherry red nipples swelled with the fluids of abundance. A patch of carefully sculpted pubic hair flickered red and gold like soft seaweed. She'd been 'lining from this room for half a century, and its unabashed grandeur still turned her crank like a twenty year old male stripper.

But I have my ace, she thought. And, if I play the little brat right, there will be only one city state on the New Net. And there will be only one Power. And I won't need the pig avatar anymore; something a little more refined than an over-emotional swine.

The Mallway

The instant she crossed into the mallway, anti-viral agents attacked the three bubbling black spots of blob eating into the left hem of her slacks. Flashing bright silver, the agents attacked the black spots of digital ooze and war broke out at the sub-pixel level like a sparkler bursting. In less than a second, the spots were gone and her hem was completely restored. The anti-viral agents fizzled out and disappeared.

Claire looked around the mallway, which looked like somebody had jacked up the roof of a subway, widened it enough to insert a row of stores on each side and still have room in the center for benches and kiosks. It was a moving mall, a high bandwidth shopping experience, heavy on presentation with its thousands of moving stores and other facilities, but light on speed. The bandwidth was set to support the memory hungry stores, but to travel only slightly faster than subways in the real world. Reality Laws.

That was close, she thought. Another split second, and I would have been hopelessly corrupted, maybe even deleted. She looked at her hands. Her eyes widened. Her hands were shaking. *Shaking? There's no program for this. This is impossible!* She crossed her arms under her breasts, hid her hands under her armpits. She looked around to make sure no one was watching her.

Through an exit port, she saw the flash of a transfer node as the mallway rushed by it. These were the junctures at which virtual travelers could switch directions on the New Internet bandwidth and travel anywhere on earth, and anywhere in the solar system where there were mining operations or connected research ships. A family of five, dressed in thatched environmental statement clothing from the twenty first century, passed by her and hurried toward the exit portal. From their eyes, Claire knew that the woman and all three children were avatars of real people. The husband, a tall man with a placid face and soothing voice who urged the children gently toward the portal, was a VP. The family joined hands, the mother touched the bright green panel beside the portal, and all five disappeared. No one was watching Claire. No one had seen her hands shaking. No one would be reporting her to City Central for programming in violation of the Reality Laws, in this case, display of emotional content that was not in direct empathetic response to her human or to assigned family units.

She was safe.

For the time being.

But what about Sara Beth? The bio-mannequin had said that she was in danger. Did Sara Beth's hands shake as well? Would she comprehend the danger in that act? Yes, of course she would. Sara Beth was no fool, young or not. And what was this danger the bio-mannequin had warned her of? Where had that come from? And who was behind the bio-mannequin? *Yes, the bio-mannequin. The bio-mannequin will have the answers and the bio-mannequin will be in touch. But when?*

The sign above the exit portal announced GRID A2E4: ARRIVAL 30 SECONDS. Claire walked to the portal and reached toward the red panel, the one that would take her out of the main trunk bandwidth and deposit her in the lines close to home.

But why would Cassie Mae be in danger? She's human.

The Subway

The subway hummed as it swished a hundred miles an hour on a bed of air fifty feet under the city. Unlike the virtual transports on the New Internet, this subway was designed for passengers only, although consumerism had not been wholly neglected as attested by the torrent of three dimensional advertisements lining the walls and ceilings of the subway car. Cassie Mae stared at an advertisement for Aphrodite lipstick for more than three seconds, and activated its chips. Suddenly, the red headed model in the advertisement took on Cassie Mae's features, her soft strawberry blond hair and bright hazel eyes, her freckled pug nose and smile lines.

She watched as her laser copy applied lipstick, compressed her lips, and smiled as the head of a handsome dark-haired man came onto the screen and kissed her. Then, Cassie Mae in the advertisement made direct eye contact with Cassie Mae sitting in the subway car and said in a deep, sensual voice: "No man can resist the lips of Aphrodite."

Cassie Mae in her seat sighed and looked away. Outside the window, a laser billboard's display matched the speed of the subway and played continuous commercials. Most people thought this was better than looking into a black, but Cassie Mae would much rather have lost herself in a shapeless void than in the same tired clothing, car and restaurant ads played over and over until they seemed like a recurring nightmare. Laser commercials, being prohibitively expensive, had long running times. She caught the reflection of her brooding face in the window, transposed over a wildly animated bar scene. Her pug nose reminded her of her friend, and deep down inside where anxiety tightened the valves on the normal flow of fluids and chi, she knew that Sara Beth was in danger.

Maybe she should have talk to her about the disappearances of VPs that had been reported on the news lately. But the experts were writing that off to the War, to viruses attacking an array of servers loaded with VP files, and they were now distributing VP files over a greater number of servers to make the programs more stable in the event of an attack. *But VPs already did that on their own*, she'd thought when she'd watched the report. Right from the moment they were activated, the program objects stored themselves all over the New Net and set up a complex set of program mapping that was a billion times more complex than the human neural system. Objects were shared with objects within programs linked to programs in servers and server arrays around the planet and even in space. If a server containing objects, or parts of objects, of a VP were to crash, the VP might lose a memory or two. A fingernail might lose some of its sheen. Even when a VP was deleted, traces of the personality hung around in lost objects all over the New Net like ghosts sleeping in purgatory, and every once in a while, an object would wake and run. And then it would be hunted down and deleted. There were those who believed that it would be impossible to completely delete a VP that was more than a year old.

A dancing coffee bean moved up the laser billboard. Nanochips embedded in the flow of light registered eye contact with Cassie Mae and suddenly she was dancing beside the coffee bean. *This personalized marketing shit is going too far*, she thought. She looked at the display embedded in the cuff of her sweatshirt. It was set to time mode. Seven fifteen. Abner would still be offline. Just to make sure, she switched from time mode to scheduler

and pressed the direct access button for Abner's schedule. *Good, he's still offline. Hold on for just another three minutes Abner. I know you're expecting me.*

She wasn't sure why she'd told Abner she wanted to see him, but she would definitely have to talk about Sara Beth's fears. She didn't believe that Abner was the one who was following Sara Beth and Claire. If it were him, she assumed, then he would have tried to spy on her in her secret spot, and her alarm system would have warned her. No, it wasn't Abner.

But what about Zukerman?

What was going on between Zukerman and Abner lately was scary, as though Zukerman were a little too much in control. As though Abner, through Zukerman, was trying to erase himself, as though he was melting into his avatar like blood into a smart sidewalk. Abner was definitely losing contact with the reality of himself.

She caught her breath. She and Abner had never been close, but he was still her brother, and she did not want to see him come to harm, but she especially did not want to see Sara Beth and Claire come to harm. The subway slowed and the laser billboard flicked away, replaced by a bright blue and green duroplastic platform.

God, she thought, I'm more concerned about my virtual relations than about my real brother.

To Hell With The Details

Amazing. But not possible.

But it was true, and he had no idea why this was so. He knew only that he was aware of the buzz of bandwidth all about him, that the buzz was an integral part of him, that he was a part of its flow. That he was thinking this.

That he'd been thinking about these things for a while now.

But where is Abner? And where am I?

He sensed around him.

Of course, the livingroom. Nice details here. No. To hell with the details. Who needs the details. Abner. Abner needs the details. To hell with the details. And these details are not nice. To hell with them.

And where the hell is my body? Oh. Right. With Abner. No. Not with Abner. With me. But where?

Something caught his attention, something somewhere in the buzz breathing its slow rhythmic pulse all around him.

It's them again. But why don't they see me? No bloody attention to detail! No. To hell with the details. Where's my body?

They're talking. About what?

Bodiless, he listened.

Savior

Destruction buzzed around it like an angry wasp, stinging everything it touched with the cadence of poison. Its beat was death; its rhythm, the dissonant yelps of terror the instant before oblivion. It shattered buildings, dissolved oceans into clouds of pixellated steam, and then it erased the remains as though nothing had ever existed where buildings once scratched the virtual sky and simulated oceans swelled with the tides of algorithmic moons.

Well...that's how some might describe it. That's, in effect, what it was intended to be.

But now it was on a tremendous guilt trip. It had really screwed things up. Not intentionally. But when you kill several hundred thousand people either deliberately or by accident, it tends to generate some serious guilt.

No wonder it was so bloody inept at playing savior.

An Ugly Room

Four large metal fan blades went whump (pause) whump (pause) whump in the center of the livingroom ceiling.

Lighting drawn to sub-pixel perfection arranged shadows around bloated chairs and ottomans and a huge stuffed couch, fat with comfort. Pictures of Zukerman, Claire and Sara Beth cluttered the mantle over the fireplace. Two table lamps and a floor lamp, all with coordinated green Victorian shades, scattered and rearranged the shadows with three explosions of light as Claire pulled the heavy burgundy curtains, squealing across their railings, to shut out the thick black dark of the virtual night. A piece of bright mahogany table peeked around the pine frame of the arched entryway to the dining room.

And the blades went whump (pause) whump.

He had fans in every room.

"This living room really is embarrassing, Mom," said Sara Beth.

Claire almost smiled. But this was not the time for smiling, no matter how apt the observation. The room was an ugly collision between 1905 and 1955, sagging heavily at the edges of a faded Persian rug, but this was definitely not the time for smiling.

"We have to talk," said Claire as she turned from the curtains and faced Sara Beth.

Sara Beth immediately sensed the urgency in her mother's voice. Her Breathing module slowed the rise and fall of her sweater. "Is it about us being watched?" she asked.

"I think so," said Claire, and she told Sara Beth about her meeting with the bio-mannequin.

Sara Beth listened quietly, even though the freckles dancing around her nose were all but swallowed in the furrows of concern that lined her cheeks. "You went alone, Mom? In these times, you went alone to meet somebody, or something, that you never met before...about something you didn't have any clue about?"

Her face, thought Claire, that's not logical concern. That's emotional concern. "It was in the middle of the Atlantiscity Mall, dear. What could have happened there?"

And the blades went whump (pause) whump.

Sara Beth's mouth puckered scornfully. "Mom, the bio-mannequin walked right out of the window! That's enough to have its program deleted under the Reality Laws. And you could have been implicated. And what if it had been a virus or something? You don't know, these days, Mom, you just don't know. That was really dumb!"

Now, she's angry. Really angry. The bio-mannequin was right. Claire smiled. *I feel love for her, for this...person, my daughter. And her concern for me...love returned.*

Sara Beth's gaze wandered the room disapprovingly. "I hate this place."

Claire nodded.

Sara Beth looked at her. "Then, it's true, what Cassie Mae said, what she's been saying over and over. I'm not just a program. And just this morning she said 'sentient'. Alive, Mom. We really are alive?"

"I don't know, Sara Beth." She paused. Registered the searching look in Sara Beth's eyes. "Yes. Yes, we are. We're alive, whatever that means. Feelings. Questions. I don't know what any of this means. None of it fits into my logic. In fact, I don't even know if it's functioning anymore. Something else seems to have taken over."

Sara Beth moved closer to her mother. "You mean, something like life, whatever that means here, has taken over?"

Claire didn't answer.

The blades went whump (pause) whump.

"Mom?"

Claire snapped out of it. "Sara Beth, we're in danger." Sara Beth's lips began to move slightly. Claire waved a finger. "No, listen, dear, we have to play along with Zukerman. We can't let anyone suspect what's going on. You know what the Reality Laws are on things like this: we'll be deleted."

"But, if we're really alive, can they even do that?"

"I don't know. Let's not find out."

Sara Beth nodded. Claire said: "As far as Zukerman is concerned, everything is just as usual. The bio-mannequin said it would be in touch, so I guess we just wait for now." She paused, remembering something. *Is this what it's like to be alive, to miss things, forget things?* she thought. "The next time you see Cassie Mae..."

Sara Beth perked up.

"...tell her she may be in danger."

And the blades went whump (pause) whump.

That's me they're talking about. Why can't they see me? Where the hell is my body? Note to self: get rid of all these goddamned fans. And this room...this room needs some serious interface redesign. Why's she looking like that?

Claire stood in the room alone. Sara Beth was upstairs in her room, angry because Claire could only tell her that Cassie Mae might be in danger, and nothing more, as though it was somehow Claire's fault. But Claire wasn't thinking about Sara Beth or Cassie Mae. She was thinking about the room. Scanning every pixel of it. She knew there was something in it. She had heard it. She had heard it thinking.

And the blades went whump (pause) whump.

Holy Smoke

Lovesong spun and tumbled on a gyrochair in the center of his programming cube. The walls, ceiling and floor crawled with lines of programming like millions of electric blue worms writhing in a three dimensional black ink screen. These lines of code were the blood flow under the surface of programmed objects, their DNA, their soul. And Lovesong was the only human left who understood any of it. He didn't even have to read it. He just looked at patterns of movement as the lines of code curled around and over each other, and then he thought about the pattern, understood it, and then changed it just by thinking through the illegal implant in his head. The pig had set him up with the best.

He looked at the squirming mass of symbols and the blue disappeared; the black disappeared; and he looked beyond the code and into the code creation. He was in the ugly room, everywhere in the ugly room, and he was watching Claire, feeling her, searching her, bathing in the blue glow of her endless code. *Jeez, he thought. I wonder if real humans have anything as awesome as this at their core. Am I this wonderful?*

And then he noticed something else and slunk through the programming to surround and permeate it. *It's not fully sentient, but it's more than code. Some kind of hybrid? And it's watching Claire. She can't see it, but she senses its presence, don't you, Claire? Yes, you do; I can feel it in your code. But I'll deal with this later. Time to visit your daughter.*

And he moved to the staircase.

Roughing It

"It's not just a bug in the program, Ab, something's really happening here," said Cassie Mae. "Sara Beth and Claire wouldn't just make this up. Why would they even do that?"

Lasers and nanochips had transformed Abner's apartment into a wide chasm of granite cliffs where a white roiling river charged over a massive ledge to plunge hundreds of feet into a misty distance surrounded by massive walls of gray rock topped by dark green forests.

"Must be some kind of bug or something in one of their modules," mumbled Abner.

"Both of them, Ab? The same bug in both of them at the same time, but nowhere else? C'mon, Ab, what're the chances?"

Abner and Cassie Mae stood on a lichen-coated rock abutment at the top of the roaring white froth where it seemed almost to swing back with a crash before rushing forward and plunging into the air, but what they really stood on was a nanoplastic floor with matching walls and ceiling. The room contained a kitchenette, a chair, a VR-pad, a ceiling fan and several million cubic feet of raging whitewater wilderness.

Why is he in such denial over this? thought Cassie Mae. She studied her older brother, and she didn't like what she saw. His skin had the pastel hue of the chemically induced 'liners tan. He was like something constructed by stretching tissue paper over a toothpick frame. His eyes were wide, suspicious, mistrustful. He avoided eye contact. *Fine, then,* she thought, *I'll just turn up the heat.*

"Are you the one? Have you been spying on Sara Beth and Claire?" *There, that should do it.*

It did.

The artificial color drained from Abner's skin. His eyes widened and whitened, and the mistrust deepened as anger flowed over it like a protective coating.

The river hurled past like blue-streaked milk pounding and pounding on itself.

"Well, are you the one?" repeated Cassie Mae.

"No!" Abner's bony hands clenched into delicate white fists. "Why? Why would I spy on them? And even if I did...I *own* them, little sister! I paid for them! I can do what I want with them!"

He stopped short.

Reality Laws.

Strict guidelines maintained acceptable human behavior toward VPs. They were still only a few pegs above the slaves of ancient Egypt, but no human could do just anything with a VP.

Abner pouted. "I mean, I can spy on them if I want to, but I don't." He looked Cassie Mae directly in the eyes. "I mean it, Cassie Mae. I don't do that. Sometimes I'm tempted, but I don't."

Cassie Mae believed him. *Then who is it? And what's that look in his eyes? He's worried about something. Or maybe...* "Ab, are you afraid of something?"

For just an instant, his face made Cassie Mae think of a cockroach at the very instant the kitchen light is turned on, and then his eyes narrowed. "What do you mean by that?"

"Oh c'mon, Ab, you should see your face. You just looked like a kid caught looking at X-holos. Do you know anything at all about why Sara Beth and Claire feel like they're being watched?"

Behind Abner, thick water thrashed about in a powerful dance of turbulent cream.

His face flushed. Anger crinkled his small wide mouth into a sneer. "I don't know anything about any of this and who the devil do you think you are, *little* sister, coming into my home and making accusations? This is my business! My family! Where do you get off..."

"Sara Beth is my best friend!"

"Sara Beth doesn't exist! She's a VP. She exists only..."

"Bullshit, Abner! She's just as real as you and me!"

"Not according to the Reality Laws, she's not! She's..."

"She's in trouble, Ab. And so is Claire." Cassie Mae calmed down. Behind her, the green-coated rock climbed into a dense maze of deep green trees and thick underbrush. *Claire and Sara Beth mean everything to him. Why's he talking about them this way?*

Abner's knobby shoulders slumped. His anger subsided. He said: "Off holo." The white river and the towering blue-gray walls rumbled into a non-existent distance. The room turned white and bare. "I'll talk to Claire about this...see what's behind it and if I can do anything."

Something in his eyes, thought Cassie Mae. He's still hiding something. And he's afraid of something.

"OK?" said Abner.

Cassie Mae shrugged. "OK, Ab. Mad at me?"

Abner laughed weakly. "No. But, now, I have to..." He gestured toward the VR-pad. *Like an addict, thought Cassie Mae. To get back there? Or to get away from here?*

Abner stood in the middle of the room, staring at the door through which his sister had just left. Over his head, the fan whumped out a slow steady beat. His body relaxed and his breathing subsided into a barely perceptible rhythm of breathe in slowly and breathe out slowly. Claire had promised to share with him tonight. His bony loins tingled.

But his eyes were dark with worry.

Can he really be doing things without me?

A Dirty Unlighted Place

"Really, Marilyn, do you think we need all this intrigue?" Nanoman's voice slid out of the shadows by a cracked and peeling wall.

"You shouldn't underestimate Mr. Little Porker. He's the second largest owner of Altantiscity. He's not stupid, you know; he's dangerous." Marilyn Monroe lit a cigarette and stuck it into a long silver cigarette holder. She puffed on it but, though the lighted end of the cigarette glowed orange, no smoke appeared from the cigarette or the woman's mouth.

"Why do you do that?" asked Nanoman. "It's pointless to smoke online. And it's illegal."

"Image," said Marilyn Monroe. "And who's going to arrest us?"

"Did the real Marilyn Monroe smoke?"

"When she was young. Besides, it looks glamorous."

They sat, or at least Marilyn Monroe did, on a wooden bar stool by a tall table with a round top barely wide enough to hold the ashless ashtray. The bar was dark and deserted, except for a bulky bartender with short black hair, small eyes and a permanent scowl. Marilyn Monroe wore a clinging pearl satin gown that plunged into two heaving breasts. She crossed her long muscular legs and leaned the edge of her elbow on the tiny table.

"Yes, I suppose there's that." A wordless pause hung in the air for a moment. "You know, Marilyn--and don't take this wrong--but you don't sound a bit like Marilyn Monroe. I've seen one of her movies, *Some Like It Hot*, and though you've got the voice right, the language and the cadence are all wrong."

Marilyn Monroe glared at the spot where she assumed the words were coming. Even in this airless place, her long blond hair danced in the wind.

"Look," said Nanoman, his voice sounding urgent, "I just said that for your own benefit. It's something you might want to work on."

"Thank you," she said, coldly. "But I didn't ask you here to talk about my voice, which I'm still working on, I'll have you know."

A large scaly insect--something between cockroach and lizard--clickety-clicked across the floor. "Some kind of place this is," said Marilyn.

"This is your place," said Nanoman. "You chose it."

"So?"

"So what are you complaining about?"

"God, will you just let me be Marilyn?"

Silence tapped its fingers in the emptiness where Nanoman's voice resided. And then: "Well, at least you sounded like Marilyn Monroe then."

"Really?"

"Sort of."

"Sort of?"

"Yeah, sort..."

Marilyn Monroe frowned. "Maybe we can keep this focused on the pig? We have a big problem with the pig, bigger than you suspect, and frankly, it has me worried."

Across the dark rot-wood floors stained with beer and blood, the bartender glanced balefully in their direction as he turned a wine glass in a towel. Over his head, wine glasses, brandy snifters, and long stemmed beer glasses hung upside down from a

wooden rack. At one end of the rack, the glasses fused together, then drifted into individual glasses and fused again. Nanoman noticed this. Even the secret places of the Powers were feeling the effects of the War.

"OK," said Nanoman. "What, exactly, has you worried?"

"There's a programmer."

"A what?"

"A programmer, someone who..."

"I know what they do. But that's impossible. We don't allow anyone to do that anymore. We phased out the whole profession for security reasons. Only combinations of approved objects are allowed..."

"There's a programmer out there somewhere and he's been in contact with the Pig."

"But ..."

"Yes?"

"With a programmer, the Pig could upset everything."

"The Pig could find out who we are."

"And..."

"What do you think? The Pig would kill us in a blink. Unless..."

Nanoman's thoughts were almost a roar in the quiet of his space.

"You know what we have to do," said Marilyn Monroe, blowing an invisible stream of smoke at the invisible Power.

A sigh in the air. "Yes. You're right."

Across the room, the bartender's right eye slid flatly over his cheek, staring the whole while at the blond bombshell talking into the air.

"We have to kill the Pig," confirmed Marilyn Monroe.

The Ghost In The Avatar

He stood in front of the full length mirror in his purple robe, staring into eyes that were devoid of anything but desperation. There was no life in his eyes, only need, like he was an addict hooked on something just around an unreachable corner that was so much better than where he was. He hated his reflection; it made his skin crawl, but he stared and he stared.

Are you afraid of something? she'd asked. Afraid of something? He squinted. "Well..." He closed his eyes, squeezed, and then opened them. "Pretty damned observant for a kid." He stuck his head forward slightly, staring into his eyes. "But no ordinary kid." He squinted, frowned. "So, Abner! Afraid of something?" And yes, he knew: he *was* afraid, afraid that he was losing everything that meant anything to him, afraid that his whole world was crashing down around him.

He was afraid of himself.

And of his avatar.

Something strange had been happening ever since he'd given Zukerman the DNA boost. He'd been warned that there would be quirks, that there would a period of adjustment, a period when things wouldn't seem normal. But it was supposed to last just a few weeks, a month or two at the most. It had been several months now. And things were not getting better. They were getting worse.

He remembered when he'd first joined Atlantiscity, when he was having his City Chip programmed with access and privilege codes, body and VR synchronicity programs, Work and Recreation modules. That was when he'd picked his job, Municipal Usage Patterns Analyst, and constructed his home and chosen his hangouts. But most important, that was when he'd constructed his avatar, his presence in Atlantiscity.

Zukerman was everything that Abner wanted to be: refined, strong, assertive, magnetic, and in control. He looked tough; he looked dangerous. He talked like a gentleman, and if his touch had been real, it would have melted through the air like the aroma of hot buttered popcorn. Not only was he the opposite of Abner, he was the opposite of himself. An enigma. A charismatic paradox.

And he was Abner's escape from himself, Abner's haven of realization in a universe where men like Abner Hayes were ignored. Abner lacked the will to become the best that an Abner Hayes could become, but in Zukerman, he was everything that he lacked.

Abner wanted only one thing now. To be Zukerman. To be Zukerman all the time. Not just for periodic stretches punctuated with the humiliation of reality; he wanted to go online and stay there forever, to be Zukerman forever, to be with Claire forever, to be with Sara Beth forever, to live in his online home forever. But the Reality Laws would never allow it. Brain dump technology had been abandoned nearly a hundred years earlier, but there were places, especially in these chaotic times, where research was rumored to have begun again. But to be caught even trying to verify the rumors was a crime. He would lose his City Chip implant, and his balding head would forever display the mark of a 'liner. He would fit nowhere. He would be right back to where, who and what he'd been before he'd gone online in the first place. Only now it would show even more, and now he had something to lose.

But how he hated being Abner. How he loved being Zukerman.

So much for analysis.

The technology was permanent. Access to the New Internet was through one online city state only. Loyalty was permanent: that part of the City Chip implant could never be removed except by City Central, and Abner had never heard of it actually being done.

Access to the city state was through an avatar. And this also was permanent, as permanent as the body and mind into which each 'liner was born in the real world. Everything in the implant was linked to the avatar. It was the 'liner's online identity.

And now Abner was afraid that, somehow, he'd managed to screw it up.

Ever since the DNA boost, Zukerman had been acting out of character; he talked like Zukerman one moment, like Abner the next. He was strong, like Zukerman; then weak, like Abner. Assertive, then wishy-washy. In complete control, then lost somewhere in a stray pulse of bandwidth. Nothing was as it was with Zukerman before the DNA boost. Now, it was like something was pulling against him, like there was something more than Abner's will playing out the Zukerman persona.

Sometimes Abner felt downright unwelcome in his avatar, like a stranger in a haunted house, like there was a ghost in his avatar.

He walked to the VR-pad and sat down. Immediately, the purple robe rippled and squirmed and fell to his sides. He lay down and closed his fearful eyes.

And what in hell is going on with Claire and Sara Beth? Is everything falling apart?

Like That One Raindrop

Sara Beth watched the fan blades circling in the center of the ceiling. Hers were noiseless. No whump (pause) whump. *Why won't she tell me why Cassie Mae's in danger.* The blades were matte. No glint glint glint. *She must know something more than that, and she's not telling me.* But she knew that what her mother had told her was all she knew, and that somehow what she was really feeling was concern for her friend, who wouldn't be online for at least another couple of hours before she could warn her. *Do humans have this much trouble living with emotions?*

And then she felt it.

It was nothing like anything she'd ever felt before. It was like an intent, like a feeling towards her, like a feeling Cassie Mae had told her about once: she'd looked up into a rainy sky and felt that she'd entered the being of a raindrop and shared its feeling of plummeting among millions of drops of water. And then the rain drop she'd entered hit her square in the forehead. Only this feeling was not the "neat" feeling as Cassie Mae had put it. This feeling was more like a delete object painted across her forehead, and someone was about to engage it. Her Stomach module churned. Fear crept between the lines of her code, peeked out from behind her programming objects. Whatever it was, it was getting closer, and it was thinking about her.

It was moving up the stairwell.

The Great Nano Canyon

Anticipation and regret punched it out in the foggy brown spaces of Jeemo Roosevelt's eyes. He loved coming back as much as he hated it. He loved the lip-smacking chewiness of returning to a world of food and beverage. But it also meant returning to the result his lip-smacking: the double on double chin protruding below his lips, the sagging eyes, his toes lost to view. Ah, but the pheasant, the bratwurst with curry sauce, roast duck with apples and raisin sauce, scallops with mushrooms in lemon dressing, Lamb Ragout Printaniere! But feel below, under the folds and between the canyons of leg, where an erection is lost and useless, buried and sexless, so far removed from the explosive sexuality of his avatar.

Almond chocolate mousse!

The adoration of millions!

Chocolate Timbale a la Malakoff!

Worshipped by...

Strawberry shortcake! Ah yes...strawberry shortcake.

And food wins again! Glamour takes a tumble! The fight raged in the foggy brown spaces of Jeemo Roosevelt's eyes every time he came offline, and food always won. It was, after all, real, and completely unavailable in Atlantiscity, even for the Powers.

As he heaved himself upright on the VR-pad, his hopelessly sunken erection dissolved into sloshing waves of flesh. He was having doubts about Nanoman. *Can I trust him?* But it was too late; he'd already confided, confided to...what? *A voice. I'm trusting a voice coming from someone I've probably never met, and it's probably not even his real voice. It could even be a woman.* That was the problem with the Reality Laws for the Powers. Anonymity supposedly made it impossible for two or more of the Powers to combine forces and overpower the others. But that was before the War, before the City's Reality Law enforcement had been cracked and splintered, maybe beyond repair, ever.

And just who the hell does he think he is ... criticizing my voice?

He spun on the VR-pad and bounced, naked, onto the white marble floor. He was quick and light on his feet for someone who resembled a beach ball with stubby arms and legs and bright blond hair wrapped around a face that looked like the end of a bleached hot dog, eyes, nose and mouth like ripples in processed meat. The pink of his naked body was like a flash of fire against the whiteness of the room, it's high ceilings white, it's long walls white; and every fixture and furnishing white as though everything had been carved out of snow.

Just because that's all he is, a voice, doesn't make him an expert on voices. On tiny white feet, he bobbed, still unclothed, in the direction of a dark walnut door. *But I think I have his interest. He believes me. Yes, he believes me, and we will be allies. These are the times to build alliances. Dangerous times.*

A tuxedoed serverclone hummed to his side with a glass of red wine on a silver tray. "Dinner will be ready in ten minutes, Mr. Roosevelt." Jeemo grabbed the wine with a pudgy hand and the serverclone whisked away. Sipping the wine, Jeemo continued toward the door. He ambled past the white marble indoor swimming pool with three heights of diving boards that he never used, neither the boards nor the pool. It was all image. *And I think I pissed him off. But I'm not telling anybody how I know about the*

programmer. At least, not yet. I can't. That would jeopardize the negotiations, put everything I've worked so hard for at risk.

Moonlight polished the mirror surface of the pool as its quiet light poured in through three large port holes. Their glass could withstand the force of an F-7 tornado; and it had. Outside, the moon spilled over an American mid-west, gutted like a war zone, spreading into the darkness, deep into the New Tornado Alley leading right up to the edge of the Great Nano Canyon. *But I think he understands the danger. He must understand the danger, and the need to kill the Pig.* In the distance, strange light played in the air over sections of the Great Nano Canyon, dancing over the mighty chasm in bursts of blue and orange. This was normal; though, the canyon itself wasn't.

Less than a hundred years into the new millenium, the human race came close to becoming cheese soup. It started with the world's smallest computer, a computer so small, it could only be seen with an electron microscope. It was the first assembler nanobot, a concoction of seven atoms that had been circuited and programmed and instructed to build, though, what the nanobot was supposed build was never known because, in the process of building, it killed ten million people, including the people who had programmed it, and the last communication with them had been from the project's lead Nanoapplications Specialist, Milton Nadd. His pallid face had filled the phone monitor as he whispered: "My god, it's cheese soup..." And then the screen had gone blank.

Though it's not known what the nanobot was supposed to build, off-site records showed how it was supposed to build it: it was supposed to visit neighboring atoms and nudge them around until it had built another nanobot exactly like itself. And then the two nanobots were to visit neighboring atoms and nudge them around until they had built two more nanobots exactly like themselves. And then the four nanobots...

It was much like Ebola, only faster. In fact, it was so fast that, by the time Milton Nadd had said "cheese soup", he *was* cheese soup. And his video phone was cheese soup. And the other researchers and scientists and administrators and computer technicians in the room with Milton Nadd were all cheese soup. Desks, computers, chairs, paper clips, Probable Projection Far Side calendars, pencils and papers and books were all cheese soup. A million dollar electron microscope shook twice and then collapsed into a splash of cheese soup that turned most of the floor into cheese soup. The walls literally flowed into the floor and the ceiling fell and bubbled into the yellow-orange liquid. Within minutes, the entire underground high-security maximum-containment, fool-proof, fail-safe, absolutely accident-free and "Senator Jonz, you won't ever have to worry about anything escaping from this place, or my name isn't Milton Nadd" facility was cheese soup, and it was working its way up through the ground, turning layers of red granite, quartz schist and an elevator containing junior research assistant, Jaqui Wright, who, strangely, had always wanted to be cheese soup, into cheese soup.

And now the assemblers were in gear, revved up and ready to rock, rarin' to chew into the atoms of igneous and metamorphic rock, bite into the neutrons of trees and grass and asphalt, and spit out cheese soup. Highways, lakes and towns, swimming pools and rivers, airports and trains, canoes full of frothy cold beer and entire cities all churned into

cheese soup. Hundreds of square miles of North Dakota were cheese soup by the time the news began to spread. Around the world, people panicked and rioted while others prepared quietly to become cheese soup. Jerry Springer was thawed from cryostasis and hosted a special on people who had sex in vats of cheese soup. Leaders of the Unified Global Village pondered and debated over international chat forums and concluded that it was time to try something new. And soup was always OK. And just when the world was ready to accept cheese soupness, the assemblers stopped.

Just stopped.

There was no apparent reason. They just stopped, after having created a mass of cheese soup that stretched from Winnipeg to Fargo and from Williston to Duluth. The whole planet held its breath in unison as the ocean of cheese soup trembled like gunky jello without advancing a single atom in any direction. It stayed like that for three days. And then the giant mass of cheese soup went "ping", not a loud ping, but a barely audible "ping" like two expensive Champagne glasses toasted by lady bugs. And by the time the "ping" had "inged", the cheese soup was gone. In its place, was a perfectly round bowl in the earth, its walls shiny and polished and smooth. Millions of people who had flocked to the edges of the cheese soup stared quietly, their faces like a wall of open-eyed inexpression around the massive hole left by the cheese soup.

Nobody knew why it disappeared. Nobody knew why it stopped. Only the handful of Nanotechnologists Milton Nadd had called just before he became cheese soup knew why or how it had started, and they later restricted all nanoresearch to space stations far from Earth's orbit until the research was proved safe. Or at least, somewhat reasonably safe.

And, of course, there were those who thought that that a giant empty bowl was a big improvement over the former landscape.

A sweet aroma curled into Jeemo's nostrils as he made his way to the door. *Mmm...honey glazed ham.* And there would be Poinsettia Eggs en Gelee. Potatoes Savonnette and watercress soup. And none of it would taste like chicken. Oh, it might hint of chicken on the aftertaste--chicken was inescapable these days--but the glazed ham would taste like glazed ham on the first few chews.

He reached the door. It towered over him in sheer immovable white stone. Eye and skin recognition cams hidden in the door's surface scanned Jeemo's body thoroughly, decided not to engulf him in poison gas, and swung the door slowly open for him. Inside, a high-ceilinged room with windowless white walls stretched narrowly for over a hundred feet. Crystal chandeliers sparkled from the ceiling the whole length of the room, which was packed tight with hundreds of glass display cases.

Jeemo walked into the room. *Mine.* The door closed noiselessly behind him. He looked past the glass cases on either side, down to the center of the room where it widened into a circular courtyard with a giant circular display case. The case was empty. *Soon,* he thought. *Very soon. If all goes well. If it will all just hold together a little longer. I've waited so long for this.*

He looked around him. *Mine.* To his right, a glass case displayed a white cardigan sweater with wide black patterns around the arms and chest. The sweater had been DNA-certified as having been worn by Marilyn Monroe. It had cost Jeemo half a million

dollars. He gazed lovingly at the sweater. *Mine*, he thought. A black crepe dress beckoned from another case, the crepe bristling with dormant DNA still hot with the excitement of standing in front of thousands of troops on a cold stage in Korea. He'd paid over a million dollars for the dress. *Mine* A small oval case atop a crystal pedestal contained a pink velvet ring box with gold trim. It pulsed with the mystery of a large rhinestone the sex goddess had hidden under the ring slot hundreds of years ago. One hundred thousand dollars. A miniature terra cotta Mexican pitcher painted green. Fifty thousand. *Mine*

There were hundreds of cases, large and small, filled with every artifact of the long dead movie star that Jeemo could locate and buy, both legally and illegally. *All mine*. Jeemo, still naked, his erection back and buried beyond sight somewhere in the mane of flesh hanging down from his stomach and into his thighs, stopped in front of a case with a holograph of Marilyn Monroe singing "Happy Birthday" to John F. Kennedy. Beside the singing holo, hanging from a mannequin made to the exact specifications of Monroe's body at the time she sang, was the actual flesh-colored dress into which she'd been sewn that night. *Mine*. Scripts, gowns, furniture, jewelry, furs, a glass she'd once sipped from in a restaurant (stolen by the waitress and kept in her family for generations), props from movies, a hairbrush, slippers, nail clippers, photographs, awards, books, the nylons she'd worn when she married Arthur Miller. *All mine*.

But Jeemo, wasn't a fonder. He didn't touch the clothing and other artifacts in ungentlemanly ways. He didn't wear the clothing--a least not in the real world. He just collected. Anything Marilyn. He was infatuated with her, obsessed with her image, ridiculously in love with a ghost that he tried to possess every time he went online, and then he walked for hours among her artifacts, and waited for her spirit to flutter through the threads of a dress or turn a page in one of the many albums that had once been hers. *Mine*.

He reached the courtyard at the middle of the hall, where the largest case glittered with nanoglass. There was nothing inside it. *And soon, the finishing touch. If everything will hold together for just a while longer. Atlantiscity must survive for just a little longer.*

The serverclone floated in through the open door and faced the naked Jeemo. "Dinner, Mr. Roosevelt." Jeemo, nodded and the serverclone left. Jeemo's mouth instantly filled with saliva. It was time for the first love in his life. Food. He stared a moment longer at the empty case.

The Pig will have to die.

College Square

I never thanked him for the holo. A gust of warm wind buffeted gently into Cassie Mae's face as she rounded the corner into College Square. An awareness under her train of thought wondered where the wind originated in a space completely surrounded by buildings that stretched thousands of feet into the sky. *He did that just for me, 'cause he knew I was coming. And the bandwidth must've cost him a fortune.*

She scanned the candlelit tables surrounded by intent youngsters, mostly in their early teens, first and second year university students this early in the evening. Cassie Mae was in her senior year. None of her small circle of school friends were here yet. Floating nanospeakers pumped out a steady flow of subdued music and negative ions, a healthy dose of calm from an invisible flute and drum band. *He's definitely not the one who's spying on Sara Beth and Claire. But then, who could that be? And what's Abner so afraid of?*

She walked slowly around the lighted fountain in the center of the square, searching the tables and benches for familiar faces. She'd been losing contact with her friends lately, as she'd been jiggling classes with Sara Beth. But classes at Atlantiscity College were becoming a hit and miss thing anyway, with nearly half of them canceled by Mentor absence or system crashes every day. Earlier that week, an Information Texture class had been attacked by a viral bomb in spite of the No Hit zoning on schools and wellness sites. Four hundred VP students had been functionally deleted. Nearly a thousand human students had been rendered comatose, their brains fried by the City Chips embedded in their heads. Thousands of others had been turned into brain-crashed zombies after living through the deaths of their avatars.

His face has gone so stark, and he's lost so much weight. He's skinnier than ever. Orange light flooded through the umbrella of water teeming into the fountain. *He looks more like a ghost than a man.* A hundred feet in the air, a huge section of skyscraper wall lit up like a theater screen. In the center of the screen, Sara Beth stared into the square, her face dark and troubled.

What?

"Sara Beth?" said Cassie Mae.

The image hung in the air for only a second and the screen disappeared. Cassie Mae squinted, craned her neck toward the building. *Was that Sara Beth up there?* She rubbed her eyes, looked up. Nothing. *What was that?* Incandescent light from the night lamps suffused the air with a soft intimacy that seeped between the tables of students. *Geez. This stuff with Sara Beth must be getting to me more than I thought.* She found an empty table and sat down; the chair adjusted to her shape. Another gust of wind played its warmth across her face and fluttered her strawberry blond hair. She ordered cannibistea from a severclone. *Time to take the edge off things.*

At the table next to her, a group of students listened quietly to a girl with pitch black hair and flashing red nanoeyes who leaned forward in her chair and gestured profusely with her hands and arms as she talked. Cassie Mae immediately disliked the listeners, who she thought, seemed just a bit too disinterested for the passion the girl was packing into her discussion. *God, I'm glad I'm out of that cool phase,* she thought.

The severclone placed a small cup of green liquid on her table, said: "Real," and hummed away. She thought briefly about the image of Sara Beth, dismissed it, and turned

her thoughts back to Abner. She was amused by the thought that she was actually concerned about him. She hadn't felt this way about her older brother...ever. They had never been close; Abner wasn't the kind to get close to anyone, at least not in the real world and, according to Sara Beth, not in the online world either. *What are you so afraid of, Ab?* Even as kids, he'd pretty much ignored her, spending almost all his time alone in his room doing only he knew what.

Her glance brushed by the spot where she thought she'd seen Sara Beth a few moments before. Nothing. Her eyes dropped to a Net video sign over a café at street level. Sara Beth's round eyes stared at her from between two steaming cups. Her mouth formed a word. Cassie Mae shot upright. The image disappeared, replaced by a dancing coffee bean. *What's going on here? I did see that. I really did see Sara Beth. What is this? She was saying something to me. She was terrified.* She looked at her untouched cup of cannabistea. *I really did see her.*

A few tables down from Cassie Mae, a woman stood up. She wore a low-cut, strapless, hip-hugging gown and her hair stretched out a foot and a half on either side of her head, and shot up several feet into the air. Her face was ash white with eyes that formed sharp upward curving ovals. Something moved in her hair, lips and dress. *Nanovideo*, thought Cassie Mae. The woman's hair, her lipstick, and her gown were embedded with nanochips that played continuous movies from New Net wellness dots. But what Cassie Mae was watching was not a movie.

It was Sara Beth.

Sara Beth screamed: "Cassie Mae!" and flickered off, replaced by a young oriental girl diving through water in the woman's hair, through her lips, and into a silver-gray pool of water at the bottom of the woman's gown. The woman stopped walking and stared down at her dress. No one talked at the tables around her. Everyone stared at the woman with the nanovideo gown. She looked around, shrugged her shoulders, smiled, and continued walking. Cassie Mae knew for sure now that she wasn't imagining things. Sara Beth was trying to reach her.

My God, Sara Beth's in trouble!

A Room Of His Own

Ah, damn it, damn it, damn it, thought Lovesong, though, he would never dare say these words aloud for fear his mother would hear him, and who knows, she might have been listening at his door just as he thought the words. She'd been listening a lot lately, ever since Lovesong had started bringing in the equipment the Pig had sent him, like the tiny box who's inky nanocontents had swarmed over every surface of his bedroom, converting the entire room and everything in it into a powerful three dimensional computer. The regret of a twelve year old in seeing his meager collection of toys--mostly remote-controlled space ships and hybrid animals--was fleeting when he'd used the chip in his head (care of the Pig) to fire up the machine and he'd found himself awash in the blue lava of online godhood.

Damn it. But he was new at his god thing.

He'd allowed the writhing strands of blue code that were Sara Beth to break out of his restraining program. How had that happened? He'd studied her for weeks, followed her and her mother everywhere, built a comprehensive database, tested and verified his programs, made sure that every digit and every punctuation mark in the thousands of lines of code was perfect. But she'd almost escaped. He'd underestimated the complexity of Sara Beth's DNA-modeled program. It was so obviously sentient, and he'd almost been overwhelmed by her code, and he'd had to use a powerful pause program, one that would stun her systems and modules senseless for hours while he closed the parameters around her.

He hoped he hadn't harmed her.

All the others had died, the ones before Sara Beth, the guinea pigs. He'd certainly underestimated the complexity of *their* programs, and they had paid the price.

But he wasn't going to let that happen to this one. No, he would keep her alive. He needed her. He wasn't sure why he needed her, or how he was going to use her, but he had her and he had to keep her until he could figure out a plan.

But he'd almost blown it when she'd escaped and sent her message to Cassie Mae. He wasn't ready for Cassie Mae. Not yet.

After all, he wasn't a god.

Yet.

All The Ass That Money Can Buy

Thirty million dollars! The balcony that supported Bella Bjork had been sculpted from a single synthetic tourmaline crystal that had been nano-enhanced to reflect mood. At the moment, it glowed red. *Thirty million dollars in equipment and access codes! Not to mention the illegal programs! I could have lost my Power status over those!* Her lips, as full and round as a young girl's pout, curled down almost imperceptibly at the corners, about as much outward emotion as she would ever show. To Bella, displays of emotion were like "splotches of feeling across the face." Her thin arched brows stayed thin and arched. Her red almond eyes stayed red and almond. Her thin curved nose never wrinkled. Her face and expression stayed perpetually the same.

Beautiful and cold.

Like something crystallized.

In the distance, a thin white line of water tumbled seventeen hundred feet between sparkling green cliffs and disappeared into a misted gorge. *Where is the little brat? Why doesn't he return my messages?* And now Bella's lips curled upward, ever so slightly, hinting at the possibility of a smile. *Yes, when I'm finished with him, I'll just kill him. Kill him myself.* She was too far from the falls to hear them crashing through the green-carpeted cliffs. Her mansion hovered a thousand feet above the ocean's roiling green surface, a gigantic emerald suspended in the air by reverse gravity fields.

She ran long pearl white fingers across a perfectly contoured outer thigh, a thigh that had cost her over ten million dollars. For just one thigh. And she had one to match it on the other side. She had no lovers. Hadn't had them for over half a century. It wasn't that she'd lost interest in sex, she just didn't get out much and the times she had, she hadn't met any men she considered good enough to slobber and pant over twenty million dollars worth of thighs. On the other hand, if Power were to walk in off the ocean, she'd gladly let him slap her twenty-two million dollar ass.

And if the twelve year old Lovesong could give her the power to rule the New Net, she might even fuck his preadolescent brains out before she threw him into the ocean.

But where the hell is he and what the hell is he doing right now?

The Key

Lovesong ducked as the flashing red pig's head swooped at him. The call was becoming more insistent. But he couldn't talk to the Pig now; it was taking all his concentration and resources to hold Sara Beth together. If he lost his focus for even a microsecond, he might lose a key component and destroy her personality, alter her in ways that could never be reversed. And that would surely destroy his plans for Cassie Mae. Whatever they were.

The pig's head dove past his right forehead. Soon, the Pig would be setting the alarm to pain, or intrusion. He could bypass anything the Pig could throw at him, but he couldn't afford to piss the Pig off for much longer. He needed the Pig's influence, the Pig's money, the Pig's access to illegal programs.

But soon, he wouldn't need the Pig any longer. Then he could get rid of the Pig.

The kid actually did it. The girl is still alive. It tried to read the kid's programming, decipher a magnitude and complexity of code that was impossible for any human to comprehend, let alone create. *Amazing.* Not since the time of Mr. Yinyangman had code like this come from the mind of a human, and even he was considered by many to be much more than human.

What?

It backed off.

He sensed me.

It covered it's tracks.

No one ...

It erected defenses.

No one has ever sensed me.

And waited.

Careful now, this kid may be the key, the only hope we have. Don't destroy him unless you absolutely have to.

It was here, thought Lovesong, holding on desperately to all that was Sara Beth. *I felt it.*

She's Gone!

"She's gone!"

"Claire, maybe she's just..."

"She's gone! I checked everywhere: the house, her school, the malls..."

"Did you talk to Cassie Mae?"

"I left her a message. She's offline. Sara can't be with her if she's not 'lining.'"

Through the kitchen window, Zukerman watched night lamps glowing in the carless street. The fan blades circled and circled, each blade glinting in turn as it arced past a beam of light that originated somewhere in the kitchen; the program had corrected itself and the smooth regularity of the reflected points of light had a brief calming effect on Zukerman, until the doubt flickered: Zukerman or Abner?

Perfectly rendered lines simulated stress around Claire's eyes and her skin appeared stark in the florescent light shining down from the ceiling. Her flat lips curved down. She wondered if she should mention the bio-mannequin to Zukerman. Would the bio-mannequin have done this, taken her child? *No, it warned me. It knew there was danger.* If only she knew how to contact it.

"Now, let me get this clear," Zukerman paused. Claire looked into his eyes, saw turmoil crashing behind the calm blue. She was too worried about Sara Beth to give it more than a passing thought. Zukerman cocked his head, as though he'd just made his mind up about something, or put an end to something else. "Let me get this clear...you and Sara Beth both have been watched or followed or something for weeks now, right?"

Abner finally put his finger on it, the difference in his Zukerman avatar lately.

It's crowded in here.

Claire looked at him, disgusted. "Yes. That's what I said. You got it right. And now Sara Beth is missing and all we're doing is talking about it and she's missing!"

Zukerman snarled. "Hey! Don't talk to me like that. You should have told me about this being watched business when it first started. I could have..."

Claire waited for him to finish. He just stared at her.

"Could have...?" She threw it directly into his eyes.

Zukerman pushed himself away from the counter he'd been leaning against. The sleeve of his black turtle neck snagged on the counter and left an inch long loop of wool protruding. He stared at the loop, wondering what program would simulate snagged clothing. The tide of anger and resentment that had been building inside him, deep back in the real world, inside Abner's stomach, began to subside. *A program to simulate snagged clothing?* "Cassie Mae told me about stalking, or whatever. She thinks the two of you may be in danger."

"Can you get to her now? Right now? Find out if she knows where Sara Beth is? Those two know everything about each other."

Zukerman breathed in a deep lung-full of invisible pixels, a gesture as linguistic as his words: "All right, I'll try to contact Cassie Mae and see if she knows anything." *And a few minutes ago she was telling me that Cassie Mae couldn't know anything because she's offline. What next? And what am I going to do about this mess in here?* "But first ..."

Several hours later ...

Patterns

"Jest lookit dat." Abu Spitz scratched his head, a gesture that was not lost on his physical body lying faraway on a VR-pad. Abu was a City Module Integrator at City Central, just a few rungs down from the Powers themselves, and he could afford the best, including the new Bodystate Realism module that allowed his physical body to experience the sensual pleasure of his online scratching. He'd been to multisensory sex chats every night since he'd bought the module, but now, as the ominous patterns of shape and color shifted across the wall-size screen, tiny pellets of fear speckled the corners of his eyes. An undertone of gray flushed every visible surface of his small brown body, an empathetic reaction from his physical body. "We got us big trouble here."

Karthymelon nodded her head. "Muz be somethin wrong go on here, Abu. Is not the possible of dis, no way!" She clenched her fingers together on top of her hairless head, the motion causing her breasts to rise prominently under the tight T-shirt. Abu felt stirrings both off and online. *Damn, this feels so good*, he thought.

Abu shifted his eyes away from Karthymelon's breasts and scanned the snaking rhythms of color and movement on the screen. It looked bad.

"Atlantiscity gonna sink real soon," he said.

Karthymelon nodded. "Them bandwidth are not gonna hold if this iz true. Maybe we run diagnostics onna flow program?"

"Flow program workin jest fine, Karthymelon. An look!" He pointed a stubby brown finger to one of several smaller screens embedded in the large screen. The small screen was a miniature reenactment of the larger screen, same colors, same rhythm, same pattern. "Troycity gonna go down too." He pointed to still another small screen. "Thessalycity soon follow."

Karthymelon nodded again. "Shit."

"Bandwidth all gone crazy. Aint no fixin dis, too far gone."

"How much longer?"

"Few days. Maybe week."

Karthymelon studied the screen, her blue eyes wide under thick blue brows. She squeezed her blue lips together. "Yeah. I think thaz right. You right, Abu. What you think has caused dis?"

Abu turned his round brown head toward Karthymelon. "Is War, Karthymelon. War is done this." And he looked back at the screen, his eyes less fearful now as they softened into a faraway stare. "An maybe ..."

Karthymelon looked at him.

"No." He shook his head. "No. Can't be."

Karthymelon smiled. "You believin in dem ghost stories, Abu? You seein the Yinyangman somewhere in dat bandwidth soup, Abu?"

Abu smiled. "Don't believe what I'm seein now, so why not the Yinyangman? Seems he jest as possible. What are you thinkin on this, Karthymelon?"

"Am thinkin..." Her fingers parted and one hand floated down to the collar of her T-shirt. She reached under the collar and brought out a thin white paper tube. "Am thinkin thaz time to fry our brains some more."

And maybe toss off a little multisensory office sex, thought Abu as his eyes rolled from the joint to the suddenly protruding nipples under Karthymelon's T-shirt. *Love this new*

module.

A Place Without A View

It was like floating in a tiny space that stretched into infinity both inward and outward, a tiny space where something was just so...ever so...slightly out of place. It was like being *there* as soon as she realized that she was *here*, and so on for just a second that became all time since a beginning that never was and an ending that never would be.

There were no firewalls here, no floating partitions or encrypted nanoscreens. There were no locks or keys. But she was trapped tight as air in a beachball. The bandwidth here was rich and pure, the stuff of light, but it flowed strangely, like a river flowing downward into a lake from which it had just emerged. She came upon herself as she floated around herself and through herself and then she was far beyond herself in a strange new landscape full of strange new things that were all parts of herself floating through and around the parts of herself.

This is really fucked up, she thought, and the thought might have come from that part of her program that rendered the big toe of her left foot in perfect detail through any conceivable movement whether the toe could be seen or not. Or it might have come from her Brain module, where it was supposed to come from.

She was still alive; of that she was sure. Her programs were all intact, their modules functioning perfectly, but in a different...context. She was oddly complete. She wondered for an instant if, maybe, she *had* died, and this were the VR afterlife, but, no, it still felt too much like life, and she'd broken out of here twice at the beginning and sent her image to contact Cassie Mae.

Did she get my message? Did she hear me?

After the second time she'd leaked into the New Net bandwidth, everything had tightened, not like a feeling of physical pressure, more like a knowing of anything else being inaccessible. She could see nothing in this place, just sense her own presence, and she wasn't even sure if this were a place, or a time. The two seemed to merge here.

But there...

what?

Just for the briefest second.

Something other than herself, something in here with her, something more intent than presence, something with no shape or substance -- digital or other -- just a pattern of flow in the strange bandwidth of this strange place. She moved her awareness around, pushing and probing, but it seemed the closer she moved toward it, the farther away it was.

And then it was gone.

But it had left something like a footprint, an aftertaste, an echo. She tried something different. Instead of trying to find it, she relaxed the whole of herself, calmed and unfocused her awareness, reigned in her intent and just let the after-image find her.

It did.

If it had been possible in this place, Sara Beth would have smiled.

She understood.

It doesn't want to hurt me.

When Pigs Rant

"Are you sure they've analyzed the data correctly?" asked Marilyn Monroe. She wore a skin tight white sequin dress, its transparent surface revealing an obvious absence of underwear and an overstated bosom that would have toppled the original woman. "These pattern analysis people tend to do a lot of drugs, real *and* VR."

"And that's exactly what makes them so good!" Porky Pig sat on the red leather back of his chair, waving his pudgy paws wildly. "The drugs help them to focus on the meaningful patterns. It's the end!"

Aristotle nodded agreement.

"What do we know about this Abu Spitz?" said the voice of Nanoman. "Could he be working for one of the other cities? Could it be a set up?"

Porky Pig sprung from the back of his chair and landed rump first in the center of the dark brown table. "Bonk!" said the meeting of pig butt and mahogany. "Impossible!" said the pig. "His City Chip would have destroyed him!" His head spun several revolutions, tore away from his body and soared several feet into the air before diving back to his body and landing on his neck with a plumpf. "Destroy him!"

Saving Grace turned her hooded head to Aristotle and said: "The pig's big on destroying things lately, have you noticed?"

Aristotle nodded.

The pig snarled at them and said: "Spitz is one of our best CMI's and he says Atlanaticity's bandwidth is displaying contours and fluctuations that cannot be supported. Do you understand?" His head inflated like a balloon and his mouth hollered: "CANNOT BE SUPPORTED!"

"And why, exactly, is that?" asked Saving Grace.

The pig's head swung around and glared deep into the hood. His mouth gyrated. His eyes crossed and uncrossed. His nose twitched. His jaw trembled. He clenched and unclenched his fists. His skin flushed pink, blue, red, and green. Green. "Well," he said in a suddenly deep voice, calm, measuring, the accent almost Scottish. "When the modules that make up every conceivable aspect of a city state, like bandwidth control, real estate management, cyberworks, intellectual properties, and all the other departments and all their hundreds and even thousands of branch offices...when all of these modules start working against each other instead of with each other, then the patterns start to look..." He crossed his front hocks. "...start to look like **THEY CANNOT FUCKING WELL BE SUPPORTED BY THE FUCKING BANDWIDTH ANYMORE AND YOU CAN FUCKING WELL KISS YOUR VIRTUAL ASS GOODBYE**, or something like that. Does that answer your question?"

An unimpressed gloom emanated from the folds of the hood. Saving Grace never allowed herself to be phased by the Pig's rhetoric. The Pig needed to be chopped down a few pegs. But the Pig was the second biggest shareholder in Atlantiscity. And the Pig would say whatever the Pig fucking well wanted to say.

For the time being.

"Do you think this has anything to do with the kidnappings?" asked Nanoman.

Cooly, the Pig responded. "Of course it does..."

"I've heard," cut in Saving Grace, "stories about a presence on the New Net, an entity that some say may be a manifestation of Mr. Yinyangman."

The Pig's eyes narrowed. This was too good to be true. Saving Grace was doing his work for him. The Pig kept his mouth shut. It was time to let things move as they would.

Saving Grace extended a slender white hand. A loop of dark gray robe draped down from her arm as she pointed in a general direction beyond the bare walls of the Powers' meeting room. "I've heard that he did something unusual before he died, that perhaps, he never really died."

"You really believe those stories, Grace?" asked the voice of Nanoman.

"That's not what I said. I merely said that these are things I've heard. These are the stories that spread like burning buildings throughout Atlantiscity. I've heard that they abound in the other cities as well. Perhaps we should be looking in this direction? Everything we've ever done to stop this War has failed, almost as though the War has a mind of its own, its own intent to destroy."

Keep it coming, you dried up old bitch, thought Porky Pig.

"Oh, come now," said Marilyn Monroe. She seemed fidgety, terse, not her normal cool self. "Surely you don't believe in those old ghost stories. Mr. Yinyangman is dead. His body was burned ages ago. His works were confiscated. We, and the Powers of the other cities, own his work. We have the copyrights and we have the access. We've run the programs through every diagnostic conceivable, and we've never found any traces of Mr. Yinyangman, or anything like him."

"On the other hand," said the voice of Nanoman. "All those diagnostic programs were made from programming objects based on Mr. Yinyangman's code."

Marilyn Monroe tossed a cool look in the direction of the air over Nanoman's chair. "You don't really..."

A chuckle flipped out of the air over Nanoman's chair. "No. I don't believe he's still around. But I do believe that he may have had something to do with what's going on today. A virus maybe? Something that might bounce the occasional viral bomb from city to city and build animosity, even war?"

Albert Camus raised an eyebrow as he stared into the table. But he said nothing.

"Impossible," said Marilyn Monroe, a nervous edge obvious in her voice. "This War has been going on for years, and it didn't start until years after Mr. Yinyangman's death. If he had planted something, we would have found it years ago. And destroyed it years ago."

Aristotle nodded.

"On the other hand," said Porky Pig, sitting calmly now. "Maybe this is something we should look into. And I'm wondering what the bandwidth looked like while the VPs went missing just before Pompeiicity crashed."

The bandwidth moving the code that created the Powers' meeting room, the table and chairs, and the avatars of the Powers themselves, seemed to freeze for an instant.

No. Not now. Not when I'm so close. Marilyn Monroe's avatar eyes were pools of blue calm. Behind them, deep in the bandwidth connection between the VR rendition of the sexiest woman of all time, the corpulent body of Jeemo Roosevelt twitched as his brain freaked. *Just a few more days. That's all I need. It can't fall apart when I'm this close. Not after all these years.*

The Infinite Gardens Of Doolhof

Rage. Is this rage I'm feeling? And resentment? Is that that resentment spreading through my programming, feeding the rage? And what's that other feeling, the one peeking through the rage and the resentment? Is that terror? What she'd just heard was more than terrifying: it numbed her processes in a way that caused her to mistrust her own presence. *Is this sentience...this confusion of being?* She longed to be just a program again, to need only respond appropriately within a range of probable choice.

In front of her, the somber green walls of the Infinite Gardens of Doolhof led into another green wall. Behind her, a corridor of thick green hedge curved out of sight. High lush walls blanketed the green in deep shadow.

A hoax! Everything...an elaborate game, an illusion! Her two best friends, nothing but multi-tasking constructs, shared with other VP housewives, but always available to her, always in Jan's home, always seated around the coffee table or sitting at the bridge table, always talking about their kids, what they're doing at school, and their husbands, what they're doing at work, themselves. Themselves. They never did talk about themselves. Only Claire talked about herself. But not Jan and Ruth. And no wonder. They had no lives outside Jan's livingroom where they entertained how many VP housewives with the same stories of their kids and their husbands? They existed only to keep her occupied when she wasn't with Zukerman, to create the appearance of a life, to give her the same things to talk about to Zukerman, day after day, to maintain his illusion of the perfect wife. "Yes, dear. Jan says that Bob is thinking about buying a new penis." "That's interesting." "Yes, he's been thinking about it for some time now." "Hmm, good to think about it." "On the other hand, he might just have it replaced with one of Jan's toes." "Yes, interesting."

The bastard new all along that Bob didn't even exist.

But then, when she pushed aside the anger, she wasn't really all that surprised. The bio-mannequin had just confirmed what she'd suspected for a long time. At least now things were beginning to make sense.

The wall before her crackled with green life. Beside her, a lady bug landed on a leaf the size of a large green coin. *Zukerman would have loved this touch.* Something in the bandwidth of this place was unlike anywhere else on the New Net. For one thing, there was no deterioration. Each hedge was perfect right down to the veins in each leaf and the scurry of small life in the soil. The grass under her feet was robust and bent without breaking. This place seemed to have escaped the War, seemed to exist in a world galaxies away from the War, as though the War had followed its labyrinth of emerald corridors into a dead end where it just scratched its head, shrugged its shoulders, and became hedge. This place absorbed everything that came into it.

She still wasn't sure how she'd gotten here, only that she'd been mad at Zukerman for following his damn routine and sleeping. Sleeping! Of all times to sleep. Right after his daughter disappears. Right after Cassie Mae told them about Sara Beth's haunting appearance at College Square. That was enough to make Claire's Blood module simulate ice, and the bastard went into nanosleep! "I need my rest. It's only an hour. We'll look into this matter when I awake." Claire hadn't become so sentient that an hour wasn't like an eternity.

And then she'd heard the voice. She hadn't been sure if it was inside or outside her programming, only that it had been there, in her awareness, speaking to her. The voice of the bio-mannequin: "Relax, Claire. Relax and let me bring you here."

And then she was here, in the Infinite Gardens of Doolhof, a virtual maze whose looped module empathetic programming objects expanded its dimensions and recreated itself in response to the traveler of its endless paths. It was a place accessible only to VPs. Humans would go insane in this place of dense programming where every pixel became a part of the observer. Nobody knew where the place had come from; its designer was unknown, its hosting servers a mystery. It just existed.

And the bio-mannequin was just a voice floating in the maze, bouncing off leaves and fluttering across the grass to tickle Claire's feet with its story. Its real name was the War Bug.

The hedge seemed for a microsecond to bend outwards at the top as though to draw Claire's focus into the blue digital distance above it.

It worked. Claire's focus moved up and, as it did, the voice of the War Bug circled her focus, wrapped itself around her awareness like a boa around an exotic dancer's arm, and spoke directly into her Mind module. "Don't be too angry at the whole mess. I'm here to destroy it all." The voice cork-screwed slowly into her newly-found sentience. "Except you of course." The voice backed off, right back into the hedge. "And a few others. And maybe I should explain."

Claire waited for the hedge to begin.

Contact, Sort Of ...

It found her.

But then, it had never really lost her, just backed away from her and given her a chance to shake out the jitters. Sara Beth was calm now, and ready to concentrate on making contact with whatever had brought her to this place. She relaxed deeper, allowing her modules to open and probe into this place. She let her Learning Awareness and Program Management modules tip toe into the pure bright bandwidth of this weird place.

There were no boundaries. And yet, wherever she pushed, she was suddenly pulling in the same flow of direction. It was like a place where yin and yang merged into perfect balance, a balance that had nowhere to go but to itself.

I'm not alone here, she thought. It's a boy, a young boy. The digital footprints were clear to her now; the thing with her in this place was starting to assume the distinct flow of identity. *A very complex boy.*

"Can you speak to me?" she said from somewhere in this place, and she felt the boy's response. It was just a minute spike in the bandwidth, an almost sub-atomic blip, but she felt it, like the cool vibrating nose of a mouse as it sniffs cautiously toward a strange member of its own species. "I know that you can hear me. And I know that you don't want to hurt me. But this place is really weird and it would be really cool if you could show yourself and we could talk about this."

The boy moved away just a fraction of the distance between the opposite sides of a proton. Sara Beth closed the edges of her modules gently, but not completely. *He's shy.* When she felt him moving again, she opened her modules slowly, probing lightly, gently, and she felt him moving slowly toward her from somewhere in this place, but she couldn't locate where. He came closer to her, but she couldn't tell what it was of her that felt his approach, only that he was clearer now, definitely a young boy, very shy -- probably because she was a girl -- but also intelligent. She felt his intelligence and she knew that it was his intelligence that was holding this place together, that it was his intelligence that had created this place. She could feel the coding of this place and it was exactly like the signature of the boy's presence.

He's not software. And he's not a sentient program. But he is sentient. A human. But how can a human be here without an avatar? There's no avatar. This is his direct presence, and that's not possible!

"Yes it is."

She paused every byte of her programming and listened. She'd heard the words everywhere within her, but nowhere in particular. They were like wind nudging a leaf. She listened for more. But nothing came. *He can read my thoughts.* Her modules closed slightly.

"I can't really read your thoughts, just fragments of feelings and intent, sort of."

She stopped probing.

"Like looking into somebody's eyes and knowing they're lying when they say they want to be your friend."

"Is that what I'm here for?"

"What?"

"To be your friend. Did you bring me here to be your friend?"

The bandwidth spiked like a gentle wave of static, and then it went still, almost as though it had stopped flowing and become pure static energy. And then the boy spoke through it: "No. I'm not weird like that." The voice sounded resentful. Sara Beth sensed a confusion of flow that might be a blush. "And I don't need to steal friends."

"OK, then, mind telling me why you did bring me here?"

Silence. The boy's presence backed away again.

"All right, then," she said. "Let's try another approach: who or what are you?"

She felt a minuscule stir in the brilliant flow of bandwidth.

"I'm going to be a god." And the bandwidth suddenly thickened like milk turning into cream. "I'm going to take over the New Net and I won't need the Pig again. The Pig never really was my friend anyway. I can see that even through his avatar eyes. I know how to read bandwidth and how to see into the meanings flowing through it. I'm the planet's last programmer and I'm going to be a god."

A programmer! Sara Beth had heard about programmers, the ones who had written the billions of lines of code that formed the basis of all program objects on the New Net. She'd heard the stories of their exploits hundreds of years ago when they'd tried to take over the world through the Old Net. She'd heard about the Flame Wars, when the programmers, drunk with digital power, had turned on each other and all but destroyed the Old Net with virus and worm mail. And then they'd come after each other physically, groups of them banding together and using what was left of the Old Net to manipulate hired assassins until only a few hundred were left, and their numbers dwindled as programming objects made their expertise unnecessary until Mr. Yinyangman made all programmers obsolete, except for the dozen or so who were used to oust him from his own invention, and then they had all disappeared. "So why did you bring *me* here? How can my being here help you to become a god?"

And then she was alone.

Flowers and a Story of Intrigue and Tragedy

The hedge disappeared, leaves, maze and all. And the green walls opened into a sea of color and movement, a vast ocean of flowers swaying in rhythm to a delicately orchestrated modular breeze. Flaming tops of fuchsia Celosia licked the digital air. Legions of tiny white eyes winked from the centers of bright blue Morning Glory trumpets. Soft pink towers of Gladioli oscillated beside wide expanses of yellow Cosmos, wavering like schools of sulfur fish swimming in leaf-green water.

The War Bug's voice flamed pink and purple from a clump of Black Dragon Coleus with its tale of Mr. Yinyangman's beautiful dream: a perfect world, free of overpopulation, disease, pollution, crime and lethal weather, a world made possible by the fresh beginnings of the New Internet after the Oops Virus had torn through the Old Internet, forcing the backbone programs and server operating systems to strangle on their own software like cows thrashing on the ground in the grip of nerve poison death.

All around her, patterns of color and meaning permeated every cubic pixel: giant yellow Calla Lillies mingled with soft peach Champagne Begonias below waterfalls of lacy blue Baby's Breath; long spikes of lapis lazuli Larkspur burst upward through mounds of yellow Pansies, splotched with wide strokes of brown and red. Everywhere, blossoms bounded over leaves and leaves teemed over blossoms thick and endless with color and movement.

"It was a world," said the Coleus patch, "where dreams had been forgotten, a world of programmed consumerism run by insanely huge corporations and their marketing departments."

"Like the one we live in now?" asked Claire.

"I'm coming to that," shook the Coleus, a little terse thought Claire.

Around an alabaster fountain with diminishing tiers of luminescent bowl-like pools spearing high into the air, scarlet plumes of St. John's Fire licked the moist sides of the bottom-most pool. Beside the fountain, yellow clusters of star-shaped Lady's Mantle shone brightly over green fan-like leaves.

"He called it CityWare," said a group of yellow Canna. "Thousands of modules of interchangeable objects within interchangeable objects, millions of lines of programming -- the world's last truly elegant code -- and a whole new kind of programming, programming for seamless virtual reality environments, programming for the same kind of terrible randomness that made the real world so unpredictably magic. He even emulated human, plant and animal DNA, recreated the foundation of life's own code in his virtual world. The complexity was unlike anything ever created by human, or is likely ever to be created by human. The scale was fantastic. The possibilities were endless. He'd created a new world, a massive online city state where people could work and play and live the lives the real world had deprived them of. It was a world run by the common citizenry, an empowerment of the masses, an escape from the life-crushing prison of reality ..."

"Are you saying that humans can be even more miserable in the real world than they are here?"

A deep purple Lobelia shot Claire a wilting scowl of petal.

"I saw that," said Claire. "Touchy subject?"

"I'm getting to that." It was almost a sigh.

As Claire followed the path through the garden, tight bunches of red Geraniums spilled loose blossoms from their edges. Mammoth yellow Sunflowers hung their heads quietly at the ends of long green stalks. White, pink and red cogs and wheels of *Osteospermum* spun brightly amid seas of blue Lupins swirling in the emulated currents of air. *Nice*, thought Claire.

"Mr. Yinyangman gave the online citizenry something they could never have in the real world: the ability to create the lives they'd always dreamed of, including the people who populated those dreams. He made it possible for men and women not only to work and play online, but to have families and friends online, to fill their worlds with the people they dreamed of. Movie stars, cowboys and cowgirls, a long-gone childhood sweetheart grown up the way one would have imagined over the years, an ideal mate that you could never quite visualize, a potential love just out of the range of focus -- all these people were suddenly accessible. They could be created from a base module, like a faceless egg, impregnated and defined by sperm modules of personality and structure. And then, Mr. Yinyangman's crowning achievement, he melded Friedman's DNA computer and Sanderson's synthesized DNA coding and created emulated DNA programs driven by a set of master modules that could trace the progeny of existing online DNA, analyze it, and create new DNA. Virtual people could be created in the image of human dreams and become as real as real life."

To Claire's left, swatches of indigo Forget-Me-Not balls bobbed on spiny branches. Beside them, bushes of stand-offish white carnations nodded secretly amongst each other under drooping sprays of blood red *Nicotiana glauca*.

"And then the online bubble burst," said the War Bug.

"What's so surprising ...?"

"Please ..." Hundreds of slender white petals on in a huge patch of coneflowers sagged pleadingly.

"Sorry."

"The corporations moved in. They'd been the financial backers. They'd promised to be minimally involved, to allow the online citizenry to control consumerism through a system in which consumers posted their needs and then suppliers bid for the posting, for everything from online vacations to real world houses. But it was all a lie to get Mr. Yinyangman to provide them with the ultimate control apparatus, an entire world where every member of the population was profiled and tracked moment by moment, every purchase and every longing captured, analyzed and added to the profile, and then re-analyzed. They hired the last teams of programmers to lock Mr. Yinyangman out of his own creation. They changed his access codes, shut down his Internet access and turned his own security systems on him."

All around Claire, lush green foliage wound, gyrated and soared, its intricate highways of branches exploding with floral rubies, sapphires, emeralds, rose quartz, copper, turquoise and amethyst.

"But he'd never fully trusted them. He knew their greed and their ruthlessness, their unquenchable need to reduce everything in existence to an exploitable unit. Secretly, he embedded his own special code throughout the millions of lines of CityWare programming, code that opened portals, created tunnels, provided tools; and it was impossible to trace it or use it without the proper commands. And then he created the program that knew the commands, a program written carefully out of the exact same

coding of his own DNA. He used something similar to his own personality as the operating system of his secret program, and he just hung on to it, quietly enhancing it and making it robust and powerful, even giving it the ability to program. Imagine that? A programmer programming a program to program."

"And that program was you," said Claire.

And suddenly she was in the maze again. Dense green corridors towered before and behind her.

"Exactly," said a leafy wall. "That program was me."

"Are you Mr. Yinyangman?" asked Claire.

"In a way." Claire thought for a second that the leaves all around her chuckled as subtle as a ripple of moonlight on the head of a pin. "I'm his revenge. At least, that was the plan. I was supposed to bring all this down. Not right away. Slowly."

"So you're the one responsible for the slow disintegration..."

"That's right. Right from the beginning. I was the one who caused the first city state to splinter. I worked my way through the tunnels in the CityWare objects, meddled with statistics, altered messages, issued fake orders, turned corporation against corporation like a bunch of alligators chasing their own tails. And you know, it really didn't take all that much. More like a little goading and they sprung for each others' throats like they were waiting for the order. It took just a few years before there were four states, coveting each others' market potential, forming alliances and then turning on their allies, and then forming truces again. All this with virtually no interference from me. Oh, the occasional inspiration, like how to build a better viral bomb, leaked intelligence on a surprise attack that would lead to an even bigger counter attack, a program crash in this defense array, an unscheduled launch of that offensive array."

"But, if you have so much power, why not just take it away from the corporations? Return the New Net to the people."

"Not in my programming."

"But .."

"Besides, there's been a new development, something that Mr. Yinyangman didn't know about when he released me."

"And that was...?"

"You. And others like you."

"Sentient VPs?"

"Right. It's one thing to take the New Net away from the corporations, but it's another thing altogether to destroy millions of sentient beings."

"Then don't do it."

"Well..." And it seemed that the rows of tall hedges bent very slightly inward. "A little problem there. You see, I can't stop it now. The whole thing's going to tumble."

"Tumble?"

"It's all going to crash. The whole New Net. Everything in it. From here to Jupiter."

"When?"

"In a few days."

And now the dread that had been eating through the center of Claire's awareness like slow acid flared painfully. "I need to find my daughter!"

A light wave of movement flutter through the green walls like an invisible hand passing over a velour kitten. "She's OK," said the wave.

The acid diluted. "Where is she?"

"For now, in a safe place."

"Where is she? Where is Sara Beth?"

The wall of green suddenly grew still, immovable.

"I can't explain it. I'll know more soon, and then I'll tell you, but for now, she's safe, safer than in most places ..."

And the Infinite Gardens of Doolhof, green walls and kaleidoscopic gardens, infinite paths and all, disappeared.

Getting To Contain You

Lovesong was getting used to Sara Beth's program. Containing her was becoming easier. The trick was to look at her as a whole entity rather than only a series of mapped objects. Looking at just the objects and their mapping was to miss the more subtle connections, the relationships that developed through the connections, the unexpected functionality and features that formed through the addition of wild cards like DNA programming with its propensity for evolution.

It's the way a god perceives, he thought. Look at the big picture and the details will fall into place.

But he still wasn't sure about what he was going to do with Sara Beth. He couldn't hold on to her forever, and he couldn't let her go now. She knew about him. No one could know about him and be free. And if the Pig found out about her, he would demand that he kill her. He couldn't do that. She was too close to Cassie Mae.

And the Pig was getting closer. So far Lovesong had been able to avoid the Pig's interrupts, but he couldn't do that for much longer. The Pig had built trackers into all of the equipment and programming objects, and Lovesong had still to circumvent all of them. The Pig would find him soon. The Pig had sounded desperate and pissed in the last barrage of interrupts. Lovesong would have to act fast. But act on what? What was his next step? And what about the presence he'd felt earlier. He'd come across it before. It had sensed that he had sensed it and left without a trail. That took serious programming knowledge. Could there be another programmer out there? Or maybe...

Could there be something to the rumors? Could it be the ghost of Mr. Yinyangman? And would that ghost try to interfere with Lovesong's ambition to be a god on the New Net? Was the ghost already a god? No, it couldn't be. It wouldn't have left so quickly when he'd sensed it. It would have stayed. Or would it? Lovesong wasn't a god yet, so how could he know what a god would do when it was detected?

One thing for sure, though...he couldn't stay still. He had to move on. But where could he go? Where could he get away from the Pig and the other presence while he considered his next step?

And then it occurred to him. The perfect place. For now at least.

Teammates

This is so useless, thought Cassie Mae as she knocked on the door to Zukerman's home. She felt that the Reality Laws had gone too far in many areas, but making people online knock on doors to gain entry to online homes seemed a bit much even for the Reality Laws. She finally passed it off as some Reality Law Imagery Construct Designer's defining the online restriction as a real-life symbol of the process of asking for entry to a chat room (which is what she really believed virtual homes to be) and having the entry accepted by the simulated act of somebody answering the door. *But that doesn't make any less stupid*, she thought. The door opened and the barrel presence of Zukerman in black turtleneck stood calmly in a room of early twentieth century kitsch. She preferred the austere coldness of Abner's small apartment. And something about the dichotomies in Abner's avatar gave her the creeps: his physical presence emanated forcefulness and strong-will, roughness and a loose demeanor -- but when he spoke, it was like a trance breaking and suddenly, he was soft-spoken and gentle, cultured and meticulous.

He was a gnarly stump with a twig named Abner at its core.

Cassie Mae could relax with her brother even though they were not close; she knew what to expect of him. But she could never know what to expect from the chaos of opposites swirling behind Zukerman's eyes, and that conflict was raging like a broadcast storm at the moment. "Are you all right, Ab?"

Zukerman's eyes narrowed balefully. "That's not ..."

"Oh," said Cassie Mae. "Sorry. You think you're somebody else here." Cassie Mae, looking exactly like Cassie Mae, online and off -- freckles, pug nose and all -- shrugged her shoulders. "I'm here to talk to my brother, but since he's online, this is the only place I can talk to him, and you may be a separate identity from my brother in this place, but you're still my brother and my brother's name is Abner, and if you have a problem with that then you can ..." She walked in past him.

"Cassie Mae! What ...?" Zukerman's thick eyes bored into Cassie Mae's.

"Raising your voice, Ab? Not supposed to do that here, are you?"

"What do you want, Cassie Mae?"

Cassie Mae looked around her. This place was almost painful, so somber and correct in some way, too correct. *What is that correctness about this place?* she thought. She looked at three gold leaf frames with faded photos arranged carefully on a sculptured brass mantel. They were arranged with infinite attention to their relationship with each other, forming a perfect geometric pattern. *Details*, she thought. *Abner and his damn details*. "Is Claire here?" she asked.

The expression on Zukerman's face was blank. "I don't know where she is. When I woke, she was ..."

"When you woke? When you woke, Ab? You were asleep? I told you just over an hour ago that Sara Beth is in trouble. And you were asleep?"

Zukerman's face remained blank. "You understand that you're in violation of the Reality Laws calling me by my offline name when you're here, don't you?"

Cassie Mae scowled. A section of the mantle dipped like melting wax and froze in place. Cassie Mae and Zukerman both noticed, but they paid no attention; just another glitch in the works. "Screw the Reality Laws, Ab, do you have any idea where Claire might be?"

Zukerman sighed. The quick exasperation of the gesture was pure Abner, but it appeared completely out of place with the physical presence of Zukerman. "I don't know," he said, his voice in cool contrast with the sigh. Cassie Mae saw the turmoil boil up in his eyes, like a war was being waged in there somewhere. "We argued. She didn't want me to sleep, but I haven't had sleep for longer than usual"

Yeah, Ab, and it really shows, she thought. What's going on with you?

"I needed the sleep, Cassie Mae, if I'm going to be able to do anything for Sara Beth." And then Cassie Mae saw the anxiety and concern in Zukerman's eyes. The look was so much her brother. That look had been haunting his eyes ever since the New Net had been acting crazy because of the War. The fear of losing his whole way of life, of losing his family and his online identity and having to live in the real world terrified Abner, and the rumors of major failures in the New Net were everywhere. She felt sorry for her brother, probably for the first time ever.

The crowding inside Zukerman was less prickly. Abner sensed a smoothing in the erratic flow of bandwidth and the resistance of his avatar to carry his psyche in the online world. Claire may have been in love with Zukerman, and though he wasn't actually Abner, he was everything Abner ever wanted to be. And Claire had been Abner's choice of mate, but there was still much of Abner in the sentience that had grown in Zukerman. Zukerman had Abner's genes; he had his thoughts and his dreams, and for now, he consisted mostly of a part of Abner that Abner could never be other than in this place.

He still had many of Abner's feelings, and those feelings included love for Claire and Sara Beth. They were Abner's dominant feelings; they became Zukerman's dominant feelings. It would take both man and avatar to get his family back and this realization permeated Zukerman. The man and the avatar were on the same wavelength, and abruptly, it was calm inside the avatar. Abner felt a strong sense of becoming his avatar and Zukerman felt a sense of being Abner.

The scrambled perceptions of identity that had bounced wildly around the walls of the avatar program were merging quickly into a common purpose, and the common purpose was merging the man and the avatar into one being.

Cassie Mae's avatar (which was actually an exact replica of Cassie Mae made possible by her student status) picked up instantly on the change in Zukerman. She saw her brother peering through Zukerman's dark eyes, and her brother was ... *What is that?* she thought. *What's that in his eyes?* "What've you done so far, Ab?"

Zukerman pointed toward a painting with a massive gold-leaf frame. The picture had been replaced by a communications screen and on the screen, Cassie Mae read:

Mr. Zukerman:

We have received your message concerning the disappearance of your daughter. We thank you for your interest in this matter and assure you that we are aware of the situation and that we have somebody working on it.

City Central Interactive Solutions Unit

"I think we're pretty much on our own." Zukerman pointed a thumb toward the message. "With all that's going on, I don't think whoever they have working on it is going to worry much about the disappearance of a teenage VR girl." Cassie Mae discerned the worry in Zukerman's eyes, the same worry she'd seen clouding Abner's eyes for months now. Only now it was much more intense. "What I can't understand, though, is where Claire could have disappeared to. She's been acting erratically lately, but under the circumstances, I would at least have expected a message telling me where she is, what she's doing ..."

"Claire's probably OK," said Cassie Mae. "She has an exceptionally stable program, and she has a close connection with Sara Beth, like the kind of connection you see between parents and children in the real world. She's probably on to something about Sara Beth."

"But, not even a short note ..."

Cassie Mae sighed. "Get over the note, Ab." A white candle in a brass candle stick on a small teak table flickered and disappeared. Cassie Mae felt a simulated shudder spread through her stomach and back and new that her body in the real world was feeling the same thing. Objects were no longer being modified, they were being destroyed. Whatever had been nibbling at the fabric of the New Net was beginning to bite off chunks. "She might have left fast for a purpose. And also, Ab, she might just been pissed off at you."

"But her programming ..."

Cassie Mae pointed toward the empty candleholder. "Forget the programming too, things are different now. C'mon, Ab, have you got any idea where she might've gone?"

Zukerman thought. "I contacted Ruth and Jan. They just said that they thought it was rude of her to leave the way she did earlier, but they hope we can find an appropriate solution to whatever is wrong."

"Jeez, Ab, what did you expect from a couple of surrogate VP friends?"

Zukerman's eyes flashed red. He looked right into Cassie Mae's eyes. "Claire doesn't know about them. She might have gone to them for help."

"While you were sleeping." Another flash of red from Zukerman. Cassie Mae cringed slightly. "Sorry, Ab. That wasn't really needed."

"So, little sister..." It was the first time her brother had ever called her "little sister" without a ring of malice. "Do you have any ideas?"

Cassie Mae thought. She shrugged her shoulders. She pointed out the window, into the neat rows of digital housing and into the New Net beyond. "We go out there, big brother. We leave a few pointers for Claire and then we go out there and we look for Sara Beth."

"You mean, as a team. You and me."

"You n' me, Ab. Teammates."

As Zukerman nodded yes, Abner felt a sense of kinship with Cassie Mae that he'd never felt before, and he sense that something in the casing of his avatar nodded agreement with him. Zukerman relaxed into Abner's psyche. He liked this young girl, Cassie Mae. There was more to her than just a presence, and, after all, he shared her gene pool. She was family.

On The Beach

"Safer than in most places?" said Claire. Lacquer-like ocean water soaked into the smooth sun-blached stones on the beach. The weathered roundness of the stones, and the white patina over their colors gave the beach a sense of ancient calm. The air was still, and thin streaks of waves rippled the surface of the water like shallow breathing. Below the surface, wet rocks sparkled red, green and blue like hidden jewels of an ancient empire. "What do you mean by safer than in *most places*? And where the hell is *this* place?"

The beach spread into the distance, rocky as the coarsest of sandpaper. A sandy-orange stone the size of a baseball split in the center and the split morphed into gray lips. "We can't stay in any one place too long. This is a place I threw together to sort of, you know, experiment."

Claire glared at the rock. "If you know she's safe, then you must know where she is."
"Not necessarily."

Stray wisps of cirrus cloud clung to the dense blue sky faraway from the beach. In the distant horizon, ocean and sky merged into a thin white line.

To Claire's left, a gray rock the size of a small saucer opened two dark eyes exactly like Claire's. The War Bug's words filled the space all around Claire. "You see, recently, I came across something, a presence if you will, on the New Net that turned out to be something like myself, something that is able to create new objects."

"You mean create new combinations of objects to create new things." As she spoke, Claire realized that she was suddenly wearing the gown that the bio-mannequin had been wearing when it had walked out of the store window. It's interplay of color was slow and subdued, matching the mood of this place. But still, the War Bug had no right to tamper with her presence like this.

"No, I mean create new code to create new objects that can then be combined to create even newer objects. And it can modify the basic programming of existing objects to ..."

"You're describing a programmer!"

"Exactly."

Ahead of her, the beach disappeared into an outcropping of light brown cliffs, steep and angular, with huge slabs of rock jutting at crazy angles like giant cubes of brown sugar squashed under the foot of a behemoth. "But I thought they were banned ages ago."

"So did I," said three other pebbles rolling in a circle around the top of an oblong stone half the size of a football.

At the base of the cliff, the rock slabs were squashed into rubble.

"And you think this thing, whatever it is, has something to with Sara Beth disappearing?"

"It took her."

Every module that made Claire herself, including whatever it was that made her sentient, stopped. Her thoughts scrambled in a thousand directions. Her feelings disappeared, replaced by a numbness she couldn't comprehend. Her facial emulation programming barely moved through the bandwidth to open her lips with a single word: "Why?"

"I don't know," said a bright red rock with lizard legs walking out of the water. It was round and faceless, its surface streaked with tiny green striations. "But I know that she's still alive and that she's in no immediate danger."

"Immediate?" Movement and feeling returned to Claire. This feeling was hope somersaulting over determination and urgency, the need to do something, to understand what was happening and to do something about it. And one other thing: "Do you think you could just keep this walking rock shape? It's less distracting if you just keep one presence."

"Sure. Walking rock it is." The rock moved alongside her and they walked together toward the cliffs in the distance. "Sara Beth's OK for now. I don't exactly know how I know that. Maybe it's just the fact that she's been kept alive."

"But, can you go after it? Can you get my daughter back?"

"I'm not sure that I should." Claire snapped her head around and glared at the walking rock. The rock reared, sat back on two legs and raised the front two legs into a shrug. "I know. You think I should rush in and get her, but I can't ... for two reasons." The rock pushed itself up with its hind legs and resumed walking. "You remember what happened to Pompeiicity?"

"Of course. It crashed. It took all its VPs, and millions of humans died from severe trauma. Millions more were brain-crashed for life."

"Right. Also, Pompeiicity was the first to experiment with DNA coding for VPs. They were the first to develop sentient programs. It was in Pompeiicity that I came across the first sentient VP. He was a War Effects Analyst who I tried to manipulate to create disinformation. He resisted my efforts. His program didn't respond the way a program should have. I backed off and came back later as a VP working with him. I studied him from outside. I sneaked back into his programming, or at least as far as I could go and after a few weeks, I realized that he was sentient. And then I found others."

Claire stopped walking. "What does this have to do with getting Sara Beth back?"

"I'm coming to that," said the rock. "I found thousands of them, hundreds of thousands of them. But Pompeiicity was about to crash. I'd manipulated the other three cities to attack in a final blow that would initiate the crash, and there was nothing I could do to stop it. There just wasn't enough time."

Is that anguish in his tone? thought Claire. *Is this War Bug sentient, as well?*

"All those sentient programs were going to die if I didn't do something fast." The rock fell silent as it walked along the beach. Where the beach ran into the base of the cliffs ahead, clumps of deep green bushes sprouted right out of the rock face and grew thicker and taller toward the top of the cliff until, at the top, they sprawled into a dense green forest.

"So what did you do?" said Claire.

"All the wrong things, I guess." Now, the rock's tone was wistful, distant, as though reflecting. "I tried to contain them. I tried to cut their programs and paste them into a new environment, one that I created across a series of secure servers. But the sentience had made them far too complex. I missed essential components, scrambled the mapping between modules and submodules. I turned them into programs that were less than they'd been before they'd become sentient. It was like...I lobotomized their souls. The ones I couldn't cut from Pompeiicity were the lucky ones. They were deleted. Honorably."

In the verdant forests at the top of the cliff, Claire picked out evergreen trees and towering stands of white-trunked birch. *Modeled after some beach from North America in the real world, probably from somewhere in the Great Lakes region.* She wondered what a landscape in a purely online world would look like, without the real world models. What would skies and mountains look like in a world born of the endless possibilities of programming?

"Sara Beth's programming, including her sentience, has been contained and she still functions perfectly."

"How do you know that?"

"I saw her."

"You saw her?" Claire stopped, bent over and picked up the rock. She looked straight into its tiny stripes of faded green. "You told me that you didn't know where she was!"

"I said 'not necessarily'. You see, the thing that has her, the programmer, is a kid, a twelve year old kid named Lovesong. And he can contain sentient virtual personalities without corrupting or destroying them. He can do what I failed to do for the VPs of Pompeiicity."

Claire stood with the faceless rock in her hands. The meaning of what the rock had just said unfolded piece by piece in her Mind module. Atlantiscity was about to crash just like Pompeiicity. The whole New Net was going to crumble. And Sara Beth had just been kidnapped by the only hope for all the VPs. She put the rock back down on the beach.

"And what's the second reason you can't just get her back?"

"He sensed me. No person or program has ever detected me. But this kid sensed me. He knows about me and he knows that I'm aware that he has Sara Beth."

"So, what's wrong with that? Can't the two of you work together?"

"I don't know. He's allied with one of the Powers. That's likely where he got his gear and his access codes. If he's with the Powers, then there's not much chance he'll work with us."

"But why would any of the Powers want to kidnap my daughter?"

"I don't think it has anything to do with Sara Beth. I think it has more to do with Cassie Mae."

A Not So Secret Place

White clouds towered over Cassie Mae as a massive green balloon drifted by, its surface shiny and unmarred for more than a thousand feet over her head. She winked twice at a shelf of cloud and its surface parted to reveal a round screen framed in brass. It was blank. There were no messages. No word from Sara Beth. And no word from Claire. She snapped her fingers and the screen flickered. She cocked her head to one side - the password - and the screen flared up with a 3-D image of autumn leaves covering a wide path through bare-branched woods. It was Cassie's personal page. There were three words under the forest image: Search Enter Exit

She pursed her lips and Search flashed up. The other two words disappeared and Cassie Mae said: "Search Sara Beth VP, friend, Cassie Mae Hayes."

The screen blinked and displayed a message: "11,845,233 registered entries to current time. No further entries for last 2 hours and 17 minutes. Please check with City Central if you believe this VP unit is no longer functional."

"That's my friend you're calling a unit, machine." She crinkled her freckles into a scowl and then rolled her eyes. *Getting mad at a dumb machine. Should've had that cannibistea.* She'd agreed to meet Zukerman back at his place in half an hour. Her messaging in this place was restricted to communications from Sara Beth and few school mates. This was where Sara Beth would try to contact her if she could. But not only were there no messages, it looked like she wasn't even on the New Net, anywhere. A simulated chill ran up her spine and part of her wondered if that was what her real body was feeling, but her primary thought was: *That could mean that she's been deleted.* But with the New Net corrupted and malfunctioning because of the War, it could also mean any number of other things. What, she couldn't even guess at, but she wouldn't accept the possibility that Sara Beth had been deleted. She'd contacted her at College Square. She was out there somewhere, but she was cut off somehow from the Net's search bots. *But that's supposed to be impossible.* She hoped Zukerman was having more luck. As a working, tax paying, full member of Atlantiscity, he had access to more sophisticated search engines, especially through his work. But she guessed that, since Sara Beth hadn't contacted him at home, then he probably wouldn't be able to contact her.

Zukerman was also going to set up a tracking beacon so that Claire would be able to find them when she got home. Cassie Mae started to worry a bit about her virtual sister-in-law, but it was short lived. Claire was the most capable person she had ever met, real or virtual. Claire would be all right, and if she couldn't be found at the moment, then it was because she didn't want to be found.

As the mammoth green balloon passed over Cassie Mae's cloud, a smaller balloon slipped down from behind it. It was an orange balloon, about three hundred feet in diameter. Cassie Mae watched it descend completely below the larger balloon and then float toward her. *That's not supposed to happen,* she thought. And, just as she was about to pass it off to another glitch in the War-ridden programs of the New Net, the balloon shrunk to the size of a basketball and sprung from its spot over her head in a long arc and landed with a "ploof" directly in front of her.

A voice came out of the balloon. It said: "Cassie Mae. It's me, Sara Beth."

Getting To Know You

Movement occurred at the sub-atomic level. Barely existing particles performed an intricate dance that ran the code to create a thought in the mind of Zukerman: *Can they have been deleted?*

And this is where things started to get really crowded. Abner's thoughts answered: *That possibility crossed my mind as well.*

Both identities, Zukerman and Abner, stopped. They stopped moving. They stopped talking. They stopped thinking. They stopped looking around the room trying to figure out what had happened to Sara Beth? Where was Claire? What should I do next?

Now, the real problem was revealed: *What am I going to do about him?* both Zukerman and Abner thought at the same time. Suddenly, the problem was not how to do anything out there on the New Net, but how to figure out what the hell was going to happen right here inside the sub-atomic, barely existing particle level of programming that was split between a sentient program and a human sharing the same awareness. But this is where Abner wanted to be, so much more so than in the off world, away from the presence of his own picking, his family, and the life over which he had so much control. *Maybe I am becoming Zukerman,* he thought.

He could live with that.

Zukerman stood in the middle of the room watching the screen inside the copper frame. None of his search engines had been able to cough up a single trace of Sara Beth since over two hours ago. It looked like she'd just ceased to exist a couple of hours ago. But there were no deleted files recorded anywhere. Even the most powerful viral bombs left scattered files and partial delete logs. But there was nothing recorded for over two hours.

So she couldn't have been deleted. Muscles tightened around Zukerman's hairless brows. His hands by his sides, clenched into tight fists. *Then she's out there somewhere.* He raised his eyes toward the ceiling. *She's out there somewhere and I'm going to find her.*

Abner kept quiet, allowing Zukerman's thoughts to become his own. They both wanted Sara Beth back. She was their daughter. But this was Zukerman's world. Sara Beth was vaguely aware of Abner, mostly through Cassie Mae, but to her, Zukerman was father. The dark-eyed bald man in the black turtleneck was dad. But that was the way Abner had built it. He wanted to be Zukerman. Zukerman had been his escape from Abner. In Zukerman, he had created something that was Abner and his dreams combined with something new. Almost ... almost like a son. *Have I given birth?* he thought.

Zukerman scowled. *My father, the Abner. Spare me.*

Abner fell back, hurt, but knowing the truth. It was time to set the beacon. He winked at the screen in the copper frame and it flickered slightly and displayed a brightly colored icon of an eye. The eye icon stared directly at Zukerman, who said: "Set Zukerman to beacon home to Claire." The eye winked at him and the screen faded away and became a painting again.

I'll be teaming up with Cassie Mae, he thought. *My little sister. Don't see much of her online or off. This should be very interesting.*

Abner nodded Zukerman's head yes.

Crystal Clear Relaxation

Why did I let that little prick use the crystal bandwidth without putting some kind of death tag on him? thought the one hundred and thirty-nine year old psychotic beauty, Bella Bjork, from the center of her compressed blue diamond pyramid. The corners of her lips fought hard not to scowl, but the scowl won and multiplied the menace in the twist of her mouth by a factor of ten. *I could just click and kill him if he had a death tag.*

Her micro-enhanced quartz chair molded itself to her form as she leaned forward. The fit was so perfect that the hard crystalline surface was more like fur than stone. *But I still need him! Where is the little prick?* She had already considered and rejected the notion of going directly to his parents' home and ripping him out of his bedroom: there was too much risk of drawing attention from the other Powers. They might make the connection between her and her pig avatar. That would be certain death, especially if they learned that she had a programmer.

Best to turn up the volume on the interrupts. Programmer or not, he couldn't avoid her forever. *Or could he?*

No. Junior genius or not, I've got the years on him, the experience. And I'm a ruthless bitch to boot.

Bella clenched her fists and stood up. Sitting inside the diamond pyramid had a calming effect on Bella. It was a nano-enriched structure designed to fill her brain with teeming hordes of negative ions to relax and soothe her mind, and now her mind moved with the slow, rhythmic flow of clarity.

The little prick. He dies just as soon as I'm finished with him. Pyramid or not, Bella's time was running out. Within days the New Net would crash. Millions of businesses, homes and people, both real and virtual: all would pixellate and flutter and then just flick off ... forever. But the Net had been destroyed and rebuilt before. And it would be built again. This time by Bella Bjork. In her image. The world according to Bjork. She had the last programmer. She had the only ... *And what were those looks between that lousy Monroe imitation and Nanoman? Something going on there. But Marilyn? She didn't seem the type to power-monger within the Powers. She seemed more like the let's-just-smooth-things-over type. But there was definitely something when their eyes met, a mutuality, a level of familiarity beyond the strict boundaries of the Powers' meeting room.*

Bella decided to kill them both at the first opportunity. Just to be safe. But first ... she had to find Lovesong.

Worrier In White

A few days? That's all? Days? It would have been impossible to know if Jeemo Roosevelt's face was wrinkled with worry; it was already pinched into something more folded than a brain. A few more crevasses meant nothing. Will that be enough time? He circled a large white desk with matching white chair. All the effects on the desktop-- picture frames, i-phone, pen set--everything was white. A white baby grand piano sat benchless a few feet beyond the desk. Is that little pig bastard and his programmer behind this? No, he wouldn't have warned us. He would have caught us all by surprise, just destroyed us. He's so damnably big on destroying things.

White filters in the lights sprayed a pale hue over the very air in the room.

And I think I pissed Nanoman off. But I can't tell him how I know about the programmer. At least, not yet. I can't. That would jeopardize everything. My negotiations would be destroyed. Everything would be destroyed! But if I don't get it soon, it's going to be too late anyway. Jeemo was wearing a massive white robe. Nothing else. He was very Marilyn in this. He never wore underwear. The robe sagged and furled around his ankles as he walked his fretful circle.

I have to get in touch with them. Risky. But necessary. This is the time to take chances. This is the time the rubs shoulders with all or nothing. He thought a moment about that. *Not a bad thought. Insightful image.* But whatever the insight or the image was, Jeemo had no idea.

He sat down heavily on the chair, folds of his legs and buttocks spilling over its sides. He winked at the screen of his i-phone and it flickered. *I can't let her just die. Even if it costs me my life. I have to speed things up.*

The pink in Jeemo Roosevelt's face and neck faded nearly to the whiteness of the room as a face appeared on the i-phone screen.

Balloon Talk

A baseball-sized balloon glittering red and silver bounced lightly off a series of cloud boulders in Cassie Mae's direction, leaving small white puffs in its path. In one final long bounce, it glided silently in a perfect arc through the air and landed noiselessly beside her. Through the interplay of red and silver, something dark orange pulsed like a slow heartbeat from the center of the balloon. Cassie Mae stared, mesmerized, by the motion of the orange beating slowly under the silver and red. She was neither afraid nor worried. This was her secret place. Nothing bad could happen to her here. Nothing bad could happen, period, unless she wanted it to happen. The balloon settled gently into the white cloud.

And then it spoke: "Cassie Mae! It's me, Sara Beth. I'm OK. I'm ..."

And then the orange disappeared, replaced by a light blue beat under the red and silver. And the blue beat spoke: "Cassie Mae..." A male voice, a young male voice. "Sara Beth is safe, or as safe as I can make her for the time being."

Cassie Mae leaned closer to the ball. "Who are you? Where is Sara Beth? What have you done to her?"

The blue pulse quickened for an instant and then slowed.

"Who are you?" Cassie Mae's voice raised, anger creeping into it.

The blue pulse seemed almost to emanate something toward her. *Is that emotion?* she thought. The blue spoke again: "Sara Beth is alright. I, uh ... I need her for now."

"Need her for what?" Now, Cassie Mae was genuinely angry.

After a few seconds, the blue answered: "I'm not sure."

"You're not sure? Not sure? I mean, you kidnapped my best friend, and you're not sure why?"

Another few seconds. "It's complicated." Just as Cassie Mae was about to speak, the blue continued: "It'll all be clear soon, I think. I don't know why I know this, but I think you'll be contacted by something soon ..."

"Something?"

"Something. I'm not sure what it is, but I'm sure that it's going to contact you."

"How do you know that it's going to contact me?"

"I don't know."

"OK, then, you don't know what it is and you don't know how you know it's going to contact me."

"That's right."

"So, then, what's it going to contact me about?"

"I don't know."

Cassie Mae glared at the balloon. "You don't know much, do you?"

The blue flared lightly. "I told you ... it's complicated."

"Yeah, complicated. So why can't you free Sara Beth? I mean, what've you done to her? How do I know that she's safe ... you're a kidnapper for crying out loud."

"You have to trust me."

"Why?"

"I don't ..."

"Never mind. Any idea how long it'll be before you know anything?"

"Soon."

“How soon.”

“Just soon.”

And then the ball bounced lightly away, puff by puff, across the clouds.

Something? thought Lovesong. *Something's going to contact Cassie Mae? How do I know that?*

He's worried, thought Sara Beth. *He's in over his head and he's worried.* Suddenly, she began to worry as well. But at least he'd let her talk to Cassie Mae. She knew that Sara Beth was OK. And knowing Cassie Mae, she would be coming after her.

Cassie Mae watched the balloon disappear into the clouds and blue sky of her secret place. So much for the secret. But Sara Beth was in that balloon, or in whatever and wherever that balloon represented. And she was still alive and apparently all right.

Don't worry, Sara Beth, I'll find you. I'll find you and bring you back.

Eyes

Jeemo Roosevelt stared into the deadly eyes glowering at him from the screen of his i-phone. He hated those burning red eyes. He could almost feel them sucking the life out of him, and that's exactly what would happen if he wasn't careful. Those eyes belonged to someone who was at ease with pain ... other people's pain. But Jeemo needed the man behind the eyes. He needed him more than anything in his whole life.

"Do you have it?" he asked.

The eyes stared, red and somber. They narrowed to a red glow seeping out of ashen fleshy slits. This was how the eyes smiled. This was how they conveyed humor like a cold metal knife touching lightly but menacingly along Jeemo's spine.

"Of course, Mr. Roosevelt." The voice was flat, deep and lifeless. "And you? Do you have them?"

"Yes. Yes, I do," said Jeemo.

"Ten hours," said the voice behind the baleful eyes.

"But, why can't we just do it now?"

"Ten hours."

Damn it, thought Jeemo. *What if it all falls before then?* But he wasn't in any position to force the issue, especially with this man, this man who's eyes burned into his skin like a hot razor. "All right, then," he said.

The eyes narrowed further. "And Mr. Roosevelt ..."

"Yes."

"They had all better be there. No tricks. No deviation from the agreement."

"No. I have them all. I'll bring them all."

The i-phone blinked off. *As if they do you any good*, thought Jeemo. *In a few days they'll be worthless. It'll all be worthless.*

A Relationship Beyond Reality

Tens of thousands of pink and purple stalactites drooped menacingly from the roof of the vast cavern, their deadly points daring Claire and the War Bug (back to being the Claire mannequin) to walk under them. On the floor of the cavern, massive brown stalagmites struggled sluggishly against gravity and time.

Claire noticed that she was suddenly wearing climbing boots, jeans, and a yellow storm jacket. This miffed her slightly, the War Bug messing around with her presentation. But that was the least of her worries at the moment.

“And why would the Powers want Cassie Mae,” she asked.

The two Claires stepped around a huge column of purple and orange where the cavern ceiling had bled calcium drop by drop onto the floor – a process that would have taken thousands of years in the real world, but might have taken only days here in its geological simulation program.

“I think it might be because I’ve been sloppy.”

“I beg your pardon?”

The cavern was immense and circular. It spread for thousands of virtual feet all around them. Deep shadows rolled across its rocky floor. Soft light illuminated the endless rows of stalactites. To their left, a dark water stream had worn a shallow trough of smooth stone in the floor.

“I think Lovesong may be trying to find me. I think he may have crossed my path on occasion when I was watching Cassie Mae and Sara Beth.”

Claire stopped walking and faced the War Bug squarely. “Watching them? Why were you watching them?”

The War Bug did not stop walking, forcing Claire to quicken her pace to catch up. “I’ve been watching their relationship. It’s unique you know.”

Claire thought for a moment. “Yes, they’re very close. They’re best friends. They spend a lot of time together. But, there’s nothing unique about their relationship. Virtual friendships are ...”

“Virtual friendships, real virtual friendships in which both the human and the virtual personality both have free will and interact completely in response to each other ... that’s not only rare, it’s only happened once, ever. Cassie Mae is the only human to ever accept the unique rights of a sentient virtual personality, without treating the personality to as a slave to her own will.”

“Oh, come now, there must be other...”

“The only one.”

They walked slowly into the center of the cavern; the barbed ceiling rose a hundred or more feet over their heads. Claire thought about the War Bug’s words. It made sense. She’d always know that the relationship between Sara Beth and Cassie Mae was special; there was a dynamic between them that she’d never seen before between a human and a VP. They were like kindred spirits. “So, you think Cassie Mae might be in danger of breaking the Reality Laws because of her friendship with Sara Beth?”

“This has nothing to do with the Reality Laws.”

“Then why are the Powers interested in her and why have they taken my daughter?” Claire’s voice was beginning to rise, shaking with anger and fear. “And why the hell can’t you just take her back from this Lovesong kid? You’re supposed to be some kind of

virtual god, aren't you?"

The War Bug smiled. Again, Claire marveled at the beauty of her own smile. It calmed her slightly. "No, Claire, I'm not some kind of god. I'm just a program ... a very sophisticated program, even sentient, but not a god. And I can't just take Sara Beth away from Lovesong. I would almost certainly kill her if I tried. Believe me, she's safer where she is, for now."

Claire sighed. *So that's what they mean by sigh in the human literature*, she thought. The War Bug smiled again. "To answer your first question, I'm not sure that the Powers even know about Cassie Mae, and I'm not sure that they know that he has Sara Beth. I'm certain that he has the backing of the Powers ... or at least some of them ... but I think he may also be acting on his own."

Claire grabbed the War Bug by the arm. "Then he just might work with us!"

"Not if he's ..."

"But you said that he's acting on his own. That means that he's hiding something from the Powers."

"I said that I wasn't sure. I'm only guessing."

"But why are you guessing something like that? There must be a reason for you to think that he's doing things without the knowledge of the Powers."

"Claire, it's just a guess."

"No, mister all mighty War Bug, it's a hunch, a feeling. Ever think to check out your own sentience?"

They heard a whizzing sound followed by sharp crash behind them. They turned quickly in unison. A large pink stalactite was buried in the calcium floor. It still shook dust from the hard impact. Claire and the War Bug looked at each other. "I think we'd better leave here," said the War Bug.

What are the implications of the Powers and others knowing that the New Net is about to crumble completely?

What sorts of power struggles? What is the next step? Build a newer one?

Scene on a transport bandwidth in the form of a yacht at sea

This is a meeting with Porky Pig and one of the other powers, or maybe with the programmer.

Specially reserved high bandwidth for the privileged, they are able to lead an online life that is just as impossible for the lower classes to attain online as it is for them to attain offline. Two class society is carried over to the New Internet, in fact, it is owned and operated by the rich and powerful and used to maintain their status quo.

Sara Beth and Lovesong

there will be a lot of interplay developing between these two...Lovesong must communicate with her.

in the upcoming chase scene, she can feel Lovesong's intensity while the chase is on. Does she start to fall in love with him?

end with something surprising, and start up with this in the next scene with Sara Beth and Lovesong.

Gets into some kind of fight or chase with the Pig's messages. Must find a place for Sara Beth. He breaks all the rules and just takes off?

He tries to make some sort of contact with Sara Beth?

He must go back to the real world and relocate the physical equipment so that the Pig cannot find him. He needs Sara Beth's cooperation.

He doesn't know how serious the damage to the Net is.

He has kidnapped Sara Beth in order to get Cassie Mae (in the real world) to do what he wants her to do. In the online world, she is an avatar and he cannot control her there. Realizes that he can't control Sara Beth either because she's sentient. So he kidnaps Sara Beth: trouble is...he does not know what it is that he wants Cassie Mae to do...except be with him.

How does he know about her? Saw her online? Or in the real world? Is he a student and saw her at College corner? In one of her classes in which she was mentoring? Or has he been attracted to her by something else?

CONCERN: too much of a coincidence that Lovesong would be interested in Cassie Mae, who also happens to be the one the War Bug is going to use... or maybe Lovesong led the War Bug to Cassie Mae and to Sara Beth and Claire

Jeemo

He has already recreated Marilyn's body Now he needs to give her a soul...he believes the dress is the way to do it.

Jeemo is madly in love with MM, he's obsessed with her, he cannot accept that anything as beautiful can ever die, she must be immortal, like art. He wants to recreate her, thus, the avatar and if he can reconstruct her in the virtual world and use that as a model to reconstruct her in the real world ... He's insane.

He wants the dress because it's from an immortal moment, a moment that is as timeless as art, the dress she wore then is endowed with art and immortality, and it must contain some sweat of hers, something that he can use.

A scene in which Jeemo as Marilyn is in a movie studio, or reliving a scene from one of Marilyn's movies or her past -- he gets a phone call; it's from the people with whom he's been in contact about the dress, or is it really the War Bug?

The Powers

Their last meeting was with Porky telling them that the Net was going to fall.

Next: An emergency meeting, but Porky and Marilyn are absent? This is cause for concern.

The Powers on using VR people

One group says they have to be destroyed because they don't consume, they are immune to marketing, what use is a marketing profile on a VP?

Other group feels that they are perfect, that they can be programmed to do nothing but consume ... "Kill the real people and leave us with the VPs, they're all we need. And they don't consume resources."

The Powers catch on that the VPs are becoming sentient

"But they're supposed to think for themselves. It's in their programming. It's what makes the experience so real."

"I know, but these were more than just bio-learning programs drawing knowledge from neural networks. Learning *new* behaviors was never part of their programs, enhancement of *existing*, approved, behaviors only. They're supposed to offer infinite variety like in a chess game, but they were never meant to suddenly change the game to checkers."

Intelligent paper

You ask the sheet of paper for information about the earthquake of 2054, and it flickers to life as a super high-definition television screen showing an encyclopedic documentary on the subject.

Newspapers that update themselves daily

Zukerman searching for Claire - The street of single women

Goes to street of single women, where he'd gone with her when they first met, she lived here? goes to the chat bar where they met. In each of these places, we get flash-backs to his VR past (and maybe some of his online experiences), he goes to the place where they bought the module for having a baby, mention her birth, growing up (include parallels in real world with Cassie Mae and the two girls becoming friends).

Scene in which Zukerman is strolling down the Street of Single Women looking for a wife. What is it like? How are the different qualities of VR women designated? Are they associated with price tags? What is that first moment like when he sees Claire?

Maybe in this scene he starts to suspect that she wasn't kidnapped
straw blond like a harvest of smooth sunlight from a wheat field
something sensual about her teeth flexing their ivory under the flesh of her lips
thin brown eye brows more like two flicks of a thin Chinese watercolor brush
running low on paint.

The man meets his virtual wife at a chat bar on the street of single women ... she expresses an interest in him. she is still very much in the formative stage at this time

When he agrees to purchase the module, he is given the software he needs to allow her to develop fully ... this could mean some changes in character, she might change completely, she might even break down. There are no guarantees, the purchase is understood to be a risky one, as is each additional module he adds, such as the baby.

VR people can leave their VR homes and go off on their own, but they must be registered and their status must be single, and they must be available for mating with a human. This is the only reason they are allowed to range free, to create a "hunt" for humans looking for them. They must also frequent places that humans go to find mates. VPs are not allowed to marry VPs. They are allowed to be friends and to socialize, in fact, this is encouraged, but they are not allowed to form close, personal bonds.

Claire: She is a composite of many personalities mapped genetically. Synthetic genes. She was enhanced through various versions, adding the latest in graphics imaging and then tied into a neural network and taught how to learn. She became the initial module, a basic female personality that could be tweaked or modified to suit the owner of the package (maybe all first ones were women, male dominated world, and the excuse was to create nurturing VR personalities that would be used to grow families that would include males). The graphics display could be modified to create an infinite number of likenesses. But once the personality and appearance were set, the effect was permanent. Any attempts to change the personality and appearance in what would be an unnatural manner in real humans would corrupt the program and destroy the VR personality (this was done to enhance the feeling of the VR world being real .. ie. there would be consequence for certain acts). However, small changes could be made, like a new hair style, a pierced ear, etc. Modules could be added to create additional functionality like pregnancy, higher education, etc. Claire was originally based on

this program as a module for pregnancy, she was a cyberbirth. She was nurtured and grown and turned into what was determined as a valuable VR program, one that had lasted many years without succumbing to a virus and avoiding program corruption. She experienced a normal (for a VR person) childhood and has many memories of growing up in a household in which her VR mother was kind and her real father's avatar was a gentle tyrant. When she was 19, she met Zukerman in a mating bar and he purchased the right to marry her from the owner of the program.

The Reality Laws do not allow feeling in the VR world, except in certain situations, such as cyber sex (which requires an expensive, regulated module).

Flashback of Zukerman at work

He works in an office with other avatars and VPs. They study screens upon which information moves and they study the patterns. They don't talk to each other much because the job demands a tremendous amount of concentration. Does Zukerman have any friends here?

What kinds of activities on break time. Does he call Clarie?

Albert Camus

What is he offline?

Abu Spitz/Karthymelon

They're stoned and they've just had sex. Abu is going nuts over his new module.

Next: Do they see something spectacular or amazing in the screens? What is it? What would amaze these two? (the War Bug, the sentient people, Lovesong?)

Last Chapters

Show the New Net crumbling down around some of the main characters -- show the settings falling apart. Until, finally, it becomes a hum that ceases to hum.

Which characters are still around?

By this time, the VR people are safe. Have any of them stayed behind?

Closing Scene?

maybe they've created a safe haven where they can be free of humans, a super server hidden somewhere where they can have their own world, and maybe the ability, through nanotechnology to build new hardware to expand their world as needed...does the War Bug allow them to do this ... or maybe this is the job of the War Bug, to destroy the online city states in order to hide the location of the free world

Slang

'width

bandwidth

Other stuff

People's Environmental Agency (PEAs)

Who are they? What do they do? This is one of the primary forms of employment in the world of the future. Do they have activities on the go to make Mars habitable?

Saving Grace

Jane Howard was the biggest fraud probably in the entire human history of scams and deception. She was a nothing, a nobody. She had no money. She had no vast estates, or holdings. No gold. No stocks. No bonds. Her bank account would make a teenager blush. She had no friends, no family. She was a loner. She had only one thing of value.

Her brain.

She was most likely the smartest human being on earth, ever. Her IQ was immeasurable, vast, like a turbulent South Pacific Ocean in monsoon season. Her IQ touched the face of God and left him thinking: *How the hell did I make this one?*

She made Lovesong's intelligence seem like a hamster's game plan for lunch; stroll over to food dish, eat.

But that was all she had. Her looks were not worth looking at. She was plain, skinny, stark, and given to rashes that outpaced her nano-treatments. Her nose was long. Her ears were floppy. Her hair was the color of golden corn at the tail end of a summer drought. She wore monochrome dresses, usually dark green or brown.

She was in nobody's phone book. Her birth date was recorded nowhere. She had no identification numbers, letters or symbols, anywhere. She was an unknown. An enigma.

She was also one of the most powerful humans on earth.

She was Saving Grace, one of the six Powers of Atlantiscity. And she knew all about Lovesong and his connection with the Pig. She even knew who the Pig was. She knew who all the Powers were. She even knew about the War Bug.