With a Little Help

Cory Doctorow

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With a Little Help,
Cory Doctorow 1

Dedication:

For my friends, past, present and future. No man is an island.

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Publication history

“Introduction,” written by Jonathan Coulton for this volume

“The Things that Make Me Weak and Strange Get Engineered Away” originally published on Tor.com, August 2008

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“Visit the Sins,” originally published in *Asimov's Science Fiction Magazine*, June 1999

“Constitutional Crisis,” produced for the Future of the Book Project, 2009

“Pester Power,” originally published in *Communications of the Association for Computing Machinery*, December 2008

“Chicken Little,” written for *Gateways,* forthcoming from Tor Books, 2010

“Epoch,” commissioned by Mark Shuttleworth for this volume

“I'm Only In It For the Money,” written by Russell Galen for this volume

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A note about typos and other errors

Every book has typos. *Every* book. But this book is different. This book isn't perfect, but it *fails well.*

If you spot a typo in this book, send it to walh_typos@craphound.com (that's me) and I'll correct it in the electronic editions and in the next copy of the print-on-demand book that's printed -- nigh-instantaneously.

What's more, as a thank-you, I'll include your name as a footnote on the page you fixed for me, and at the bottom of the ebooks.

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Introduction by Jonathan Coulton

It turns out the future doesn't really care about space travel. It used to, or at least when I was growing up all the science fiction I read promised that space travel would someday be commonplace. That was what made it the future: we would all be so bored with flying to other planets that we wouldn't even really talk about it anymore, it would just become a dull backdrop to our daily lives. There would be aliens, obviously. Probably there would be some sort of intergalactic governing body, maybe a war involving a trade federation, some asteroid mines. At the very least, a mission to Mars. But it doesn't seem to be shaping up that way.

There's always something that science fiction gets charmingly wrong about the future. The problem is, every now and then there's an unanticipated seismic shift in the world, something that changes everything and creates a corner we can't see around. The most recent of these was the potent combination of digital information and global connectivity that transformed the end of the 20th century. I like to call it “The Internet,” and mark my words, it's going to be very big. The struggling record industry, the death of the newspaper, the rise of LOLCats - these are just warning shots. Everything is going to get swallowed up eventually, and it's all going to get loud and messy and complicated. Forget space travel, this is the future we need to imagine now, and quickly, before it overtakes us.

Luckily, we have Cory Doctorow; he thinks about the Internet, a lot. And so his stories are especially compelling because they are so relevant to our immediate future. “Scroogled” warns us of what might happen if Google someday decides that yes, actually, they would like to be evil after all. For a future-lover like me it's easy to get caught up in rosy visions of a world where we're all connected, and everything is free, and our in-brain iPods have every Beatles album with all the correct metadata. Cory's fiction reminds us that we have quite a few thorny issues to sort out before we get there, not least of which is the question of how people like Cory are going to make a living when books and publishing companies disappear. But of course he's thinking about that too.

With a Little Help is an experiment of sorts, an attempt to re-imagine what it means to publish, market and sell a book. It will be self-published, and like all of Cory's books it will be released under a Creative Commons license that allows for non-commercial sharing and remixing. There will be a number of price-points, ranging from free ebook and audiobook downloads, to print-on-demand paperbacks, to hardcover special editions with all sorts of extra goodies. The highest price-point comes with an opportunity to commission a brand new story based on a mutually agreeable premise (hence, “Epoch”). Throughout the process Cory will hold weekly public production meetings on Twitter in an effort to share information about the success or failure of these strategies. The plan combines a lot of different new ideas - audience participation, free culture, long tail economics - and it will test a few hypotheses about what it might mean to be an author in the future. It's a shotgun approach to innovation; as the old business models become quaint antiques from

a not-so-distant past, sometimes the best way forward is simply to try a bunch of stuff and see what works.

At least, that was my theory when I finally decided to become a full-time musician. I had spent years avoiding a career in the music business because it seemed impossible. How do people discover you if you're not famous? And how do you get famous if nobody ever discovers you? Then I heard about Creative Commons, a brilliant licensing hack that sits on top of the complicated and antiquated copyright system. It allows creators to specify ahead of time what sorts of uses they'd like to allow for the things they create. For me and for Cory this means allowing people to share our work freely, and to re-use it to create new things. The first time the concept was explained to me I felt as though someone had set my brain on fire - it was the most exciting idea I had ever heard. 31

In my head, songs became little autonomous vehicles that I could release into the wild, letting them bounce around and find their way to the people who would enjoy them. It was a way to let this new “Internet” thing do all the heavy lifting, an organic and efficient method of targeting an audience of fans who did not yet know they were fans. On top of that, it was a perfect expression of what I had always felt about art, this idea that everything ever created owes its existence to something that came before. To be sure, there is a boundary between inspiration and theft, but it's a thick and mushy one. When we create, we borrow, we build, we steal. Declaring my intentions to allow this sort of thing, indeed to encourage it, made perfect sense. I didn't have it all figured out, but I started licensing my music with Creative Commons that very day. It became the first piece of the puzzle, and it remains an essential component of the mysterious machinery that now allows me to make my living as a musician. It was just one of those ideas that resonated, the buzzing end of a long wire stretching off into the distance, perhaps even around a corner or two. 32

Speaking of which, it's not unreasonable to ask: as a science fiction author, what is it that Cory is getting wrong about the future? What is the corner that he can't see around? Certainly there's something big coming, and we'll know it once we've gotten past it. But until then, we've got our own rather sharp corner to turn, and we're just now getting a glimpse of some of the possible futures that might be in store for us. Here in the real world, where constant change seems to be the new status quo, he's hedging against what we don't know, not just thinking about the future, but trying to take us there. 33

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The Things That Make Me Weak and Strange Get Engineered Away

"Cause it's gonna be the future soon,
"And I won't always be this way,
"When the things that make me weak and strange get engineered away"

-Jonathan Coulton, The Future Soon

Lawrence's cubicle was just the right place to chew on a thorny logfile problem: decorated with the votive fetishes of his monastic order, a thousand calming, clarifying mandalas and saints devoted to helping him think clearly.

From the nearby cubicles, Lawrence heard the ritualized muttering of a thousand brothers and sisters in the Order of Reflective Analytics, a susurration of harmonized, concentrated thought. On his display, he watched an instrument widget track the decibel level over time, the graph overlayed on a 3D curve of normal activity over time and space. He noted that the level was a little high, the room a little more anxious than usual.

He clicked and tapped and thought some more, massaging the logfile to see if he could make it snap into focus and make sense, but it stubbornly refused to be sensible. The data tracked the custody chain of the bitstream the Order munged for the Securitat, and somewhere in there, a file had grown by 68 bytes, blowing its checksum and becoming An Anomaly.

Order lore was filled with Anomalies, loose threads in the fabric of reality -- bugs to be squashed in the data-set that was the Order's universe. Starting with the pre-Order sysadmin who'd tracked a $0.75 billing anomaly back to a foreign spy-ring that was using his systems to hack his military, these morality tales were object lessons to the Order's monks: pick at the seams and the world will unravel in useful and interesting ways.

Lawrence had reached the end of his personal picking capacity, though. It was time to talk it over with Gerta.

He stood up and walked away from his cubicle, touching his belt to let his sensor array know that he remembered it was there. It counted his steps and his heartbeats and his EEG spikes as he made his way out into the compound.

It's not like Gerta was in charge -- the Order worked in autonomous little units with rotating leadership, all coordinated by some groupware that let them keep the heirarchy nice and flat, the way that they all liked it. Authority sucked.

But once you instrument every keystroke, every click, every erg of productivity, it soon becomes apparent who knows her shit and who just doesn't. Gerta knew the shit cold.

“Question,” he said, walking up to her. She liked it brusque. No nonsense.

She batted her handball against the court wall three more times, making long dives for it,

sweaty grey hair whipping back and forth, body arcing in graceful flows. Then she caught the ball and tossed it into the basket by his feet. “Lawrence, huh? All right, surprise me.”

“It's this,” he said, and tossed the file at her pan. She caught it with the same fluid gesture and her computer gave it to her on the handball court wall, which was the closest display for which she controlled the lockfile. She peered at the data, spinning the graph this way and that, peering intently. 48

She pulled up some of her own instruments and replayed the bitstream, recalling the log-files from many network taps from the moment at which the file grew by the anomalous 68 bytes. 49

“You think it's an Anomaly, don't you?” She had a fine blond mustache that was beaded with sweat, but her breathing had slowed to normal and her hands were steady and sure as she gestured at the wall. 50

“I was kind of hoping, yeah. Good opportunity for personal growth, your Anomalies.” 51

“Easy to say why you'd call it an Anomaly, but look at this.” She pulled the checksum of the injected bytes, then showed him her network taps, which were playing the traffic back and forth for several minutes before and after the insertion. The checksummed block moved back through the routers, one hop, two hops, three hops, then to a terminal. The authentication data for the terminal told them who owned its lockfile then: Zbigniew Krotoski, login zbigkrot. Gerta grabbed his room number. 52

“Now, we don't have the actual payload, of course, because that gets flushed. But we have the checksum, we have the username, and look at this, we have him typing 68 unspecified bytes in a pattern consistent with his biometrics five minutes and eight seconds prior to the injection. So, let's go ask him what his 68 characters were and why they got added to the Securitat's data-stream.” 53

He led the way, because he knew the corner of the campus where zbigkrot worked pretty well, having lived there for five years when he first joined the Order. Zbigkrot was probably a relatively recent inductee, if he was still in that block. 54

His belt gave him a reassuring buzz to let him know he was being logged as he entered the building, softer haptic feedback coming as he was logged to each floor as they went up the clean-swept wooden stairs. Once, he'd had the work-detail of re-staining those stairs, stripping the ancient wood, sanding it baby-skin smooth, applying ten coats of varnish, polishing it to a high gloss. The work had been incredible, painful and rewarding, and seeing the stairs still shining gave him a tangible sense of satisfaction. 55

He knocked at zbigkrot's door twice before entering. Technically, any brother or sister was allowed to enter any room on the campus, though there were norms of privacy and decorum that were far stronger than any law or rule. 56

The room was bare, every last trace of its occupant removed. A fine dust covered every surface, swirling in clouds as they took a few steps in. They both coughed explosively and stepped back, slamming the door.

“Skin,” Gerta croaked. “Collected from the ventilation filters. DNA for every person on campus, in a nice, even, Gaussian distribution. Means we can't use biometrics to figure out who was in this room before it was cleaned out.”

Lawrence tasted the dust in his mouth and swallowed his gag reflex. Technically, he knew that he was always inhaling and ingesting other peoples' dead skin-cells, but not by the mouthful.

“All right,” Gerta said. “*Now* you've got an Anomaly. Congrats, Lawrence. Personal growth awaits you.”

#

The campus only had one entrance to the wall that surrounded it. “Isn't that a fire-hazard?” Lawrence asked the guard who sat in the pillbox at the gate.

“Naw,” the man said. He was old, with the serene air of someone who'd been in the Order for decades. His beard was combed and shining, plaited into a thick braid that hung to his belly, which had only the merest hint of a little pot. “Comes a fire, we hit the panic button, reverse the magnets lining the walls, and the foundations destabilize at twenty sections. The whole thing'd come down in seconds. But no one's going to sneak in or out that way.”

“I did *not* know that,” Lawrence said.

“Public record, of course. But pretty obscure. Too tempting to a certain prankster mind-set.”

Lawrence shook his head. “Learn something new every day.”

The guard made a gesture that caused something to depressurize in the gateway. A primed *hum* vibrated through the floorboards. “We keep the inside of the vestibule at 10 atmospheres, and it opens inward from outside. No one can force that door open without us knowing about it in a pretty dramatic way.”

“But it must take forever to re-pressurize?”

“Not many people go in and out. Just data.”

Lawrence patted himself down.

“You got everything?”

“Do I seem nervous to you?”

The old timer picked up his tea and sipped at it. “You'd be an idiot if you weren't. How long since you've been out?”

“Not since I came in. Sixteen years ago. I was twenty one.” 73

“Yeah,” the old timer said. “Yeah, you'd be an idiot if you weren't nervous. You follow politics?” 74

“Not my thing,” Lawrence said. “I know it's been getting worse out there --” 75

The old timer barked a laugh. “Not your thing? It's probably time you got out into the wide world, son. You might ignore politics, but it won't ignore *you*.” 76

“Is it dangerous?” 77

“You going armed?” 78

“I didn't know that was an option.” 79

“Always an option. But not a smart one. Any weapon you don't know how to use belongs to your enemy. Just be circumspect. Listen before you talk. Watch before you act. They're good people out there, but they're in a bad, bad situation.” 80

Lawrence shuffled his feet and shifted the straps of his bindle. “You're not making me very comfortable with all this, you know.” 81

“Why are you going out anyway?” 82

“It's an Anomaly. My first. I've been waiting sixteen years for this. Someone poisoned the Securitat's data and left the campus. I'm going to go ask him why he did it.” 83

The old man blew the gate. The heavy door lurched open, revealing the vestibule. “Sounds like an Anomaly all right.” He turned away and Lawrence forced himself to move toward the vestibule. The man held his hand out before he reached it. “You haven't been outside in sixteen years, it's going to be a surprise. Just remember, we're a noble species, all appearances to the contrary notwithstanding.” 84

Then he gave Lawrence a little shove that sent him into the vestibule. The door slammed behind him. The vestibule smelled like machine oil and rubber, gaskety smells. It was dimly lit by rows of white LEDs that marched up the walls like drunken ants. Lawrence barely had time to register this before he heard a loud *thunk* from the outer door and it swung away. 85

#

Lawrence walked down the quiet street, staring up at the same sky he'd lived under, breathing the same air he'd always breathed, but marveling at how *different* it all was. His heartbeat and respiration were up -- the tips of the first two fingers on his right hand itched slightly under his feedback gloves -- and his thoughts were doing that race-condition thing where every time he tried to concentrate on something he thought about how he was trying to concentrate on something and should stop thinking about how he was concentrating and just concentrate. 86

This was how it had been sixteen years before, when he'd gone into the Order. He'd been so *angry* all the time then. Sitting in front of his keyboard, looking at the world through the lens of the network, suffering all the fools with poor grace. He'd been a bright 14 year old, a genius at 16, a rising star at 18, and a failure by 21. He was depressed all the time, his weight had ballooned to nearly 300 pounds, and he had been fired three times in two years. 87

One day he stood up from his desk at work -- he'd just been hired at a company that was selling learning, trainable vision-systems for analyzing images, who liked him because he'd retained his security clearance when he'd been fired from his previous job -- and walked out of the building. It had been a blowing, wet, grey day, and the streets of New York were as empty as they ever got. 88

Standing on Sixth Avenue, looking north from midtown, staring at the buildings the cars and the buses and the people and the tallwalkers, that's when he had his realization: *He was not meant to be in this world.* 89

It just didn't suit him. He could *see* its workings, see how its politics and policies were flawed, see how the system needed debugging, see what made its people work, but he couldn't touch it. Every time he reached in to adjust its settings, he got mangled by its gears. He couldn't convince his bosses that he knew what they were doing wrong. He couldn't convince his colleagues that he knew best. Nothing he did succeeded -- every attempt he made to right the wrongs of the world made him miserable and made everyone else angry. 90

Lawrence knew about humans, so he knew about this: this was the exact profile of the people in the Order. Normally he would have taken the subway home. It was forty blocks to his place, and he didn't get around so well anymore. Plus there was the rain and the wind. 91

But today, he walked, huffing and limping, using his cane more and more as he got further and further uptown, his knee complaining with each step. He got to his apartment and found that the elevator was out of service -- second time that month -- and so he took the stairs. He arrived at his apartment so out of breath he felt like he might vomit. 92

He stood in the doorway, clutching the frame, looking at his sofa and table, the piles of books, the dirty dishes from that morning's breakfast in the little sink. He'd watched a series of short videos about the Order once, and he'd been struck by the little monastic cells each member occupied, so neat, so tidy, everything in its perfect place, serene and thoughtful. 93

So unlike his place. 94

He didn't bother to lock the door behind him when he left. They said New York was the burglary capital of the developed world, but he didn't know anyone who'd been burgled. If 95

the burglars came, they were welcome to everything they could carry away and the landlord could take the rest. He was not meant to be in this world.

He walked back out into the rain and, what the hell, hailed a cab, and, hail mary, one stopped when he put his hand out. The cabbie grunted when he said he was going to Staten Island, but, what the hell, he pulled three twenties out of his wallet and slid them through the glass partition. The cabbie put the pedal down. The rain sliced through the Manhattan canyons and battered the windows and they went over the Verrazano bridge and he said goodbye to his life and the outside world forever, seeking a world he could be a part of. 96

Or at least, that's how he felt, as his heart swelled with the drama of it all. But the truth was much less glamorous. The brothers who admitted him at the gate were cheerful and a little weird, like his co-workers, and he didn't get a nice clean cell to begin with, but a bunk in a shared room and a detail helping to build more quarters. And they didn't leave his stuff for the burglars -- someone from the Order went and cleaned out his place and put his stuff in a storage locker on campus, made good with his landlord and so on. By the time it was all over, it all felt a little...ordinary. But in a good way, Ordinary was good. It had been a long time since he'd felt ordinary. Order, ordinary. They went together. He needed ordinary. 97

#

The Securitat van played a cheerful engine-tone as it zipped down the street towards him. It looked like a children's drawing -- a perfect little electrical box with two seats in front and a meshed-in lockup in the rear. It accelerated smoothly down the street towards him, then braked perfectly at his toes, rocking slightly on its suspension as its doors gull-winged up. 98

“Cool!” he said, involuntarily, stepping back to admire the smart little car. He reached for the lifelogger around his neck and aimed it at the two Securitat officers who were debarking, moving with stiff grace in their armor. As he raised the lifelogger, the officer closest to him reached out with serpentine speed and snatched it out of his hands, power-assisted fingers coming together on it with a loud, plasticky *crunk* as the device shattered into a rain of fragments. Just as quickly, the other officer had come around the vehicle and seized Lawrence's wrists, bringing them together in a painful, machine-assisted grip. 99

The one who had crushed his lifelogger passed his palms over Lawrence's chest, arms and legs, holding them a few millimeters away from him. Lawrence's pan went nuts, intrusion detection sensors reporting multiple hostile reads of his identifiers, millimeter-wave radar scans, HERF attacks, and assorted shenanigans. All his feedback systems went to full alert, going from itchy, back-of-the-neck liminal sensations into high intensity pinches, prods and buzzes. It was a deeply alarming sensation, like his internal organs were under attack. 100

He choked out an incoherent syllable, and the Securitat man who was hand-wanding him 101

raised a warning finger, holding it so close to his nose he went cross-eyed. He fell silent while the man continued to wand him, twitching a little to let his pan know that it was all OK.

“From the cult, then, are you?” the Securitat man said, after he'd kicked Lawrence's ankles apart and spread his hands on the side of the truck. 102

“That's right,” Lawrence said. “From the Order.” He jerked his head toward the gates, just a few tantalizing meters away. “I'm out --” 103

“You people are really something, you know that? You could have been *killed*. Let me tell you a few things about how the world works: when you are approached by the Securitat, you stand still with your hands stretched straight out to either side. You do *not* raise unidentified devices and point them at the officers. Not unless you're trying to commit suicide by cop. Is that what you're trying to do?” 104

“No,” Lawrence said. “No, of course not. I was just taking a picture for --” 105

“And you do *not* photograph or log our security procedures. There's a war on, you know.” The man's forehead bunched together. “Oh, for shit's sake. We should take you in now, you know it? Tie up a dozen people's day, just to process you through the system. You could end up in a cell for, oh, I don't know, a month. You want that?” 106

“Of course not,” Lawrence said. “I didn't realize --” 107

“You didn't, but you *should have*. If you're going to come walking around here where the real people are, you have to learn how to behave like a real person in the real world.” 108

The other man, who had been impassively holding Lawrence's wrists in a crushing grip, eased up. “Let him go?” he said. 109

The first officer shook his head. “If I were you, I would turn right around, walk through those gates, and never come out again. Do I make myself clear?” 110

Lawrence wasn't clear at all. Was the cop ordering him to go back? Or just giving him advice? Would he be arrested if he didn't go back in? It had been a long time since Lawrence had dealt with authority and the feeling wasn't a good one. His chest heaved, and sweat ran down his back, pooling around his ass, then moving in rivulets down the backs of his legs. 111

“I understand,” he said. Thinking: *I understand that asking questions now would not be a good idea*. 112

#

The subway was more or less as he remembered it, though the long line of people waiting to get through the turnstiles turned out to be a line to go through a security checkpoint, complete with bag-search and X-ray. But the New Yorkers were the same -- no one made 113

eye contact with anyone else, but if they did, everyone shared a kind of bitter shrug, as if to say, *Ain't it the fuckin' truth?*

But the smell was the same -- oil and damp and bleach and the indefinable, human smell of a place where millions had passed for decades, where millions would pass for decades to come. He found himself standing before a subway map, looking at it, comparing it to the one in his memory to find the changes, the new stations that must have sprung up during his hiatus from reality. 114

But there weren't new stations. In fact, it seemed to him that there were a lot *fewer* stations -- hadn't there been one at Bleeker Street and another at Cathedral Parkway? Yes, there had been -- but look now, they were gone, and... And there were stickers, white stickers over the places where the stations had been. He reached up and touched the one over Bleeker Street. 115

“I still can't get used to it, either,” said a voice at his side. I used to change for the F Train there every day when I was a kid.” It was a woman, about the same age as Gerta, but more beaten down by the years, deeper creases in her face, a stoop in her stance. But her face was kind, her eyes soft. 116

“What happened to it?” 117

She took a half-step back from him. “Bleeker Street,” she said. “You know, Bleeker Street? Like 9/11? Bleeker Street?” Like the name of the station was an incantation. 118

It rang a bell. It wasn't like he didn't ever read the news, but it had a way of sliding off of you when you were on campus, as though it was some historical event in a book, not something happening right there, on the other side of the wall. 119

“I'm sorry,” he said. “I've been away. Bleeker Street, yes, of course.” 120

She gave him a squinty stare. “You must have been *very* far away.” 121

He tried out a sheepish grin. “I'm a monk,” he said. “From the Order of Reflective Analytics. I've been out of the world for sixteen years. Until today, in fact. My name is Lawrence.” He stuck his hand out and she shook it like it was made of china. 122

“A monk,” she said. “That's very interesting. Well, you enjoy your little vacation.” She turned on her heel and walked quickly down the platform. He watched her for a moment, then turned back to the map, counting the missing stations. 123

#

When the train ground to a halt in the tunnel between 42nd and 50th street, the entire car let out a collective groan. When the lights flickered and went out, they groaned louder. The emergency lights came on in sickly green and an incomprehensible announcement played over the loudspeakers. Evidently, it was an order to evacuate, because the press of people began to struggle through the door at the front of the car, then further and further. Lawrence let the press of bodies move him too. 124

Once they reached the front of the train, they stepped down onto the tracks, each passenger turning silently to help the next, again with that *Ain't it the fuckin' truth?* look. Lawrence turned to help the person behind him and saw that it was the woman who'd spoken to him on the platform. She smiled a little smile at him and turned with practiced ease to help the person behind her. 125

They walked single file on a narrow walkway beside the railings. Securitat officers were strung out at regular intervals, wearing night scopes and high, rubberized boots. They played flashlights over the walkers as they evacuated. 126

“Does this happen often?” Lawrence said over his shoulder. His words were absorbed by the dead subterranean air and he thought that she might not have heard him but then she sighed. 127

“Only every time there's an anomaly in the head-count -- when the system says there's too many or too few people in the trains. Maybe once a week.” He could feel her staring at the back of his head. He looked back at her and saw her shaking her head. He stumbled and went down on one knee, clanging his head against the stone walls made soft by a fur of condensed train exhaust, cobwebs and dust. 128

She helped him to his feet. “You don't seem like a snitch, Lawrence. But you're a monk. Are you going to turn me in for being suspicious?” 129

He took a second to parse this out. “I don't work for the Securitat,” he said. It seemed like the best way to answer. 130

She snorted. “That's not what we hear. Come on, they're going to start shouting at us if we don't move.” 131

They walked the rest of the way to an emergency staircase together, and emerged out of a sidewalk grating, blinking in the remains of the autumn sunlight, a bloody color on the glass of the highrises. She looked at him and made a face. “You're filthy, Lawrence.” She thumped at his sleeves and great dirty clouds rose off them. He looked down at the knees of his pants and saw that they were hung with boogers of dust. 132

The New Yorkers who streamed past them ducked to avoid the dirty clouds. “Where can I clean up?” he said. 133

“Where are you staying?” 134

“I was thinking I'd see about getting a room at the Y or a backpacker's hostel, somewhere to stay until I'm done.” 135

“Done?” 136

“I'm on a complicated errand. Trying to locate someone who used to be in the Order.” 137

Her face grew hard again. “No one gets out alive, huh?” 138

He felt himself blushing. “It's not like that. Wow, you've got strange ideas about us. I want 139

to find this guy because he disappeared under mysterious circumstances and I want to --" How to explain Anomalies to an outsider? "It's a thing we do. Unravel mysteries. It makes us better people."

"Better people?" She snorted again. "Better than what? Don't answer. Come on, I live near here. You can wash up at my place and be on your way. You're not going to get into any backpacker's hostel looking like you just crawled out of a sewer -- you're more likely to get detained for being an `indigent of suspicious character.'" 140

He let her steer him a few yards uptown. "You think that I work for the Securitat but you're inviting me into your home?" 141

She shook her head and led him around a corner, along a long crosstown block, and then turned back uptown. "No," she said. "I think you're a confused stranger who is apt to get himself into some trouble if someone doesn't take you in hand and help you get smart, fast. It doesn't cost me anything to lend a hand, and you don't seem like the kind of guy who'd mug, rape and kill an old lady." 142

#

"The discipline," he said, "is all about keeping track of the way that the world is, and comparing it to your internal perceptions, all the time. When I entered the Order, I was really big. Fat, I mean. The discipline made me log every bit of food I ate, and I discovered a few important things: first, I was eating about 20 times a day, just grazing on whatever happened to be around. Second, that I was consuming about 4,000 calories a day, mostly in industrial sugars like high-fructose corn syrup. Just *knowing* how I ate made a gigantic difference. I felt like I ate sensibly, always ordering a salad with lunch and dinner, but I missed the fact that I was glooping on half a cup of sweetened, high-fat dressing, and having a cookie or two every hour between lunch and dinner, and a half-pint of ice-cream before bed most nights. 143

"But it wasn't just food -- in the Order, we keep track of *everything*; our typing patterns, our sleeping patterns, our moods, our reading habits. I discovered that I read faster when I've been sleeping more, so now, when I need to really get through a lot of reading, I make sure I sleep more. Used to be I'd try to stay up all night with pots of coffee to get the reading done. Of course, the more sleep-deprived I was, the slower I read; and the slower I read the more I needed to stay up to catch up with the reading. No wonder college was such a blur. 144

"So that's why I've stayed. It's empiricism, it's as old as Newton, as the Enlightenment." He took another sip of his water, which tasted like New York tap water had always tasted (pretty good, in fact), and which he hadn't tasted for sixteen years. The woman was called Posy, and her old leather sofa was worn but well-loved, and smelled of saddle soap. She was watching him from a kitchen chair she'd brought around to the living room of the tiny apartment, rubbing her stockinged feet over the good wool carpet that showed a few old stains hiding beneath strategically placed furnishings and knick-knacks. 145

He had to tell her the rest, of course. You couldn't understand the Order unless you understood the rest. “I'm a screwup, Posy. Or at least, I was. We all were. Smart and motivated and promising, but just a wretched person to be around. Angry, bitter, all those smarts turned on biting the heads off of the people who were dumb enough to care about me or employ me. And so smart that I could talk myself into believing that it was all everyone else's fault, the idiots. It took instrumentation, empiricism, to get me to understand the patterns of my own life, to master my life, to become the person I wanted to be.” 146

“Well, you seem like a perfectly nice young man now,” Posy said. 147

That was clearly my cue to go, and he'd changed into a fresh set of trousers, but he couldn't go, not until he picked apart something she'd said earlier. “Why did you think I was a snitch?” 148

“I think you know that very well, Lawrence,” she said. “I can't imagine someone who's so into measuring and understanding the world could possibly have missed it.” 149

Now he knew what she was talking about. “We just do contract work for the Securitat. It's just one of the ways the Order sustains itself.” The founders had gone into business refilling toner cartridges, which was like the 21st century equivalent of keeping bees or brewing dark, thick beer. They'd branched out into remote IT administration, then into data-mining and security, which was a natural for people with Order training. “But it's all anonymized. We don't snitch on people. We report on anomalous events. We do it for lots of different companies, too -- not just the Securitat.” 150

Posy walked over to the window behind her small dining room table, rolling away a couple of handsome old chairs on castors to reach it. She looked down over the billion lights of Manhattan, stretching all the way downtown to Brooklyn. She motioned to him to come over, and he squeezed in beside her. They were on the twenty-third floor, and it had been many years since he'd stood this high and looked down. The world is different from high up. 151

“There,” she said, pointing at an apartment building across the way. “There, you see it? With the broken windows?” He saw it, the windows covered in cardboard. “They took them away last week. I don't know why. You never know why. You become a person of interest and they take you away and then later, they always find a reason to keep you away.” 152

Lawrence's hackles were coming up. He found stuff that didn't belong in the data -- he didn't arrest people. “So if they always find a reason to keep you away, doesn't that mean --” 153

She looked like she wanted to slap him and he took a step back. “We're all guilty of something, Lawrence. That's how the game is rigged. Look closely at anyone's life and you'll find, what, a little black-marketeering, a copyright infringement, some cash economy business with unreported income, something obscene in your Internet use, something in your bloodstream that shouldn't be there. I bought that sofa from a *cop*, Lawrence, bought 154

it ten years ago when he was leaving the building. He didn't give me a receipt and didn't collect tax, and technically that makes us offenders." She slapped the radiator. "I overrode the governor on this ten minutes after they installed it. Everyone does it. They make it easy -- you just stick a penny between two contacts and hey presto, the city can't turn your heat down anymore. They wouldn't make it so easy if they didn't expect everyone to do it -- and once everyone's done it, we're all guilty.

"The people across the street, they were Pakistani or maybe Sri Lankan or Bangladeshi. I'd see the wife at the service laundry. Nice professional lady, always lugging around a couple kids on their way to or from day-care. She --" Posy broke off and stared again. "I once saw her reach for her change and her sleeve rode up and there was a number tattooed there, there on her wrist." Posy shuddered. "When they took her and her husband and their kids, she stood at the window and pounded at it and screamed for help. You could hear her from here." 155

"That's terrible," Lawrence said. "But what does it have to do with the Order?" 156

She sat back down. "For someone who is supposed to know himself, you're not very good at connecting the dots." 157

Lawrence stood up. He felt an obscure need to apologize. Instead, he thanked her and put his glass in the sink. She shook his hand solemnly. 158

"Take care out there," she said. "Good luck finding your escapee." 159

#

Here's what Lawrence knew about Zbigniew Krotoski. He had been inducted into the Order four years earlier. He was a native-born New Yorker. He had spent his first two years in the Order trying to coax some of the elders into a variety of pointless flamewars about the ethics of working for the Securitat, and then had settled into being a very productive member. He spent his 20 percent time -- the time when each monk had to pursue non-work-related projects -- building aerial photography rigs out of box-kites and tiny cameras that the Monks installed on their systems to help them monitor their body mechanics and ergonomic posture. 160

Zbigkrot performed in the eighty-fifth percentile of the Order, which was respectable enough. Lawrence had started there and had crept up and down as low as 70 and as high as 88, depending on how he was doing in the rest of his life. Zbigkrot was active in the gardens, both the big ones where they grew their produce and a little allotment garden where he indulged in baroque cross-breeding experiments, which were in vogue among the monks then. 161

The Securitat stream to which he'd added 68 bytes was long gone, but it was the kind of thing that the Order handled on a routine basis: given the timing and other characteristics, Lawrence thought it was probably a stream of purchase data from hardware and grocery stores, to be inspected for unusual patterns that might indicate someone buying bomb 162

ingredients. Zbigkrot had worked on this kind of data thousands of times before, six times just that day. He'd added the sixty-eight bytes and then left.

Zbigkrot once had a sister in New York -- that much could be ascertained. Anja Krotoski had lived on 23d Street in a co-op near Lexington. But that had been four years previous, when he'd joined the Order, and she wasn't there anymore. Her numbers all rang dead. 163

The apartment building had once been a pleasant, middle-class sort of place, with a red awning and a niche for a doorman. Now it had become more run down, the awning's edges frayed, one pane of lobby glass broken out and replaced with a sheet of cardboard. The doorman was long gone. 164

It seemed to Lawrence that this fate had befallen many of the City's buildings. They reminded him of the buildings he'd seen in Belgrade one time, when he'd been sent out to brief a gang of outsource programmers his boss had hired -- neglected for years, indifferently patched by residents who had limited access to materials. 165

It was the dinner hour, and a steady trickle of people were letting themselves into Anja's old building. Lawrence watched a couple of them enter the building and noticed something wonderful and sad: as they approached the building, their faces were the hard masks of city-dwellers, not meeting anyone's eye, clipping along at a fast pace that said, “Don't screw with me.” But once they passed the threshold of their building and the door closed behind them, their whole affect changed. They slumped, they smiled at one another, they leaned against the mailboxes and set down their bags and took off their hats and fluffed their hair and turned back into people. 166

He remembered that feeling from his life before, the sense of having two faces: the one he showed to the world and the one that he reserved for home. In the Order, he only wore one face, one that he knew in exquisite detail. 167

He approached the door now, and his pan started to throb ominously, letting him know that he was enduring hostile probes. The building wanted to know who he was and what business he had there, and it was attempting to fingerprint everything about him from his pan to his gait to his face. 168

He took up a position by the door and dialed back the pan's response to a dull pulse. He waited for a few minutes until one of the residents came down: a middle-aged man with a dog, a little sickly-looking schnauzer with grey in its muzzle. 169

“Can I help you?” the man said, from the other side of the security door, not unlatching it. 170

“I'm looking for Anja Krotoski,” he said. “I'm trying to track down her brother.” 171

The man looked him up and down. “Please step away from the door.” 172

He took a few steps back. “Does Ms Krotoski still live here?” 173

The man considered. “I'm sorry, sir, I can't help you.” He waited for Lawrence to react.

“You don't know, or you can't help me?”

“Don't wait under this awning. The police come if anyone waits under this awning for more than three minutes.”

The man opened the door and walked away with his dog.

#

His phone rang before the next resident arrived. He cocked his head to answer it, then remembered that his lifelogger was dead and dug in his jacket for a mic. There was one at his wrist pulse-points used by the health array. He unvelcroed it and held it to his mouth.

“Hello?”

“It's Gerta, boyo. Wanted to know how your Anomaly was going.”

“Not good,” he said. “I'm at the sister's place and they don't want to talk to me.”

“You're walking up to strangers and asking them about one of their neighbors, huh?”

He winced. “Put it that way, yeah, OK, I understand why this doesn't work. But Gerta, I feel like Rip Van Winkle here. I keep putting my foot in it. It's so different.”

“People are people, Lawrence. Every bad behavior and every good one lurks within us. They were all there when you were in the world -- in different proportion, with different triggers. But all there. You know yourself very well. Can you observe the people around you with the same keen attention?”

He felt slightly put upon. “That's what I'm trying --”

“Then you'll get there eventually. What, you're in a hurry?”

Well, no. He didn't have any kind of timeline. Some people chased Anomalies for *years*. But truth be told, he wanted to get out of the City and back onto campus. “I'm thinking of coming back to Campus to sleep.”

Gerta clucked. “Don't give in to the agoraphobia, Lawrence. Hang in there. You haven't even heard my news yet, and you're already ready to give up?”

“What news? And I'm not giving up, just want to sleep in my own bed --”

“The entry checkpoints, Lawrence. You can*{not}* do this job if you're going to spend four hours a day in security queues. Anyway, the news.

“It wasn't the first time he did it. I've been running the logs back three years and I've found at least a dozen streams that he tampered with. Each time he used a different technique. This was the first time we caught him. Used some pretty subtle tripwires when he did it, so he'd know if anyone ever caught on. Must have spent his whole life living on edge, waiting for that moment, waiting to bug out. Must have been a hard life.”

“What was he doing? Spying?”

“Most assuredly,” Gerta said. “But for whom? For the enemy? The Securitat?”

They'd considered going to the Securitat with the information, but why bother? The Order did business with the Securitat, but tried never to interact with them on any other terms. The Securitat and the Order had an implicit understanding: so long as the Order was performing excellent data-analysis, it didn't have to fret the kind of overt scrutiny that prevailed in the real world. Undoubtedly, the Securitat kept satellite eyes, data-snoopers, wiretaps, millimeter radar and every other conceivable surveillance trained on each Campus in the world, but at the end of the day, they were just badly socialized geeks who'd left the world, and useful geeks at that. The Securitat treated the Order the way that Lawrence's old bosses treated the company sysadmins: expendable geeks who no one cared about -- so long as nothing went wrong.

No, there was no sense in telling the Securitat about the 68 bytes.

“Why would the Securitat poison its own data-streams?”

“You know that when the Soviets pulled out of Finland, they found 40 *kilometers* of wire-tapping wire in KGB headquarters? The building was only 12 storeys tall! Spying begets spying. The worst, most dangerous enemy the Securitat has is the Securitat.”

There were Securitat vans on the street around him, going past every now and again, eerily silent engines, playing their cheerful music. He stepped back into shadow, then thought better of it and stood under a pool of light.

“OK, so it was a habit. How do I find him? No one in the sister's building will talk to me.”

“You need to put them at their ease. Tell them the truth, that often works.”

“You know how people feel about the Order out here?” He thought of Posy. “I don't know if the truth is going to work here.”

“You've been in the order for sixteen years. You're not just some fumble-tongued outcast anymore. Go talk to them.”

“But --”

“Go, Lawrence. Go. You're a smart guy, you'll figure it out.”

He went. Residents were coming home every few minutes now, carrying grocery bags, walking dogs, or dragging their tired feet. He almost approached a young woman, then figured that she wouldn't want to talk to a strange man on the street at night. He picked a guy in his thirties, wearing jeans and a huge old vintage coat that looked like it had come off the eastern front.

“Scuse me,” he said. “I'm trying to find someone who used to live here.”

The guy stopped and looked Lawrence up and down. He had a handsome sweater on underneath his coat, design-y and cosmopolitan, the kind of thing that made Lawrence think of Milan or Paris. Lawrence was keenly aware of his generic Order-issued suit, a brown, rumpled, ill-fitting thing, topped with a polymer coat that, while warm, hardly flattered. 207

“Good luck with that,” he said, then started to move past. 208

“Please,” Lawrence said. “I'm -- I'm not used to how things are around here. There's probably some way I could ask you this that would put you at your ease, but I don't know what it is. I'm not good with people. But I really need to find this person, she used to live here.” 209

The man stopped, looked at him again. He seemed to recognize something in Lawrence, or maybe it was that he was disarmed by Lawrence's honesty. 210

“Why would you want to do that?” 211

“It's a long story,” he said. “Basically, though: I'm a monk from the Order of Reflective Analysitcs and one of our guys has disappeared. His sister used to live here -- maybe she still does -- and I wanted to ask her if she knew where I could find him.” 212

“Let me guess, none of my neighbors wanted to help you.” 213

“You're only the second guy I've asked, but yeah, pretty much.” 214

“Out here in the real world, we don't really talk about each other to strangers. Too much like being a snitch. Lucky for you, my sister's in the Order, out in Oregon, so I know you're not all a bunch of snoops and stoolies. Who're you looking for?” 215

Lawrence felt a rush of gratitude for this man. “Anja Krotosky, number 11-J?” 216

“Oh,” the man said. “Well, yeah, I can see why you'd have a hard time with the neighbors when it comes to old Anja. She was well-liked around here, before she went.” 217

“Where'd she go? When?” 218

“What's your name, friend?” 219

“Lawrence.” 220

“Lawrence, Anja *went*. Middle of the night kind of thing. No one heard a thing. The CCTVs stopped working that night. Nothing on the drive the next day. No footage at all.” 221

“Like she skipped out?” 222

“They stopped delivering flyers to her door. There's only one power stronger than direct marketing.” 223

“The Securitat took her?” 224

“That's what we figured. Nothing left in her place. Not a stick of furniture. We don't talk about it much. Not the thing that it pays to take an interest in.” 225

“How long ago?”

“Two years ago,” he said. A few more residents pushed past them. “Listen, I approve of what you people do in there, more or less. It's good that there's a place for the people who don't -- you know, who don't have a place out here. But the way you make your living. I told my sister about this, the last time she visited, and she got very angry with me. She didn't see the difference between watching yourself and being watched.”

Lawrence nodded. “Well, that's true enough. We don't draw a really sharp distinction. We all get to see one another's stats. It keeps us honest.”

“That's fine, if you have the choice. But --” He broke off, looking self-conscious. Lawrence reminded himself that they were on a public street, the cameras on them, people passing by. Was one of them a snitch? The Securitat had talked about putting him away for a month, just for logging them. They could watch him all they wanted, but he couldn't look at them.

“I see the point.” He sighed. He was cold and it was full autumn dark now. He still didn't have a room for the night and he didn't have any idea how he'd find Anja, much less zbigkrot. He began to understand why Anomalies were such a big deal.

#

He'd walked 18,453 steps that day, about triple what he did on campus. His heart rate had spiked several times, but not from exertion. Stress. He could feel it in his muscles now. He should really do some biofeedback, try to calm down, then run back his lifelogger and make some notes on how he'd reacted to people through the day.

But the lifelogger was gone and he barely managed 22 seconds his first time on the biofeedback. His next ten scores were much worse.

It was the hotel room. It had once been an office, and before that, it had been half a hotel-room. There were still scuff-marks on the floor from where the wheeled office chair had dug into the scratched lino. The false wall that divided the room in half was thin as paper and Lawrence could hear every snuffle from the other side. The door to Lawrence's room had been rudely hacked in, and weak light shone through an irregular crack over the jamb.

The old New Yorker Hotel had seen better days, but it was what he could afford, and it was central, and he could hear New York outside the window -- he'd gotten the half of the hotel room with the window in it. The lights twinkled just as he remembered them, and he still got a swimmy, vertiginous feeling when he looked down from the great height.

The clerk had taken his photo and biometrics and had handed him a tracker-key that his pan was monitoring with tangible suspicion. It radiated his identity every few yards, and in the elevator. It even seemed to track which part of the minuscule room he was in. What the hell did the hotel do with all this information?

Oh, right -- it shipped it off to the Securitat, who shipped it to the Order, where it was processed for suspicious anomalies. No wonder there was so much work for them on campus. Multiply the New Yorker times a hundred thousand hotels, two hundred thousand schools, a million cabs across the nation -- there was no danger of the Order running out of work. 236

The hotel's network tried to keep him from establishing a secure connection back to the Order's network, but the Order's countermeasures were better than the half-assed ones at the hotel. It took a lot of tunneling and wrapping, but in short measure he had a strong private line back to the Campus -- albeit a slow line, what with all the jiggery-pokery he had to go through. 237

Gerta had left him with her file on zbigkrot and his activities on the network. He had several known associates on Campus, people he ate with or playing on intramural teams with, or did a little extreme programming with. Gerta had bulk-messaged them all with an oblique query about his personal life and had forwarded the responses to Lawrence. There was a mountain of them, and he started to plow through them. 238

He started by compiling stats on them -- length, vocabulary, number of paragraphs -- and then started with the outliers. The shortest ones were polite shrugs, apologies, don't have anything to say. The long ones -- whew! They sorted into two categories: general whining, mostly from noobs who were still getting accustomed to the way of the Order; and protracted complaints from old hands who'd worked with zbigkrot long enough to decide that he was incorrigible. Lawrence sorted these quickly, then took a glance at the median responses and confirmed that they appeared to be largely unhelpful generalizations of the sort that you might produce on a co-worker evaluation form -- a proliferation of null adjectives like “satisfactory,” “pleasant,” “fine.” 239

Somewhere in this haystack -- Lawrence did a quick word-count and came back with 140,000 words, about two good novels' worth of reading -- was a needle, a clue that would show him the way to unravel the Anomaly. It would take him a couple days at least to sort through it all in depth. He ducked downstairs and bought some groceries at an all-night grocery store in Penn Station and went back to his room, ready to settle in and get the work done. He could use a few days' holiday from New York, anyway. 240

#

> About time Zee Big Noob did a runner. He never had a moment's happiness here, and I never figured out why he'd bother hanging around when he hated it all so much. 241

> Ever meet the kind of guy who wanted to tell you just how much you shouldn't be enjoying the things you enjoy? The kind of guy who could explain, in detail, *exactly* why your passions were stupid? That was him. 242

> “Brother Antony, why are you wasting your time collecting tin toys? They're badly made, unlovely, and represent, at best, a history of slave labor, starting with your cherished `Made 243

in Occupied Japan,' tanks. Christ, why not collect rape-camp macrame while you're at it?" He had choice words for all of us about our passions, but I was singled out because I liked to extreme program in my room, which I'd spent a lot of time decorating. (See pic, below, and yes, I built and sanded and mounted every one of those shelves by hand) (See magnification shot for detail on the joinery. Couldn't even drive a nail when I got here) (Not that there are any nails in there, it's all precision-fitted tongue and groove) (holy moley, lasers totally rock)

> But he reserved his worst criticism for the Order itself. You know the litany: we're a cult, we're brainwashed, we're dupes of the Securitat. He was convinced that every instrument in the place was feeding up to the Securitat itself. He'd mutter about this constantly, whenever we got a new stream to work on -- "Is this your lifelog, Brother Antony? Mine? The number of flushes per shitter in the west wing of campus?" 244

> And it was no good trying to reason with him. He just didn't acknowledge the benefit of introspection. "It's no different from them," he'd say, jerking his thumb up at the ceiling, as though there was a Securitat mic and camera hidden there. "You're just flooding yourself with useless information, trying to find the useful parts. Why not make some predictions about which part of your life you need to pay attention to, rather than spying on every process? You're a spy in your own body. 245

> So why did I work with him? I'll tell you: first, he was a shit-hot programmer. I know his stats say he was way down in the 78th percentile, but he could make every line of code that *I* wrote smarter. We just don't have a way of measuring that kind of effect (yes, someone should write one; I've been noodling with a framework for it for months now). 246

> Second, there was something dreadfully fun about listening him light into *other* people, *their* ridiculous passions and interests. He could be incredibly funny, and he was incisive if not insightful. It's shameful, but there you have it. I am imperfect. 247

> Finally, when he wasn't being a dick, he was a good guy to have in your corner. He was our rugby team's fullback, the baseball team's shortstop, the tank on our MMOG raids. You could rely on him. 248

> So I'm going to miss him, weirdly. If he's gone for good. I wouldn't put it past him to stroll back onto campus someday and say, "What, what? I just took a little French Leave. Jesus, overreact much?" 249

Plenty of the notes ran in this direction, but this was the most articulate. Lawrence read it through three times before adding it to the file of useful stuff. It was a small pile. Still, Gerta kept forwarding him responses. The late responders had some useful things to say: 250

> He mentioned a sister. Only once. A whole bunch of us were talking about how our families were really supportive of our coming to the Order, and after it had gone round the whole circle, he just kind of looked at the sky and said, "My sister thought I was an idiot to go inside. I asked her what she thought I should do and she said, `If I was you, kid, I'd 251

just disappear before someone disappeared me.'" Naturally we all wanted to know what he meant by that. "I'm not very good at bullshitting, and that's a vital skill in today's world. She was better at it than me, when she worked at it, but she was the kind of person who'd let her guard slip every now and then."

Lawrence noted that zbigkrot had used the past-tense to describe his sister. He'd have known about her being disappeared then. 252

He stared at the walls of his hotel room. The room next door was now occupied by at least four people and he couldn't even imagine how you'd get that many people inside -- he didn't know how four people could all *stand* in the room, let alone lie down and sleep. But there were definitely four voices from next door, talking in Chinese. 253

New York was outside the window and far below, and the sun had come up far enough that everything was bright and reflective, the cars and the buildings and the glints from sunglasses far below. He wasn't getting anywhere with the docs, the sister, the datastreams. And there was New York, just outside the window. 254

He dug under the bed and excavated his boots, recoiling from them with soft, dust-furred old socks and worse underneath the mattress. 255

#

The Securitat man pointed to Lawrence as he walked past Penn Station. Lawrence stopped and pointed at himself in a who-me? gesture. The Securitat man pointed again, then pointed to his alcove next to the entrance. 256

Lawrence's pan didn't like the Securitat man's incursions and tried to wipe itself. 257

"Sir," he said. "My pan is going nuts. May I put down my arms so I can tell it to let you in?" 258

The Securitat man acted as though he hadn't heard, just continued to wave his hands slowly over Lawrence's body. 259

"Come with me," the Securitat man said, pointing to the door on the other side of the alcove that led into a narrow corridor, into the bowels of Penn Station. The door let out onto the concourse, thronged with people shoving past each other, disgorged by train after train. Though none made eye contact with them or each other, they parted magically before them, leaving them with a clear path. 260

Lawrence's pan was not helping him. Every inch of his body itched as it nagged at him about the depredations it was facing from the station and the Securitat man. This put him seriously on edge and made his heart and breathing go crazy, triggering another round of warnings from his pan, which wanted him to calm down, but wouldn't help. This was a bad failure mode, one he'd never experienced before. He'd have to file a bug report. 261

Some day. 262

The Securitat's outpost in Penn Station was as clean as a dentist's office, but with mesh-reinforced windows and locks that made three distinct clicks and a soft hiss when the door closed. The Securitat man impersonally shackled Lawrence to a plastic chair that was bolted into the floor and then went off to a check-in kiosk that he whispered into and prodded at. There was no one else in evidence, but there were huge CCTV cameras, so big that they seemed to be throwbacks to an earlier era, some paleolithic ancestor of the modern camera. These cameras were so big because they were meant to be seen, meant to let you know that you were being watched. 263

The Securitat man took him away again, stood him in an interview room where the cameras were once again in voluble evidence. 264

“Explain everything,” the Securitat man said. He rolled up his mask so that Lawrence could see his face, young and hard. He'd been in diapers when Lawrence went into the Order. 265

And so Lawrence began to explain, but he didn't want to explain everything. Telling this man about zbigkrot tampering with Securitat data-streams would not be good; telling him about the disappearance of Anja Krotoski would be even worse. So -- he lied. He was already so stressed out that there was no way the lies would register as extraordinary to the sensors that were doubtless trained on him. 266

He told the Securitat man that he was in the world to find an Order member who'd taken his leave, because the Order wanted to talk to him about coming back. He told the man that he'd been trying to locate zbigkrot by following up on his old contacts. He told the Securitat man that he expected to find zbigkrot within a day or two and would be going back to the Order. He implied that he was crucial to the Order and that he worked for the Securitat all the time, that he and the Securitat man were on the same fundamental mission, on the same team. 267

The Securitat man's face remained an impassive mask throughout. He touched an ear-bead from time to time, cocking his head slightly to listen. Someone else was listening to Lawrence's testimony and feeding him more material. 268

The Securitat man scooted his chair closer to Lawrence, leaned in close, searching his face. “We don't have any record of this Krotoski person,” he said. “I advise you to go home and forget about him.” 269

The words were said without any inflection at all, and that was scariest of all -- Lawrence had no doubt about what this meant. There were no records because Zbigniew Krotoski was erased. 270

Lawrence wondered what he was supposed to say to this armed child now. Did he lay his finger alongside of his nose and wink? Apologize for wasting his time? Everyone told him to listen before he spoke here. Should he just wait? 271

“Thank you for telling me so,” he said. “I appreciate the advice.” He hoped it didn't sound 272

sarcastic.

The Securitat man nodded. “You need to adjust the settings on your pan. It reads like it's got something to hide. Here in the world, it has to accede to lawful read attempts without hesitation. Will you configure it?” 273

Lawrence nodded vigorously. While he'd recounted his story, he'd imagined spending a month in a cell while the Securitat looked into his deeds and history. Now it seemed like he might be on the streets in a matter of minutes. 274

“Thank you for your cooperation.” The man didn't say it. It was a recording, played by hidden speakers, triggered by some unseen agency, and on hearing it, the Securitat man stood and opened the door, waiting for the three distinct clicks and the hiss before tugging at the handle. 275

They stood before the door to the guard's niche in front of Penn Station and the man rolled up his mask again. This time he was smiling an easy smile and the hardness had melted a little from around his eyes. “You want a tip, buddy?” 276

“Sure.” 277

“Look, this is New York. We all just want to get along here. There's a lot of bad guys out there. They got some kind of beef. They want to fuck with us. We don't want to let them do that. You want to be safe here, you got to show New York that you're not a bad guy. That you're not here to fuck with us. We're the city's protectors, and we can spot someone who doesn't belong here the way your body can spot a cold-germ. The way you're walking around here, looking around, acting -- I could tell you didn't belong from a hundred yards. You want to avoid trouble, you get less strange, fast. You get me?” 278

“I get you,” he said. “Thank you, sir.” Before the Securitat man could say any more, Lawrence was on his way. 279

#

The man from Anja's building had a different sweater on, but the new one -- bulky wool the color of good chocolate -- was every bit as handsome as the one he'd had on before. He was wearing some kind of citrusy cologne and his hair fell around his ears in little waves that looked so natural they had to be fake. Lawrence saw him across the Starbucks and had a crazy urge to duck away and change into better clothes, just so he wouldn't look like such a fucking hayseed next to this guy. *I'm a New Yorker,* he thought, *or at least I was. I belong here.* 280

“Hey, Lawrence, fancy meeting you here!” He shook Lawrence's hand and gave him a wry, you-and-me-in-it-together smile. “How's the vision quest coming?” 281

“Huh?” 282

“The Anomaly -- that's what you're chasing, aren't you? It's your little rite of passage. My 283

sister had one last year. Figured out that some guy who travelled from Fort Worth to Portland, Oregon every week was actually a fictional construct invented by cargo smugglers who used his seat to plant a series of mules running heroin and cash. She was so proud afterwards that I couldn't get her to shut up about it. You had the holy fire the other night when I saw you."

Lawrence felt himself blushing. "It's not really `holy' -- all that religious stuff, it's just a metaphor. We're not really spiritual." 284

"Oh, the distinction between the spiritual and the material is pretty arbitrary anyway. Don't worry, I don't think you're a cultist or anything. No more than any of us, anyway. So, how's it going?" 285

"I think it's over," he said. "Dead end. Maybe I'll get an easier Anomaly next time." 286

"Sounds awful! I didn't think you were allowed to give up on Anomalies?" 287

Lawrence looked around to see if anyone was listening to them. "This one leads to the Securitat," he said. "In a sense, you could say that I've solved it. I think the guy I'm looking for ended up with his sister." 288

The man's expression froze, not moving one iota. "You must be disappointed," he said, in neutral tones. "Oh well." He leaned over the condiment bar to get a napkin and wrestled with the dispenser for a moment. It didn't cooperate, and he ended up holding fifty napkins. He made a disgusted noise and said, "Can you help me get these back into the dispenser?" 289

Lawrence pushed at the dispenser and let the man feed it his excess napkins, arranging them neatly. While he did this, he contrived to hand Lawrence a card, which Lawrence cupped in his palm and then ditched into his inside jacket pocket under the pretense of reaching in to adjust his pan. 290

"Thanks," the man said. "Well, I guess you'll be going back to your campus now?" 291

"In the morning," Lawrence said. "I figured I'd see some New York first. Play tourist, catch a Broadway show." 292

The man laughed. "All right then -- you enjoy it." He did nothing significant as he shook Lawrence's hand and left, holding his paper cup. He did nothing to indicate that he'd just brought Lawrence into some kind of illegal conspiracy. 293

Lawrence read the note later, on a bench in Bryant Park, holding a paper bag of roasted chestnuts and fastidiously piling the husks next to him as he peeled them away. It was a neatly cut rectangle of card sliced from a health-food cereal box. Lettered on the back of it in pencil were two short lines: 294

Wednesdays 8:30PM Half Moon Cafe 164 2nd Ave 295

The address was on the Lower East Side, a neighborhood that had been scorchingly trendy 296

the last time Lawrence had been there. More importantly: it was Wednesday.

#

The Half Moon Cafe turned out to be one of those New York places that are so incredibly hip they don't have a sign or any outward indication of their existence. Number 164 was a frosted glass door between a dry-cleaner's and a Pakistani grocery store, propped open with a squashed Mountain Dew can. Lawrence opened the door, heart pounding, and slipped inside. A long, dark corridor stretched away before him, with a single door at the end, open a crack, dim light spilling out of it. He walked quickly down the corridor, sure that there were cameras observing him. 297

The door at the end of the hallway had a sheet of paper on it, with HALF MOON CAFE laser-printed in its center. Good food smells came from behind it, and the clink of cutlery, and soft conversation. He nudged it open and found himself in a dim, flickering room lit by candles and draped with gathered curtains that turned the walls into the proscenia of a grand and ancient stage. There were four or five small tables and a long one at the back of the room, crowded with people, with wine in ice-buckets at either end. 298

A very pretty girl stood at the podium before him, dressed in a conservative suit, but with her hair shaved into a half-inch brush of electric blue. She lifted an eyebrow at him as though she was sharing a joke with him and said, “Welcome to the Half Moon. Do you have a reservation?” 299

Lawrence had carefully shredded the bit of cardboard and dropped its tatters in six different trash cans, feeling like a real spy as he did so (and realizing at the same time that going to all these different cans was probably anomalous enough in itself to draw suspicion). 300

“A friend told me he'd meet me here,” he said. 301

“What was your friend's name?” 302

Lawrence stuck his chin in the top of his coat to tell his pan to stop warning him that he was breathing too shallowly. “I don't know,” he said. He craned his neck to look behind her at the tables. He couldn't see the man, but it was so dark in the restaurant -- 303

“You made it, huh?” The man had yet another fantastic sweater on, this one with a tight herringbone weave and ribbing down the sleeves. He caught Lawrence sizing him up and grinned. “My weakness -- the world's wool farmers would starve if it wasn't for me.” He patted the greeter on the hand. “He's at our table.” She gave Lawrence a knowing smile and the tiniest hint of a wink. 304

“Nice of you to come,” he said as they threaded their way slowly through the crowded tables, past couples having murmured conversations over candlelight, intense business dinners, an old couple eating in silence with evident relish. “Especially as it's your last night in the city.” 305

“What kind of restaurant is this?” 306

“Oh, it's not any kind of restaurant at all. Private kitchen. Ormund, he owns the place and cooks like a wizard. He runs this little place off the books for his friends to eat in. We come every Wednesday. That's his vegan night. You'd be amazed with what that guy can do with some greens and a sweet potato. And the cacao nib and avocado chili chocolate is something else.” 307

The large table was crowded with men and women in their thirties, people who had the look of belonging. They dressed well in fabrics that draped or clung like someone had thought about it, with jewelry that combined old pieces of brass with modern plastics and heavy clay beads that clicked like pool-balls. The women were beautiful or at least handsome -- one woman with cheekbones like snowplows and a jawline as long as a ski-slope was possibly the most striking person he'd ever seen up close. The men were handsome or at least craggy, with three-day beards or neat, full mustaches. They were talking in twos and threes, passing around overflowing dishes of steaming greens and oranges and browns, chatting and forking by turns. 308

“Everyone, I'd like you to meet my guest for the evening.” The man gestured at Lawrence. Lawrence hadn't told the man his name yet, but he made it seem like he was being gracious and letting Lawrence introduce himself. 309

“Lawrence,” he said, giving a little wave. “Just in New York for one more night,” he said, still waving. He stopped waving. The closest people -- including the striking woman with the cheekbones -- waved back, smiling. The furthest people stopped talking and tipped their forks at him or at least cocked their heads. 310

“Sara,” the cheekbones woman said, pronouncing the first “a” long, “Sah-rah,” and making it sound unpretentious. The low-key buzzing from Lawrence's pan warned him that he was still overwrought, breathing badly, heart thudding. Who were these people? 311

“And I'm Randy,” the man said. “Sorry, I should have said that sooner.” 312

The food was passed down to his end. It was delicious, almost as good as the food at the campus, which was saying something -- there was a dedicated cadre of cooks there who made gastronomy their 20 percent projects, using elaborate computational models to create dishes that were always different and always delicious. 313

The big difference was the company. These people didn't have to retreat to belong, they belonged right here. Sara told him about her job managing a specialist antiquarian bookstore and there were a hundred stories about her customers and their funny ways. Randy worked at an architectural design firm and he had done some work at Sara's bookstore. Down the table there were actors and waiters and an insurance person and someone who did something in city government, and they all ate and talked and made him feel like he was a different kind of man, the kind of man who could live on the outside. 314

The coals of the conversation banked over port and coffees as they drifted away in twos and threes. Sara was the last to leave and she gave him a little hug and a kiss on the 315

cheek. “Safe travels, Lawrence.” Her perfume was like an orange on Christmas morning, something from his childhood. He hadn't thought of his childhood in decades.

Randy and he looked at each other over the litter on the table. The server brought a check over on a small silver tray and Randy took a quick look at it. He drew a wad of twenties in a bulldog clip out of his inside coat pocket and counted off a large stack, then handed the tray to the server, all before Lawrence could even dig in his pocket. 316

“Please let me contribute,” he managed, just as the server disappeared. 317

“Not necessary,” Randy said, setting the clip down on the table. There was still a rather thick wad of money there. Lawrence hadn't been much of a cash user before he went into the Order and he'd seen hardly any spent since he came back out into the world. It seemed rather antiquarian, with its elaborate engraving. But the notes were crisp, as though freshly minted. The government still pressed the notes, even if they were hardly used any longer. “I can afford it.” 318

“It was a very fine dinner. You have interesting friends.” 319

“Sara is lovely,” he said. “She and I -- well, we had a thing once. She's a remarkable person. Of course, you're a remarkable person, too, Lawrence.” 320

Lawrence's pan reminded him again that he was getting edgy. He shushed it. 321

“You're smart, we know that. 88th percentile. Looks like you could go higher, judging from the work we've evaluated for you. I can't say as your performance as a private eye is very good, though. If I hadn't intervened, you'd still be standing outside Anja's apartment building harassing her neighbors.” 322

His pan was ready to call for an ambulance. Lawrence looked down and saw his hands clenched into fists. “You're Securitat,” he said. 323

“Let me put it this way,” the man said, leaning back. “I'm not one of Anja's neighbors.” 324

“You're Securitat,” Lawrence said again. “I haven't done anything wrong --” 325

“You came here,” Randy said. “You had every reason to believe that you were taking part in something illegal. You lied to the Securitat man at Penn Station today --” 326

Lawrence switched his pan's feedback mechanisms off altogether. Posy, at her window, a penny stuck in the governor of her radiator, rose in his mind. 327

“Everyone was treating me like a criminal -- from the minute I stepped out of the Order, you all treated me like a criminal. That made me act like one -- everyone has to act like a criminal here. That's the hypocrisy of the world, that honest people end up acting like crooks because the world treats them like crooks.” 328

“Maybe we treat them like crooks because they act so crooked.” 329

“You've got it all backwards,” Lawrence said. “The causal arrow runs the other direction. 330

You treat us like criminals and the only way to get by is to act criminal. If I'd told the Securitat man in Penn Station the truth --”

“You build a wall around the Order, don't you? To keep us out, because we're barbarians? To keep you in, because you're too fragile? What does that treatment do, Lawrence?” 331

Lawrence slapped his hand on the table and the crystal rang, but no one in the restaurant noticed. They were all studiously ignoring them. “It's to keep *you* out! All of you, who treated us --” 332

Randy stood up from the table. Bulky figures stepped out of the shadows behind them. Behind their armor, the Securitat people could have been white or black, old or young. Lawrence could only treat them as Securitat. He rose slowly from his chair and put his arms out, as though surrendering. As soon as the Securitat officers relaxed by a tiny hair -- treating him as someone who was surrendering -- he dropped backwards over the chair behind him, knocking over a little two-seat table and whacking his head on the floor so hard it rang like a gong. He scrambled to his feet and charged pell-mell for the door, sweeping the empty tables out of the way as he ran. 333

He caught a glimpse of the pretty waitress standing by her podium at the front of the restaurant as he banged out the door, her eyes wide and her hands up as though to ward off a blow. He caromed off the wall of the dark corridor and ran for the glass door that led out to Second Avenue, where cars hissed by in the night. 334

He made it onto the sidewalk, crashed into a burly man in a Mets cap, bounced off him, and ran downtown, the people on the sidewalk leaping clear of him. He made it two whole storefronts -- all the running around on the Campus handball courts had given him a pretty good pace and wind -- before someone tackled him from behind. 335

He scrambled and squirmed and turned around. It was the guy in the Mets hat. His breath smelled of onions and he was panting, his lips pulled back. “Watch where you're going --” he said, and then he was lifted free, jerked to his feet. 336

The blood sang in Lawrence's ears and he had just enough time to register that the big guy had been lifted by two blank, armored Securitat officers before he flipped over onto his knees and used the posture like a runner's crouch to take off again. He got maybe ten feet before he was clobbered by a bolt of lightning that made every muscle in his body lock into rigid agony. He pitched forward face-first, not feeling anything except the terrible electric fire from the taser-bolt in his back. His pan died with a sizzle up and down every haptic point in his suit, and between that and the electricity, he flung his arms and legs out in an agonized X while his neck thrashed, grating his face over the sidewalk. Something went horribly *crunch* in his nose. 337

#

The room had the same kind of locks as the Securitat room in Penn Station. He'd awakened 338

in the corner of the room, his face taped up and aching. There was no toilet, but there was a chair, bolted to the floor, and three prominent video cameras.

They left him there for some time, alone with his thoughts and the deepening throb from his face, his knees, the palms of his hands. His hands and knees had been sanded raw and there was grit and glass and bits of pebble embedded under the skin, which oozed blood. 339

His thoughts wanted to return to the predicament. They wanted to fill him with despair for his situation. They wanted to make him panic and weep with the anticipation of the cells, the confession, the life he'd had and the life he would get. 340

He didn't let them. He had spent sixteen years mastering his thoughts and he would master them now. He breathed deeply, noticing the places where his body was tight and trembling, thinking each muscle into tranquility, even his aching face, letting his jaw drop open. 341

Every time his thoughts went back to the predicament, he scrawled their anxious message on a streamer of mental ribbon which he allowed to slip through his mental fingers and sail away. 342

Sixteen years of doing this had made him an expert, and even so, it was not easy. The worries rose and streamed away as fast as his mind's hand could write them. But as always, he was finally able to master his mind, to find relaxation and calm at the bottom of the thrashing, churning vat of despair. 343

When Randy came in, Lawrence heard each bolt click and the hiss of air as from a great distance, and he surfaced from his calm, watching Randy cross the floor bearing his own chair. 344

“Innocent people don't run, Lawrence.” 345

“That's a rather self-serving hypothesis,” Lawrence said. The cool ribbons of worry slithered through his mind like satin, floating off into the ether around them. “You appear to have made up your mind, though. I wonder at you -- you don't seem like an idiot. How've you managed to convince yourself that this --” he gestured around at the room “-- is a good idea? I mean, this is just --” 346

Randy waved him silent. “The interrogation in this room flows in one direction, Lawrence. This is not a dialogue.” 347

“Have you ever noticed that when you're uncomfortable with something, you talk louder and lean forward a little? A lot of people have that tell.” 348

“Do you work with Securitat data streams, Lawrence?” 349

“I work with large amounts of data, including a lot of material from the Securitat. It's rarely in cleartext, though. Mostly I'm doing sigint -- signals intelligence. I analyze the timing, frequency and length of different kinds of data to see if I can spot anomalies. That's with a 350

lower-case `a', by the way." He was warming up to the subject now. His face hurt when he talked, but when he thought about what to say, the hurt went away, as did the vision of the cell where he would go next. "It's the kind of thing that works best when you don't know what's in the payload of the data you're looking at. That would just distract me. It's like a magician's trick with a rabbit or a glass of water. You focus on the rabbit or on the water and what you expect of them, and are flummoxed when the magician does something unexpected. If he used pebbles, though, it might seem absolutely ordinary."

"Do you know what Zbigniew Krotoski was working on?" 351

"No, there's no way for me to know that. The streams are enciphered at the router with his public key, and rescrambled after he's done with them. It's all zero-knowledge." 352

"But you don't have zero knowledge, do you?" 353

Lawrence found himself grinning, which hurt a lot, and which caused a little more blood to leak out of his nose and over his lips in a hot trickle. "Well, signals intelligence being what it is, I was able to discover that it was a Securitat stream, and that it wasn't the first one he'd worked on, nor the first one he'd altered." 354

"He altered a stream?" 355

Lawrence lost his smile. "I hadn't told you that part yet, had I?" 356

"No." Randy leaned forward. "But you will now." 357

#

The blue silk ribbons slid through Lawrence's mental fingers as he sat in his cell, which was barely lit and tiny and padded and utterly devoid of furniture. High above him, a ring of glittering red LEDs cast no visible light. They would be infrared lights, the better for the hidden cameras to see him. It was dark, so he saw nothing, but for the infrared cameras, it might as well have been broad daylight. The asymmetry was one of the things he inscribed on a blue ribbon and floated away. 358

The cell wasn't perfectly soundproof. There was a gaseous hiss that reverberated through it every forty six to fifty three breaths, which he assumed was the regular opening and shutting of the heavy door that led to the cell-block deep within the Securitat building. That would be a patrol, or a regular report, or someone with a weak bladder. 359

There was a softer, regular grinding that he felt more than heard -- a subway train, running very regular. That was the New York rumble, and it felt a little like his pan's reassuring purring. 360

There was his breathing, deep and oceanic, and there was the sound in his mind's ear, the sound of the streamers hissing away into the ether. 361

He'd gone out in the world and now he'd gone back into a cell. He supposed that it was 362

meant to sweat him, to make him mad, to make him make mistakes. But he had been trained by sixteen years in the Order and this was not sweating him at all.

“Come along then.” The door opened with a cotton-soft sound from its balanced hinges, letting light into the room and giving him the squints. 363

“I wondered about your friends,” Lawrence said. “All those people at the restaurant.” 364

“Oh,” Randy said. He was a black silhouette in the doorway. “Well, you know. Honor among thieves. Rank hath its privileges.” 365

“They were caught,” he said. 366

“Everyone gets caught,” Randy said. 367

“I suppose it's easy when everybody is guilty.” He thought of Posy. “You just pick a skillset, find someone with those skills, and then figure out what that person is guilty of. Recruiting made simple.” 368

“Not so simple as all that,” Randy said. “You'd be amazed at the difficulties we face.” 369

“Zbigniew Krotoski was one of yours.” 370

Randy's silhouette -- now resolving into features, clothes (another sweater, this one with a high collar and squared-off shoulders) -- made a little movement that Lawrence knew meant yes. Randy was all tells, no matter how suave and collected he seemed. He must have been really up to something when they caught him. 371

“Come along,” Randy said again, and extended a hand to him. He allowed himself to be lifted. The scabs at his knees made crackling noises and there was the hot wet feeling of fresh blood on his calves. 372

“Do you withhold medical attention until I give you what you want? Is that it?” 373

Randy put an affectionate hand on his shoulder. “You seem to have it all figured out, don't you?” 374

“Not all of it. I don't know why you haven't told me what it is you want yet. That would have been simpler, I think.” 375

“I guess you could say that we're just looking for the right way to ask you.” 376

“The way to ask me a question that I can't say no to. Was it the sister? Is that what you had on him?” 377

“He was useful because he was so eager to prove that he was smarter than everyone else.” 378

“You needed him to edit your own data-streams?” 379

Randy just looked at him calmly. Why would the Securitat need to change its own streams? 380

Why couldn't they just arrest whomever they wanted on whatever pretext they wanted? Who'd be immune to --

Then he realized who'd be immune to the Securitat: the Securitat would be. 381

“You used him to nail other Securitat officers?” 382

Randy's blank look didn't change. 383

Lawrence realized that he would never leave this building. Even if his body left, now he would be tied to it forever. He breathed. He tried for that oceanic quality of breath, the susurration of the blue silk ribbons inscribed with his worries. It wouldn't come. 384

“Come along now,” Randy said, and pulled him down the corridor to the main door. It hissed as it opened and behind it was an old Securitat man, legs crossed painfully. Weak bladder, Lawrence knew. 385

#

“Here's the thing,” Randy said. “The system isn't going to go away, no matter what we do. The Securitat's here forever. We've treated everyone like a criminal for too long now -- everyone's really a criminal now. If we dismantled tomorrow, there'd be chaos, bombings, murder sprees. We're not going anywhere.” 386

Randy's office was comfortable. He had some beautiful vintage circus posters -- the bearded lady, the sword swallower, the hoochi-coochie girl -- framed on the wall, and a cracked leather sofa that made amiable exhalations of good tobacco smell mixed with years of saddle soap when he settled into it. Randy reached onto a tall mahogany bookcase and handed him down a first-aid kit. There was a bottle of alcohol in it and a lot gauze pads. Gingerly, Lawrence began to clean out the wounds on his legs and hands, then started in on his face. The blood ran down and dripped onto the slate tiled floor, almost invisible. Randy handed him a waste-paper bin and it slowly filled with the bloody gauze. 387

“Looks painful,” Randy said. 388

“Just skinned. I have a vicious headache, though.” 389

“That's the taser hangover. It goes away. There's some codeine tablets in the pill-case. Take it easy on them, they'll put you to sleep.” 390

While Lawrence taped large pieces of gauze over the cleaned-out corrugations in his skin, Randy tapped idly at a screen on his desk. It felt almost as though he'd dropped in on someone's hot-desk back at the Order. Lawrence felt a sharp knife of homesickness and wondered if Gerta was OK. 391

“Do you really have a sister?” 392

“I do. In Oregon, in the Order.” 393

“Does she work for you?”

Randy snorted. “Of course not. I wouldn't do that to her. But the people who run me, they know that they can get to me through her. So in a sense, we both work for them.”

“And I work for you?”

“That's the general idea. Zbigkrot spooked when you got onto him, so he's long gone.”

“Long gone as in --”

“This is one of those things where we don't say. Maybe he disappeared and got away clean, took his sister with him. Maybe he disappeared into our...operations. Not knowing is the kind of thing that keeps our other workers on their game.”

“And I'm one of your workers.”

“Like I said, the system isn't going anywhere. You met the gang tonight. We've all been caught at one time or another. Our little cozy club manages to make the best of things. You saw us -- it's not a bad life at all. And we think that all things considered, we make the world a better place. Someone would be doing our job, might as well be us. At least we manage to weed out the real retarded sadists.” He sipped a little coffee from a thermos cup on his desk. “That's where Zbigkrot came in.”

“He helped you with `retarded sadists'?”

“For the most part. Power corrupts, of course, but it attracts the corrupt, too. There's a certain kind of person who grows up wanting to be a Securitat officer.”

“And me?”

“You?”

“I would do this too?”

“You catch on fast.”

#

The outside wall of Campus was imposing. Tall, sheathed in seamless metal painted uniform grey. Nothing grew for several yards around it, as though the world was shrinking back from it.

How did Zbigkrot get off campus?

That's a question that should have occurred to him when he left the campus. He was embarrassed that it took him this long to come up with it. But it was a damned good question. Trying to force the gate -- what was it the old Brother on the gate had said? Pressurized, blowouts, the walls rigged to come down in an instant.

If Zbigkrot had left, he'd walked out, the normal way, while someone at the gate watched him go. And he'd left no record of it. Someone, working on Campus, had altered the stream

of data fountaining off the front gate to remove the record of it. There was more than one forger there -- it hadn't just been zbigkrot working for the Securitat.

He'd *belonged* in the Order. He'd learned how to know himself, how to see himself with the scalding, objective logic that he'd normally reserved for everyone else. The Anomaly had seemed like such a bit of fun, like he was leveling up to the next stage of his progress. 412

He called Greta. They'd given him a new pan, one that had a shunt that delivered a copy of all his data to the Securitat. Since he'd first booted it, it had felt strange and invasive, every buzz and warning coming with the haunted feeling, the *watched* feeling. 413

“You, huh?” 414

“It's very good to hear your voice,” he said. He meant it. He wondered if she knew about the Securitat's campus snitches. He wondered if she was one. But it was good to hear her voice. His pan let him know what whatever he was doing was making him feel great. He didn't need his pan to tell him that, though. 415

“I worried when you didn't check in for a couple days.” 416

“Well, about that.” 417

“Yes?” 418

If he told her, she'd be in it too -- if she wasn't already. If he told her, they'd figure out what they could get on her. He should just tell her nothing. Just go on inside and twist the occasional data-stream. He could be better at it than zbigkrot. No one would ever make an Anomaly out of him. Besides, so what if they did? It would be a few hours, days, months or years more that he could live on Campus. 419

And if it wasn't him, it would be someone else. 420

It would be someone else. 421

“I just wanted to say good bye, and thanks. I suspect I'm not going to see you again.” 422

Off in the distance now, the sound of the Securitat van's happy little song. His pan let him know that he was breathing quickly and shallowly and he slowed his breathing down until it let up on him. 423

“Lawrence?” 424

He hung up. The Securitat van was visible now, streaking toward the Campus wall. 425

He closed his eyes and watched the blue satin ribbons tumble, like silky water licking over a waterfall. He could get to the place that took him to anywhere. That was all that mattered. 426

--

Afterword: 427

I wrote this story for the launch of tor.com in 2008, at the behest of Patrick Nielsen Hayden, my friend and longstanding editor (Patrick also initially published the story “Power Punctuation!” which appears later in this volume; and, of course, he bought my first novel and my novels thereafter). Like “Scroogled” (also in this volume), this story considers the problem with losing sight of the ethical dimensions of hard and satisfying technical challenges, like data-mining. 428

I got the inspiration for this story while driving from Martha's Vineyard to New York with Patrick and his wife Teresa (Teresa copy-edited my next novel, the young adult book “For the Win”). We were talking about people we knew from science fiction fandom who had started out bright and promising but who had met their match in the real world's difficulties and sunk into a ferocious curmudgeonliness that would be comical if it wasn't so tragic. I wondered aloud, “Where do you suppose those people would have gone in ages past?” and Patrick immediately answered, “To a monastery.” It was so obviously true and weird that I knew I had to write this story. 429

Today, there's a monkish order that makes its living refurbishing toner cartridges, just as other orders make honey or beer (mmm, Chimay!). It's not such a stretch to imagine a future order that provides IT services to totalitarian governments. 430

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The Right Book

Now (-ish)

The thing that Arthur liked best about owning his own shop was that he could stock whatever he pleased, and if you didn't like it, you could just shop somewhere else. So there in the window were four ancient Cluedo sets rescued from a car-boot sale in Sussex; a pair of trousers sewn from a salvaged WWII bivouac tent; a small card advertising the availability of artisanal truffles hand made by an autistically gifted chocolatier in Islington; a brick of Pu'er tea that had been made in Guyana by a Chinese family who'd emigrated a full century previous; and, just as of now, six small, handsomely made books.

The books were a first for Arthur. He'd always loved reading the things, but he'd worked at bookshops before opening his own little place in Bow, and he knew the book-trade well enough to stay well away. They were bulky, these books, and low-margin (Low margin? Two-for-three titles actually *lost* money!), and honestly, practically no one read books anymore and what they did read was mostly rubbish. Selling books depressed Arthur.

These little buggers were different, though. He reached into the window -- the shop was so small he could reach it without leaving his stool behind the till -- and plucked one out and handed it to the kid who'd just asked for it. She was about 15, with awkward hair and skin and posture and so on, but the gleam in her eye that said, “Where have you been all my life?” as he handed her the book.

“They're all carrying them in school,” she said. “Never thought I'd find one in a shop, though. How much?”

Arthur compared the book to his cheat-sheet behind the counter. This one had a cover made from old Hacks tins, resurfaced with a spectral spiderweb of rotting Irish lace. The chapters within had a whopping aggregate score of 98 percent, meaning that 98 percent of the writing community had rated them aces or above. Even before he looked to the price column on his sheet, he knew he was going to have to disappoint her.

“That one's seventy quid, love,” he said. He armored himself for the inevitable shock, disbelief and protestation, but she just hung her head, resigned.

“Figures,” she said.

He ran his fingers down the spines until he found a cheaper one -- bound with floppy felt screened with a remixed Victorian woodcut of a woman with tentacles for arms. “This one's got mostly the same text, but I can let you have it for, erm,” he looked at the sheet again, thinking about the wholesale price, about his margin. “Call it twenty-five pounds.”

She shook her head again, gave him a wry smile. “Still too much. I should have known. It's mostly the posh kids who've got `em, the kind who turn up at school with a tenner just for lunch money.”

“You could just read it online, you know.”

“Oh, I do,” she said. “Been following it since it started.” Her eyes flicked down. “Wrote a little, too -- didn't make it into the top 100, though.”

The Story So Far was part game, part competition, part creative writing exercise, a massive shared universe drama with dozens of sub-plots, mysteries, betrayals, crosses, and double-crosses. Everyone kept saying it was only a matter of time until the big publishers started to cherry-pick the best writers from the message-boards, but in the meantime, there were these little hand-made editions, each one paying a small, honor-system royalty to the authors they anthologized.

“Have you tried asking your teachers for help?” He knew as soon as he asked it that it was the wrong sort of question. She rolled her eyes with adolescent eloquence, then looked down again. “Only you might be able to get credit for it -- independent study type of thing?”

She rolled her eyes again.

“Right,” he said. “Right. Well, sorry I couldn't be more help.” The little bell over the door jingled merrily as she left.

#

“Back again?”

She had her school bag in her hands, zip opened, bag gaping. He was reminded of all those terrible little signs that said “No more than two school kids in the shop at any one time.” Fancy that -- imagine if it said “No more than two women in the shop” or “No more than two Asians in the shop” -- kids were the last group you could treat like second class citizens without being called a bigot.

“Where do you get your copies of The Book?” she said. The Book, with the capital letters -- the one book with a thousand covers, a million tables of contents, each one not so much published as made, as curated.

“There's a man,” he said. “Art student at UCL. He's got a little stall at the weekend in the parking structure where Borough Market used to be.”

“So you just buy them from some bloke? Does he make them?”

“I suppose so -- he gives me that impression, anyway.” He liked her shrewd, unembarrassed, direct questioning. Not a single scruple or a hint that she was embarrassed to be interrogating him about the intimate details of his trade.

“Do you have, like, an exclusive arrangement with him?”

“No, no, nothing like that.” Her hands were digging through the bag, looking for something.

“Would you think about carrying these?”

She'd clearly bound them herself. Someone had taught her to really sew, her Gran, maybe. You could see it in the neat stitching that ran the binding and the spine, holding together the nylon and the denim, taken from a pair of jeans, a backpack. The end-papers were yellowed page three girls from the Star, strategically cropped just below the nipples. He'd been reading The Story So Far ever since those first six copies had sold out in forty eight hours, and he had an eye for the table of contents now, and he flipped to each volume's list, giving them a long look.

“Who's Chloe Autumn?”

She didn't look down, looked at him with a look that was totally unapologetic. “I am,” she said. “It's one way to get my stuff into print, innit?” She grinned. It was a very grown up grin.

“What do you think you want for them?”

“Those four I figure you can have cheaply -- say fifteen pounds each. You can sell them for thirty, then. That's fair, I think.”

It was more than fair. His UCL student wasn't carrying anything for less than forty now, and was only offering him a 40 percent discount.

“What about returns?”

“What's a return?”

He reached under the counter and brought out the shooting stick he used as a spare stool. “Have a seat,” he said. “Let me explain some things. Want a cup of tea? It's Pu'er. Chinese. Mostly.”

#

+75 years (or so)

The kids in the shop were like kids everywhere. That weird, hyperaware thing that came from the games they played all the time, even in their sleep; the flawless skin and teeth (because no parent would dare choose otherwise at conception), the loud, hooting calls that rippled through the little social groups whenever a particularly bon mot vibrated its way through their tight little networks, radiating at the speed of light.

Chloe watched them keenly from her perch behind the counter. After seventy-some years perching on a stool, she'd finally done away with it. The exoskeleton she'd been fitted for on her 90th birthday would lock very handily into a seated position that took all the pressure off her bum and knees and hips. It was all rather glorious.

Kids came into the store every day now, and in ever-increasing numbers. She flicked her eyes sideways and menued over to her graph of young people in the shop over time, warming herself on the upward trend.

It was Arthur's 110th birthday today, the mad old sod, and he was meant to be coming into the shop for one of his rare tours of inspection. That had the staff all a-twitter. He was something of a legend, the man who'd started the distributorship that put small, carefully curated handsful of books into the few retailers across the land who'd let young people in. No one could have predicted how well books and Halal fried chicken went together. 471

“How long have you known him, then?” Marcel, her store manager, was only a few years older than the kids who ghosted past her counter, playing some weird round of their game, listening to cues only they could hear, heads all cocked identically. 472

“Let me put it this way -- the first time we met, I was riding a brontosaurus.” 473

He did her the favor of a smile, radiant and handsome as a movie marquee. They were all like that these days. Thankfully she was old enough not to feel self-conscious about it. 474

“Seriously, Chloe, when did you meet him?” 475

“I was fourteen -- no fifteen. That was before he was Sir Arthur Levitt, Savior of English Literacy, you understand.” 476

“And before you were Chloe Autumn, superstar author?” He was kidding her. They'd stopped caring about what she wrote decades before he was born, but he knew about her history and liked to tease. He had an easy way about him, and it showed in the staff. 477

“Before then, yes.” 478

“I still don't quite understand what it was he did -- what was so different about his bookshop?” 479

“It wasn't a bookshop,” she said. “You didn't know that part?” He shook his head. “Well, that's the most important part. It wasn't a bookshop. Back then, bookshops were practically the only place you could get a book. Oh, sure, the newsagents might carry a few titles, but they were the same titles, all around the country. Bookshops are fine if you already love books, but how do you fall in love with books? Where does it start? There have to be books everywhere, in places where you go before you know you're a reader. That was the secret.” 480

“So how'd he do it?” 481

“I'll tell you how,” Arthur said. He'd padded up to the counter on the oiled, carefully balanced carapace of his exoskeleton, moving as spryly as a jaguar. His eyes glittered with mad, birdy glee. “Hello, Chloe,” he said. 482

“Happy birthday, love,” she said, uncurling herself and levering herself up on tiptoe -- the gyros whining -- to give him a kiss on the cheek. “Arthur, this is Marcel.” 483

They shook hands. 484

“I'll tell you how,” Arthur said again, clearly enjoying the chance to unfurl one of his old, 485

well-oiled stories. “It was all about connecting kids up with their local neighborhoods and the tastes there. Kids know what their friends want to read. We had them curate their own anthologies of the best, most suitable material from The Story So Far, put all that local knowledge to work. The right book for the right person in the right place. You've got to give them a religious experience before you can lure them into coming to church regular.”

“Arthur thinks reading is a religion,” Chloe said, noting Marcel's puzzled expression.

“Obsolete, you mean?” Marcel said.

Arthur opened his mouth, shut it, prepared to have an argument. Chloe short-circuited it by reaching under the counter and producing a carefully wrapped package.

“Happy birthday, you old sod,” she said, and handed it to Arthur.

He was clearly delighted. Slowly, he picked at the wrapping paper, making something of a production of it, so much so that the kids started to drift over to watch. He peeled back a corner, revealing the spine of the book, the neat stitching, the nylon from an old, old backpack, the worn denim, the embroidered title on the spine.

“You didn't,” he said.

“I certainly did,” she said, “now finish unwrapping it so that we can have some cake.”

#

150 years from now(ish)

The young man blinked his eyes at the coruscating lights and struggled into a seated position, brushing off the powdery residue of his creation. “The Story So Far?” he said.

“The Story So Far,” a voice agreed with him from a very long way off and so close in, it was practically up his nose.

“Better than Great Expectations again,” he said. getting to his feet, digging through the costumes on the racks around him. Knowledge slotted itself in his head, asserting itself. Plots, other characters, what had come before, the consensus about where things might go next. He didn't like the consensus. He began to dress himself.

“Tell me about the reader,” he said. The voice was back in an instant, describing the child (four), the circumstances of his birth and life, his interests. “So I'm a picture book?”

“No,” the voice said. “He's reading in chapters now. It's the cognitive fashion, here.” At *here*, more knowledge asserted itself, the shape of the comet on which they all resided, their hurtling trajectory, a seed-pod of humanity on its way *elsewhere*.

“Right,” he said, putting on gloves, picking out a moustache and a sword and a laser-blaster. “Let's go sell some books.”

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Afterword:

This is another story that was inspired by Patrick Nielsen Hayden; specifically by his very nice rant about how the collapse of small, local book distributors that served grocers and pharmacies -- and the rise of national distributors who serve big-box stores -- has destroyed the primary means by which new readers enter the field. It's all well and good to have terrific giant bookstores (or fabulous neighborhood stores, for that matter), but people don't go into those stores unless they already love books. In the past, the love affair with books often began outside of bookstores, in grocers and pharmacies, where you might happen upon any number of quirky, hand-picked paperbacks stocked by the local distributor. With the choice of books available outside of bookstores narrowed to the handful of titles with national distribution, it's far less likely that any given reader will discover “the right book” -- the one that turns her into a book-junkie for the rest of her life.

Thus, this story. *The Bookseller*, Britain's oldest publishing trade magazine, commissioned a story from me for its 150th anniversary issue -- three parts, depicting the future of book-selling in 50, 100 and 150 years.

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Other Peoples' Money

Gretl's stall in the dead WalMart off the I-5 in Pico Rivera was not the busiest spot in the place, but that was how she liked it. Time to think was critical to her brand of functional sculpture, and reflection was the scarcest commodity of all in 2027.

Which is why she was hoping that the venture capitalist would just leave her alone. He wasn't a paying customer, he wasn't a fellow artist -- he wanted to *buy* her, and he was thirty years too late.

“You know, I pitched you guys in 1999. On Sand Hill Road. One of the founding partners. Kleiner, I think. The guy ate a salad all through my slide-deck. When I was done, he wiped his mouth, looked over my shoulder, and told me he didn't think I'd scale. That was it. He didn't even pick up my business card. When I looked back as I was going out the door, I saw him sweep it into the trash with the wrapper from his sandwich.”

The VC -- young, with the waxy, sweaty look of someone who ate a lot of GM yogurt to try to patch his biochemistry -- shook his head. “That wasn't us. We're a franchise -- based here in LA. I just opened up the Inglewood branch. But I can see how that would have soured you on us. Did you ever get your VC?”

Gretl tossed her tablet with a crash on top of an overflowing barrel of primo plastics and wiped her hands on the cunningly stitched dress quilted from back pockets of vintage bootleg Levis, their frayed, misspelled red tags on proud display. “Son, that was 1999. Within a year, VCs weren't writing term-sheets. They were doing cram-downs on anything halfway decent in their portfolios, forcing out the founders, trying to flip them before the market cratered. But it wasn't that pitch that soured me on Sand Hill Road --”

“We're in Inglewood.”

“Yes, you said.” What the hell, it was Wednesday and she had all her week's commissions done already. The VC was at least pretty, if you liked them young. He had good teeth -- they all had good teeth now -- and a cute bump in the bridge of his nose that spoke of a little bit of brawling before his B-school days. “OK, here's the thing. I had running code, a half-million users. That was big numbers then. We did moderation matching -- a heuristic that figured out whether a message on a message board was flamebait, flagging up the worst offenders to volunteers who blindly checked each other. The BBC was hand-moderating a million message-board posts a *day* back then. We could do better. But no one thought we'd scale up -- our customers were little guys, hotrodder boards, cooking boards. Most of them were getting everything for free in exchange for serving as our `reference customers,' which was how all those biz-dev weasels did things back then.

“By 2007, we were `Web 2.0.' I mean, we'd been Web 2.0 since Web 0.9, but now it seemed like the world was ready for us. All we needed was some capital to pay for the features our freeloading reference customers wanted. I met every single shitweasel -- excuse me, junior analyst -- on Sand Hill and brain dumped. They wrote great reports.

We got nothing. No one was doing investments then, either: it was all acquisition driven. Stupid Sarbanes-Oxley killed IPOs and the VC went with it."

The stall across the way was half the size of hers. The old Shenzen couple that ran it were real gnarly, covered in old burn scars from working in the plastic tag factory where they'd met. Now they sold nostalgic hardware, old working specialty appliances and devices from the WTO's heyday. They were highly complementary to Gretl's own business, which is why they had such a friendly relationship. The old woman, she called herself Chloe, was giving her a little hand-gesture that meant, "Do you need help getting rid of this jerk?" 513

"It's OK," Gretl said to her, waving. "Want to get lunch in twenty minutes?" 514

The old lady rocked back and forth. "Not nutritionist food," she said. Gretl nodded enthusiastically. Nutritionist food wasn't even food -- just nutrients and flavoring. It was 80 percent of the stalls in the food-court, since the capital costs of a food printer and feedstock were practically nil, and any food hacker could differentiate himself by thinking up exotic new texture/flavor/temperature combos. 515

"Twenty minutes, Mr VC." 516

"Udhay," he said. "Udhay Gonzales." He passed her a card, laser-etched on a jumbo lima bean. She pocketed it. 517

"You'd have thought I'd learned my lesson by then, but no, sir. I am the original glutton for punishment. After Bubble 2.0, I took my best coders, our CFO, and a dozen of our users and did a little health-care startup, brokering carbon-neutral medical travel plans to Fortune 500s. Today that sounds like old hat, but back then, it was sexy. No one seriously believed that we could get out from under the HMOs, but between Virgin's cheap bulk-ticket sales and the stellar medical deals in Venezuela, Argentina and Cuba, it was the only cost-effective way. And once the IWWWW signed up 80 percent of the US workforce through World of Starcraft guilds, no employer could afford to skimp on health insurance. The word would go out during that night's raids and by the morning, you'd have picket lines in front of every branch office. 518

"We had all the right connections, but by then I was a 40-year old woman, and that's as close as you can come to invisible in this society without having brown skin or a janitor's uniform. I didn't even get a chance to get ignored in the offices. We couldn't even get meetings -- not once they found my YASNS profiles and saw what I looked like and the codgers in my social network." 519

"So that's when I threw in the towel. I bought a Dremel tool. Then a hot glue gun. Then a CNC lathe. Then a mill. Then I got serious." 520

"Well, it seems to have worked out for you." The VC leaned over the display cabinet. She saw his reflection in the clear top. His eyes were wide with genuine admiration. OK, OK, she thought. OK, you get another five minutes, Udhay Gonzales. 521

She opened the lid and made fortune-teller passes over her pieces with her hands. “Pick them up, that's what they're for.” 522

He went for the fish first. Its scales were individual slices from the skins of old Nokia phones -- back when it was just Nokia, not Marvel Comics Mobile -- each articulated on its own little sprig of memory wire. The gills were scuffed iPod backings, the logos just recognizable under the fog of scratches. The eyes bore HP and Playstation logos, respectively, and the lips were made from inner-tube strips that bore the smallest recognizable logomarks. As he lifted it, it settled into his hand, arching back to find his thumb and palm, nestling in there. 523

“It'll work like an old-time phone,” she said. “It'll even do a little lookup from old-style exchange numbers to different identity registers and try to get you a voice-call with someone.” 524

“Do people really do that?” 525

“Some do. Most just want it for the object-ness of it. It's got a lot of emotion.” The scuffs, that's what did it. They were like stories, those scratches, each one a momento mori for some long-dead instant in some stranger's life. 526

He picked up another piece. This one was purely sculptural, made from several generations of iPhones, their screens carved into abstract shapes and then painted with networked OLEDs that stitched them together into a single display. The abstract shapes and colors combined with the device's aggressive incursions on your PAN to give the sense of holding a vampire, something transgressive and savage. Dangerous. “When was the last time you owned a device that felt that dangerous?” 527

“Never!” The VC seemed to surprise himself with his vehemence. He fumbled the device, caught it, set it down reverently. 528

Gretl laughed. “Oh, you can be rougher than that. My little critters love adapting to hard circumstances.” She tossed the vampire high in the sky, let it come down on the floor, having righted itself in the air to take the drop on its armored back. “You can't break it, it's made of garbage.” 529

The VC fondled each of her pieces, making genuine appreciative noises. She could tell the difference between the genuine article and the fakes. 530

“I remember all these things from when I was little,” he said at last. “I wanted them all so badly. Each one seemed impossibly wonderful and out of reach.” 531

“Yeah,” she said. “That's what does it, all right. That feeling right there. You watched these go from fetish item to six-for-a-buck in the blister packs at the pharmacy check-out. This gives them back their dignity.” 532

“Can I ask how many of these you sell?” 533

“Enough,” she said. “As many as I can make. I mostly do commissions, but only with people who come down in person. I won't sell online. Getting off email was the best gift I ever gave myself.” 534

“You are hard to reach,” he said. 535

“Nope. I'm easy to reach -- you just have to haul ass here to Pico Rivera. There's even parking, if you're that kind of pervert.” 536

“I think I see why you aren't interested in capital,” he said. “You can't scale this up -- not with all the money in the world.” 537

Gretl laughed. “You VCs -- scale, scale, scale! It's all you think of. You're wrong, as it turns out. This business decomposes into four elements: materials acquisition, design, fabrication and retail. They all scale like crazy. 538

“Take materials. After the WTO, the Chinese spent 25 years brute-forcing the problem-space of all possible 3D plastic objects that an American might pay money for. There is no shortage of that stuff -- most of it is sitting in international waters somewhere on a container ship, waiting for someone to pay the carbon taxes to land it somewhere. I can bring in all the junk electronics and chassis and parts that I want, and I print the actuators, controllers, wires and the rest of it here. 539

“Design? Design's easy. Roll the parts through the tumbler and let each one get scanned up good. Then run the evolutionary algorithm to see how they can fit together. I just watch it, tweaking it, culling the ugly mutants, cultivating the pretty ones. I can do fifty original designs in a day, and by the time I'm done with any random container, I'll have used up more than 80 percent of its payload. The rest goes to some feedstockers to be eaten by bacteria. 540

“Manufacturing -- that's just monkey labor. Easy. Every kid takes shop class nowadays, especially the girls.” 541

“I made cars for my parents' anniversary,” he said. 542

“Fuel-cell?” 543

He snorted. “No one wants to drive a truck anymore. Sub-micro solar. Fast little things.” He picked up the fish again. “And retail, that's just you, here. So if you could scale up, why don't you?” 544

“Why should I? I'm making incredible money now. I could stand to double my operation, but for that I'd need, what, 60 grand? What's the smallest angel round you do at your franchise?” 545

“We're very nimble.” 546

“How nimble?” 547

He mumbled something. 548

“Speak up!”

“Three hundred kay,” he said, blushing. “But it doesn't have to be all to you. We could roll your round up with five or six similar firms --”

“And increase my communications and bureaucracy overhead by 3,000 percent. Yeah, that sounds *swell.* I net enough after expenses that I could double every quarter if I wanted to. But I'm growing organically, cherry-picking my best contractors and getting them on the payroll, expanding poco a poco. I'm sixty years old, Mr Gonzales, and I don't need to grow like a tumor anymore.”

He put the fish back down. It flopped.

“You say you're nimble. But from where I sit, you're not nimble enough. You're starting off in the 300 grand range, and you're probably averaging a million in your angel round, ten or twenty for Series A, seventy for Series B. I can turn 60 grand into 600 in six months. That's pretty good for me, as an individual. But I can't turn your million into ten million -- not in six years. What does your franchise have under management?”

“We're a gigafund,” he said. He managed to make it sound like a boast.

She shook her head. “You poor, poor boy. How are you going to spend a billion dollars in $300,000 increments? You'll be sitting on three quarters of that by the time you cash out the fund.”

“It's the smallest amount that a franchisee can take,” he said.

“Well, sure. The parent company's got what, half a trillion under management? Don't look so surprised. Yes, I keep up to date on the shenanigans you Mighty Morphin' Power Brokers get up to in Silly Valley. No *wonder* they're franchising! But the secret is, big money is dumb money. I can spend a hundred bucks so smart that I turn it into fifteen hundred. You look like a smart kid, you could probably make a thousand. But you'll never do the same trick with your billion in other peoples' money. Whoever sold you that franchise conned you, sonny.”

He looked glum.

“Oh, cheer up,” she said. “You're a young man. Getting shafted by VCs builds character. Look at me!”

He picked up the fish again. She knew what he was going to ask without having to wait. She named the price. “But for you, a ten percent discount.”

He shook his head and put it back. “I can't afford that,” he said.

“What are you doing tonight?”

He cocked an eyebrow at her. “Don't worry, I'm not interested in your youthful limbs. I just have a spot on my third shift. One of my girls is pregnant and she's taking some maternity. You pull six hours starting at 11PM and you can take that home.”

“I'm not supposed to moonlight.” He caressed the fish's scales. They rippled under his finger.

“It's due diligence,” she said.

He smiled. He was very pretty. And he'd built two cars -- not bad. He'd do OK. Maybe he'd even work out and end up one of her regulars.

“Think about it. I close down at 6PM. You come by then, if you're interested, and I'll give you the details for the fabrica.”

She locked her cabinets and set out her “Gone to lunch” sign, then hopped over the display case, vaulting it the way she'd learned to do in yogacrobatics class in Silver Lake.

“Lunch time?”

Mrs. Huang called to one of her daughters to come out and staff the booth, then came around on her cane.

“No nutritionist food,” she said.

“Certainly not,” Gretl said, sprinkling a wave at the VC as he moved off among the stalls in the dead WalMart.

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Afterword:

I have an odd and productive relationship with *Forbes* magazine. I'm far from a typical *Forbes* reader, but they've commissioned several articles and this short story from me, and the commissions are always challenging and just weird enough to inspire. Here, the brief was to write about the future of entrepreneurship. I'd been thinking a lot about how *little* it costs to start a business, and how predatory and awful many of the investors I'd met were, and I came up with this -- a Socratic dialog between a startupist and a VC who can't find anyone to take his money.

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Scroogled

576

“Give me six lines written by the most honorable of men, and I will find an excuse in them to hang him” - Cardinal Richelieu 577

Greg landed at SFO at 8PM, but by the time he made it to the front of the customs line it was after midnight. He had it good -- he'd been in first class, first off the plane, brown as a nut and loose-limbed after a month on the beach at Cabo, SCUBA diving three days a week, bumming around and flirting with French college girls the rest of the time. When he'd left San Francisco a month before, he'd been a stoop-shouldered, pot-bellied wreck -- now he was a bronze god, drawing appreciative looks from the stews at the front of the plane. 578

In the four hours he spent in the customs line, he fell from god back to man. His warm buzz wore off, the sweat ran down the crack of his ass, and his shoulders and neck grew so tense that his upper back felt like a tennis racket. The batteries on his iPod died after the third hour, leaving him with nothing to do except eavesdrop on the middle-aged couple ahead of him. 579

“They've starting googling us at the border,” she said. “I told you they'd do it.” 580

“I thought that didn't start until next month?” The man had brought a huge sombrero on board, carefully stowing it in its own overhead locker, and now he was stuck alternately wearing it and holding it. 581

Googling at the border. Christ. Greg vested out from Google six months before, cashing in his options and “taking some me time,” which turned out to be harder than he expected. Five months later, what he'd mostly done is fix his friends' PCs and websites, and watch daytime TV, and gain ten pounds, which he blamed on being at home, instead of in the Googleplex, with its excellent 24-hour gym. 582

The writing had been on the wall. Google had a whole pod of lawyers in charge of dealing with the world's governments, and scumbag lobbyists on the Hill to try to keep the law from turning them into the world's best snitch. It was a losing battle. The US Government had spent $15 *billion* on a program to fingerprint and photograph visitors at the border, and hadn't caught *a single* terrorist. Clearly, the public sector was not equipped to Do Search Right. 583

The DHS officers had bags under their eyes as they squinted at their screens, prodding mistrustfully at their keyboards with sausage fingers. No wonder it was taking four hours to get out of the goddamned airport. 584

“Evening,” he said, as he handed the man his sweaty passport. The man grunted and swiped it, then stared at his screen, clicking. A lot. He had a little bit of dried food in the corner of his mouth and his tongue crept out and licked at it as he concentrated. 585

“Want to tell me about June, 1998?” 586

Greg turned rotated his head this way and that. “I'm sorry?”

“You posted a message to alt.burningman on June 17, 1998 about your plan to attend Burning Man. You posted, `Would taking shrooms be a really bad idea?'”

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It was 3AM before they let him out of the “secondary screening” room. The interrogator was an older man, so skinny he looked like he'd been carved out of wood. His questions went a lot further than the Burning Man shrooms. They were just the start of Greg's problems.

“I'd like to know more about your hobbies. Are you interested in model rocketry?”

“What?”

“Model rocketry.”

“No,” Greg said. “No, I'm not.” Thinking of all the explosives that model rocketry people surrounded themselves with.

The man made a note, clicked some more. “You see, I ask because I see a heavy spike of ads for model rocketry supplies showing up alongside your search results and Google mail.”

Greg felt his guts spasm. “You're looking at my searches and email?” He hadn't touched a keyboard in a month, but he knew that what you put into the searchbar was more intimate than what you told your father-confessor. He'd seen enough queries to know that.

“Calm down, please. No, I'm not looking at your searches.” The man made a bitter lemon face and went on in a squeaky voice. “That would be *unconstitutional*. You weren't listening to me. We see the *ads* that show up when you read your mail and do your searching. I have a brochure explaining it, I'll give it to you when we're through here.”

“But the ads don't mean *anything* -- I get ads for Ann Coulter ringtones whenever I get email from my friend who lives in Coulter, Iowa!”

The man nodded. “I understand, sir. And that's just why I'm here talking to you, instead of just looking at this screen. Why do you suppose model rocket ads show up so frequently for you?”

He thought for a moment. “OK, just do this. Go to Google and search for `coffee fanciers', all right?” He'd been very active in the group, helping them build out the site for their coffee-of-the-month subscription service. The blend they were going to launch with was called “Jet Fuel.” “Jet Fuel” and “Launch” -- that'd probably make Google barf up model rocket ads. Not that he would know -- he blocked all the ads in his browser.

#

They were in the home stretch when the carved man found the Hallowe'en photos. They

were buried three screens deep in the search results for “Greg Lupinski,” and Greg hadn't noticed them.

“It was a Gulf War themed party,” he said. “In the Castro.” 601

“And you're dressed as --?” 602

“A suicide bomber.” Just saying the words in an airport made him nervous, as though uttering them would cause the handcuffs to come out. 603

“Come with me, Mr Lupinski.” 604

#

The search lasted a long time. They swabbed him in places he didn't know he had. He asked about a lawyer. They told him that he could call all the lawyers he wanted once he was out of the Customs sterile area. 605

“Good night, Mr Lupinski.” This was a new interrogator, a man who'd wanted to know about the reason that he'd sought both night diving and deep diving specialist certification from the PADI instructor in Cabo. The guy implied that Greg had been training to be an Al Quaeda frogman, and didn't seem to believe that Greg has just wanted to do all the certifications he could, pursuing diving the way he pursued everything: thoroughly. 606

But now the man with the frogman fantasy was bidding him a good night and releasing him from the secondary screening area. His suitcases stood alone by the baggage carousel. When he picked them up, he saw that they had been opened and then inexpertly closed. Some of his clothes stuck out from around the edges. 607

At home, he saw that all the fake “pre-Colombian” statues had been broken, and that his white cotton Mexican shirt -- folded and fresh from his laundry-lady -- had a boot-print in the middle of it. His clothes no longer smelled of Mexico. Now they smelled of airports and machine oil. 608

The mailman had dropped an entire milk-crate of mail off at his place that day, but he couldn't even begin to confront it. All he could think of, as the sun rose over the Mission, turning the Victorian houses they called “painted ladies” vivid colors, was what it meant to be googled. 609

He wasn't going to sleep. No *way*. He needed to talk about this. And there was only one person who he could talk to, and luckily, she was usually awake around now. 610

#

Maya had started at Google two years after him, but had gotten a much bigger grant of stock than he had. She knew exactly what she was going to do with it, too, once she vested: take her dogs and her girlfriend and head to Florence, for good. Learn Italian, take in the museums, sit in the cafes. It was she who'd convinced him to go to Mexico: anywhere, she said, anywhere that he could reboot his existence. 611

Maya had two giant chocolate Labs and a very, very patient girlfriend who'd put up with anything except being dragged around Dolores Park at 6AM by 350 pounds of drooling brown canine. 612

She went for her Mace as he jogged towards her, then did a double-take and threw her arms open, dropping the leashes and stamping on them with one sneaker, a practiced gesture. “Where's the rest of you? Dude, you look *hawt*!” 613

He took the hug, suddenly self-conscious of the way he smelled after a night of invasive googling. “Maya,” he said. “Maya, what do you know about the DHS?” 614

She stiffened and the dogs whined. She looked around, then nodded up at the tennis courts. “Top of the light standard there, don't look, there. That's one of our muni WiFi access points. Wide-angle webcam. Face away from it when you talk. Lip-readers.” 615

He parsed this out slowly. Google's free municipal WiFi program was a hit in every city where it played, and in the grand scheme of things, it hadn't cost much to put WiFi access points up on light standards and other power-ready poles around town. Especially not when measured against the ability to serve ads to people based on where they were sitting. He hadn't paid much attention when they'd made the webcams on all those access points public -- there'd been a day's worth of blogstorm while people looked out over their childhood streets or patrolled prostitution strolls, fingering johns, but it had blown over. 616

Now he felt -- *watched*. 617

Feeling silly, he kept his lips together and mumbled, “You're joking.” 618

“Come with me,” she said, facing squarely away from the pole. 619

#

The dogs weren't happy about having their walks cut short, and they let it be known in the kitchen as Maya fixed coffee for them -- barking, banging into the table and rocking it. Maya's girlfriend Laurie called out from the bedroom and Maya went back to talk to her, then emerged, looking flustered. 620

“It started with China,” she said. “Once we moved our servers onto the mainland, they went under Chinese jurisdiction. They could google everyone going through our servers.” Greg knew what that meant: if you visited a page with Google ads on it, if you used Google maps, if you used Google mail -- even if you *sent* mail to a gmail account -- Google was collecting your info, forever. 621

“They were using us to build profiles of people. Not arresting them, you understand. But when they had someone they wanted to arrest, they'd come to us for a profile and find a reason to bust them. There's hardly anything you can do on the net that isn't illegal in China.” 622

Greg shook his head. “Why did they put the servers in China?” 623

“The government said they'd block them if they didn't. And Yahoo was there.” They both made a face. Somewhere along the way, Google had become obsessed with Yahoo, more worried about what the competition was doing than how they were performing. “So we did it. But a lot of us didn't like the idea.” 624

She sipped her coffee and lowered her voice. One of the dogs whined. “I made it my 20 percent project.” Googlers were supposed to devote 20 percent of their time to blue-sky projects. “Me and my pod. We call it the googlecleaner. It goes deep into the database and statistically normalizes you. Your searches, your gmail histograms, your browsing patterns. All of it.” 625

“The search ads?” 626

“Ah,” she grimaced. “Yes, the DHS. So we brokered a compromise with the DHS. They'd stop asking to go fishing in our search records and we'd let them see what ads got displayed for you.” 627

Greg felt sick. “Why? Don't tell me Yahoo was doing it already --” 628

“No, no. Well, yes. Sure. Yahoo was already doing it. But that wasn't it. You know, Republicans *hate* Google. We are overwhelmingly registered Democrat. So we're doing what we can to make peace with them before they clobber us. This isn't PII --” Personally Identifying Information, the toxic smog of the information age “-- it's just *metadata*. So it's only slightly evil.” 629

“If it's all so innocuous, why all this cloak-and-dagger stuff?” 630

She sighed and hugged the dog that was butting her with his huge, anvil-shaped head. “The spooks are like public lice. They get everywhere. Once we let them in, everything suddenly got a lot more -- secret. Some of our meetings have to have spooks present, it's like being in some Soviet ministry, with a political officer always there, watching everything. And the security clearance. Now we're divided into these two camps: the cleared and the suspect. We all know who isn't cleared, but no one knows why. I'm cleared. Lucky me -- being a homo no longer disqualifies you for access to seekrit crap. No cleared person wants to even eat lunch with an un-clearable. And every now and again, one of your teammates will get pulled off your project `for security reasons', whatever that means.” 631

Greg felt very tired. “So now I'm feeling lucky I got out of the airport alive. I suppose I might have ended up in Gitmo if it had gone badly, huh?” 632

She was staring at him intently, her eyes flicking from side to side. He waited, but she didn't say anything. 633

“What?” 634

“What I'm about to tell you, you can't ever repeat it, OK?”

“Um, OK? You're not going to tell me you're a deep-cover Al-Quaeda suicide bomber?”

“Nothing so simple. Here's the thing: the airport DHS scrutiny is a gating function. It lets the spooks narrow down their search criteria. Once you get pulled aside for secondary at the border, you become a `person of interest,' and they never, ever let up. They'll check the webcams for your face and gait. Read your mail. Log your searches.”

“I thought you said the courts wouldn't let them --”

“The courts won't let them *indiscriminately* google you. But once you get into the system, it becomes a *selective* search. All legal. And once they start googling you, they *always* find something.”

“You mean to say they've got a boiler-room of midwestern housewives reading the email of everyone who ever got a second look at the border? Sounds like the world's shittiest job.”

“If only. No, this is all untouched by human hands. All your data is fed into a big hopper that checks for `suspicious patterns' and gradually builds the case against you, using deviation from statistical norms to prove that you're guilty of *something*. It's just a variation of the way we spot search-spammers” -- the “optimizers” who tried to get their Viagra scams and Ponzi schemes to come to the top of the search results “-- but instead of lowering your search rank, we increase your probability of being sent to Syria. And of course, they google all of *us*, everyone who works on anything `sensitive.'”

“Naturally,” Greg said. He felt like he was going to throw up. He felt like never using a search engine again. “How the hell did this *happen*? It's such a *good* place. `Don't be evil,' right?” That was the corporate motto, and for Greg, it had been a huge part of his reason for taking his fresh-minted computer science PhD from Stanford directly to Google.

Maya's laugh was bitter and cynical. “Don't be evil? Come on, Greg. Don't you remember what it was like when we started censoring the Chinese search results, and we all asked how that could be anything but evil? The company line was hilarious: `We're not doing evil -- we're giving them access to a better search tool! If we showed them search results they couldn't get to, that would just frustrate them. It would be a *bad user experience*. If we hadn't lost our don't-be-evil cherry by then, we surely did the day we took that one.”

“Now what?” Greg pushed a dog away from him and Maya looked hurt.

“Now you're a person of interest, Greg. Googlestalked. Now, you live your life with someone watching over your shoulder, all the time. You know the mission statement, right? `Organize all human knowledge.' That's *everything*. Give it five years, we'll know how many turds were in the bowl before you flushed. Combine that with automated suspicion of anyone who matches a statistical picture of a bad guy and you're --”

“I'm scroogled.”

“Totally.”

“Thanks, Maya,” he said. “Thanks anyway.”

“Sit down,” she said. The dog that had been bumping at his legs was at it again. Maya took both dogs down the hall to the bedroom and he heard her muffled argument with her girlfriend. She came back without the dogs.

“I can fix this,” she said in a whisper so low it was practically a hiss. “I can googleclean you.”

“But you're under constant scrutiny --”

“By DHS agents. Once they fired all non-native-born Americans from the DHS, it got a lot fatter and stupider. I can googleclean you, Greg.”

“I don't want you to get into trouble.”

She shook her head. “I'm already doomed. I built the googlecleaner. Every day since then has been borrowed time -- now it's just a matter of waiting for someone to point out my expertise and history to the DHS and, oh, I don't know. Whatever it is they do to people like me in the War on Abstract Nouns.”

Greg remembered the questioning at the airport. The search. His shirt, the bootprint in the middle of it.

“Do it,” he said.

#

The ads were weird. He hadn't really paid attention to them in years. The blocker got rid of most of them, but Google changed its code often enough that their little text ads showed up on a lot of his pages. They stayed subliminal mostly -- only clunkers like that Ann Coulter ringtone ad made it past his eyes into his brain.

Now the clunkers were everywhere: Intelligent Design Facts, Online Seminary Degree, Terror Free Tomorrow, Porn Blocker Software, Homosexuality and Satan. He clicked through a couple of these and found himself in some kind of alternate universe Internet, full of weird opinions about the evils of being gay, the certainty of the young Earth, the need for eternal national vigilance.

Then he started to notice something weird about the search results themselves. After unpacking his suitcase and opening his mail, he spent two weeks sitting at home on his ass, surfing. His pre-Mexico belly was reemerging, so he decided to do something about it. No burritos for lunch today -- he'd go to that holistic place Maya had told him about. Vegan low-fat cuisine couldn't possibly be as gross as it sounded.

“Did you mean `Hungarian Restaurants'?”

He snorted. No, he'd meant “holistic restaurants,” you dumbass search-engine. It nagged

at him. He pulled up his search history and went back through the results, printing out the pages. Then he logged out of his Google account and went back through the same searches, comparing the results to the logged-in pages. The differences were striking. A search for “democratic primary” pointed to anti-Hillary rants on angry blogs when he was logged in, and to information on volunteering for the DNC when he was logged out. Searching for “abortion clinic” while logged out listed the nearest Planned Parenthood office; searching while logged in gave him information about Campaign Life, ProLife.com, and the ProLife alliance. Good thing he wasn't pregnant.

This was Maya's googlecleaner at work. It was like the stories of people who asked their TiVos to record an episode of “Queer Eye” and then got inundated with suggestions for other “gay shows” -- “My TiVo thinks I'm gay,” was the title of one article he remembered. Google had been experimenting with “personalized” search results before he left the country -- here it was, in all its glory. 662

Google thought he was a conservative Christian Republican who supported the War on Terror and many other abstract nouns. 663

He logged out of Google -- that was simple. Five minutes later, he logged in again. His entire address book was in there. He logged out again. Logged back in. His calendar -- when was his parents' anniversary again? Logged out. Logged back in. Needed his bookmarked locations in Maps. Logged out. 664

He stopped trying. Google was where his friendships lived -- all those people he stayed connected to on Orkut. It was where his relationships lived: all that archived email, all those addresses in his address-book. It was his family photos, his bookmarks. Hell, his search history -- his real search history -- was like an outboard brain, remembering which parts of the unplumable Internet he cared about, so that he didn't have to remember it the hard way, with the meat in his skull. 665

Google had a copy of him -- all the parts of him that navigated the world and the people in it. Google owned that copy, and without it, he couldn't be himself anymore. He'd just have to stay logged in. 666

#

Greg mashed the keys on the laptop next to his bed, bringing the screen to life. He squinted at the toolbar clock: 4:13AM! Christ, who was pounding on his door at this hour? 667

He shouted “Coming!” in a muzzy voice and pulled on a robe and slippers. He shuffled down the hallway, turning on lights as he went, squinting. At the door, he squinted through the peephole, peering at -- Maya. 668

He undid the chains and the deadbolt and yanked the door open and Maya rushed in past him, followed by the dogs, followed by her girlfriend, Laurie, whom he'd last seen at a Christmas party at Google, in a fabulous cocktail dress and an elaborate up-do. Now she 669

was wearing a freebie Google Summer of Code sweatshirt, jeans, and a frown that started between her eyebrows and intensified all the way down her face.

Maya was sheened with sweat, her hair sticking to her forehead. She scrubbed at her eyes, which were red and lined.

“Pack a bag,” she said, in a hoarse croak.

“What?”

“Whatever you can't live without. A couple changes of clothes. Anything you're sentimental about -- shoebox of pictures, your grandfather's razor, whatever. But keep it small, something you can carry. We're traveling light.”

“Maya, what are you --”

She took him by the shoulders. “Do. It,” she said. “Don't ask questions right now. There's no time.”

“Where do you want to --”

“Mexico, probably. Don't know yet. *Pack*, dammit.” She pushed past him into his bedroom and started yanking open drawers.

“Maya,” he said, sharply, “I'm not going anywhere until you tell me what's going on.”

She glared at him and pushed her hair away from her face. “The googlecleaner lives. I shut it down, walked away from it, after I did you. It was too dangerous to use anymore. But I still get buginizer notifications when new bugs get filed against it, I'm still in B as the project's owner. Someone filed eight bugs against it this week. Someone's used it six times to smear six very specific accounts.”

“Who's using it?”

“Well, I'll give you a hint. Let me tell you who's been cleaned this week --” She listed six candidates, four Republican and two Democrat, who were all in the running for the primaries.

“Googlers are blackwashing political candidates?”

“Not Googlers. This is all coming from offsite. The IP block is registered in DC. And the IPs are all also used by Gmail users. And those Gmail users --”

“You spied on gmail accounts?”

“I'm leaving in two minutes, with or without you. You can interrupt me to ask me questions, or you can listen.” She gave him another look. Laurie stood in the door of the bedroom, holding the dogs by the collars and looking down at the floor.

“Good. OK. Yes. I did spy on their email. Of course I did. Everyone does it, now and again, and for a lot worse reasons that this.

“It's our lobbying firm. The ones who invented the Swift Boat Veterans for Truth. Remember them? It was a stink when we hired them, but Google couldn't afford to be `that company full of registered Democrats' forever. We needed friends in Congress. These guys could do it for us.” 687

“But they're ruining politicians' careers!” 688

“Yeah. They certainly are. And who benefits when they do that?” 689

Laurie spoke, at last. “Other politicians.” 690

He felt his pulse beating in his temples. “We should tell someone.” 691

“Yeah,” Maya said. “How? They know everything about us. They can see every search. Every email. Every time we've been caught on the webcams. Who is in our social network -- you know that if you've got more than fifteen Orkut buddies, it's statistically certain that you're no more than three steps to someone who's contributed money to a `terrorist' cause? Remember the airport? Imagine a lot more of that.” 692

“Maya,” he said, carefully. “I think you're over-reacting. You don't need to go to Mexico. You can just quit. We can do a startup together or something. Or you can move to the country and raise dogs. Whatever. This is crazy --” 693

“They came to see me today,” she said. “At work. Two of the political officers -- the minders who monitor our sensitive projects. And they asked me a lot of very heavy questions.” 694

“About the googlecleaner?” 695

“About my friends and family. About my search history. About my political beliefs.” 696

“Jesus.” 697

“They were sending me a message. They were letting me know that they were onto me. They're watching every click and every search. It's time to go -- time to get out of range.” 698

“There's a Google office in Mexico, you know.” 699

“Are you coming, Greg? We're going now.” 700

“Laurie, what do you think of this?” 701

Laurie thumped the dogs between the shoulders. “Maya showed me what Google knows about me. It's like there's a little me in there, a copy of me. Like I'm pinned down under a jar with a ball of ether. My parents left East Germany in `65 -- they used to tell me about the Stasi. They'd put everything about you in your file -- even unpatriotic jokes. Lately I've been feeling...watched. All the time. Like I can't live without leaving a trail. Like I'm throwing off a smog of data and it can't be gotten rid of.” 702

“We're going now, Greg. Now. Are you coming?” 703

Greg looked at the dogs. “I've got some pesos left over,” he said. “You take them. Be careful, OK?” 704

She looked like she was going to slug him. Then she softened and gave him a ferocious hug. “Be careful yourself,” she whispered in his ear. 705

#

They came for him a week later. At home, in the middle of the night, just as he'd imagined it. Their knock was nothing like Maya's tentative, nervous thump. They went bang-bang-bang, confident, knowing that they had every right to be there and not caring who else came after them. 706

Two men. One stayed by the door and didn't say anything. The other was a smiler, short and rumpled, in a sports coat with a small stain on one lapel and a cloisonné American flag on the other. “Computer Fraud and Abuse Act,” he said, by way of introduction. “'Exceeding authorized access, and by means of such conduct having obtained information.' Ten years for a first offense, ever since the PATRIOT Act extended it. I have it on the best of authority that what you and your friend did to your Google records qualifies. And oh, what will come out in the trial. All the stuff you whitewashed out of your profile.” 707

Greg had been playing this scene out in his head for a week. He'd had all kinds of brave things to say, planned out in advance. He'd even written some down, to see how they looked. It had given him something to do while the knots in his stomach tightened, while he waited to hear from Maya. 708

“I'd like to call a lawyer,” is all he managed. It came out in a whisper. 709

“You can do that,” the man said. “But hear me out first.” 710

Greg found his voice. “I'd like to see your badge.” 711

The man's basset-hound face lit up as he hissed a laughed. “Oh, Greg, buddy. I'm not a cop. I work for --” He named the DC firm in Google's employ. The inventors of swiftboating. “You're a Googler. You're part of the family. We couldn't send the police after you without talking with you first. There's an offer I'd like to make.” 712

Greg made coffee. It gave him something to do with his hands while he tried to find that bravery he'd been honing all week. “I'll go to the press,” he said. “I've written this all up. I'll go straight to them.” 713

The guy nodded as if thinking it over. “Well, sure. You could walk into the Chronicle's office in the morning and spill everything you need. They'd try to find a confirming source. They won't find it. Maybe you'll try to show them what your profile looks like today? Well, tell you what, it looks just like it looked the day you landed at SFO. Greg, buddy, why don't you hear me out before you start trying to figure out how to fight me? I'm in the win-win business. I'm in the business of figuring out how to get all parties what they need. I'm very good at it. You don't even want to know what I'm billing Google for this little tete-a-tete. 714

By the way, those are excellent beans, but you want to give them a little rinse first, takes some of the bitterness out and brings up the oils. Here, pass me a colander?”

Greg watched in numb bemusement as the man took off his jacket and hung it over a kitchen chair, then undid his cuffs and rolled them up, slipping a cheap digital watch into his pocket. Then he poured the beans back out of the grinder and into Greg's colander and did things at the sink. 715

He was a little pudgy, and very pale. He needed a haircut -- had unruly curls at his neck. It made Greg relax, somehow. This guy had the social gracelessness of a nerd, felt like a real Googler, obsessed with the minutiae. He knew his way around a coffee-grinder, too. 716

“We're drafting a team for Building 49 --” 717

“There is no building 49,” Greg said, automatically. 718

“Yeah,” the guy said, with a private little smile. “There's no Building 49. And we're putting together a team, with its own buginizer, to own googlecleaner. Maya's code wasn't very efficient. Every time someone runs it, it clobbers the whole farm. And it's got plenty of bugs. We've asked around and there's consensus on this. You'd be the right guy, and it wouldn't matter what you knew if you were back inside --” 719

“No, I wouldn't,” Greg said. “You're on crack.” 720

“Hear me out. There's money involved. Good work, too. Smart colleagues. A direction for your life. A chance to participate in the political life of your country --” 721

Greg gave a bitter laugh. “Unbelievable,” he said. “If you think I'm going to help you smear political candidates in exchange for favors, you're even crazier than I thought.” 722

“Greg,” he said, “Greg, you're right. That was dumb. No one is going to do that anymore. We're just going to -- clean things up a little. For some select people. You know what I mean, right? Every Google profile is a little scary under close inspection. Close inspection is the order of the day in politics. You stand for office and they'll look at your kids, your brothers, your ex-girlfriends. Now that your search history is available to so many people, it won't be that hard to look into that too. Your Orkut network, your old Usenet messages, your searches, all of it.” He loaded the cafetiere and depressed the plunger, his face screwed up in solemn concentration. He held out his hand and Greg got down two coffee mugs -- Google mugs, of course -- and passed them to him. 723

“We're going to do for our friends just what Maya did for you. Just give them a little cleanup. Preserve their privacy. That's all -- I promise you, that's all.” 724

Greg sipped the coffee, but didn't taste it. “And whichever candidates you *don't* clean --” 725

“Yeah,” the guy said. “Yeah, you're right. It'll be tough for them.” 726

“You can go now,” Greg said. 727

“Oh, Greg,” the guy said. He plucked his jacket off his chair-back and shrugged it on, felt in the inside pocket and produced a small stack of paper, folded into quarters. He smoothed it out and put it on the table. 728

Greg looked quickly and saw the rows of results he'd seen on the DHS man's screen, back at the airport, when this all started. “I don't care,” he said. “Tell the world about my search history. Go ahead. In five years, everyone will have had their search history ruptured. We'll all be guilty.” 729

“It's not your history,” the man said. He divided the stack into two piles, and pointed to names on the top sheet of each. One was Maya's. The other was a candidate whose campaign Greg had contributed to for the last three elections. 730

“You get five weeks' vacation a year. You can go to Cabo for the SCUBA. The options package is very generous, too.” 731

The man sat down and drank some coffee. Greg tried some more of his own. It didn't taste so bad. It was, in fact, more delicious than anything that had ever come out of his kitchen. The man knew what he was doing. 732

The best years of Greg's life had been spent at Google. Smart people. Amazing work environment. Wonderful technology. Nothing in the world like it. When you worked at G, you had the best model train set in the universe to play with. Organizing all of human knowledge. 733

“You can pick your team, of course,” the man said. 734

Greg poured himself another cup of delicious coffee. 735

#

The new Congress took eleven working days to pass the Securing and Enumerating America's Communications and Hypertext Act, which authorized the DHS and the NSA to outsource up to 80 percent of its intelligence and analysis work to private contractors. 736

Theoretically, the contracts were open to a competitive bidding process, but within the secure group at Google, in building 49, there was no question of who would win those contracts. If Google had spent $15 billion on a program to catch bad guys at the border, you can bet that they would have caught them -- governments just aren't equipped to Do Search Right. 737

Greg looked himself in the eye that morning as he shaved -- the security minders didn't like hacker-stubble, and they weren't shy about telling you so -- and realized that today was his first day as a de facto intelligence agent in the US government. 738

How bad would it be? Wasn't it better to have Google doing this stuff than some ham-fisted spook? 739

He had himself convinced by the time he parked at the Googleplex, among the hybrid cars and bulging bike-racks. He stopped for an organic smoothie on the way to his desk, then sat down and sipped.

The rumpled man hadn't been to the G since Greg went back to work, but it often felt like his influence was all around them in building 49. He wasn't any less rumpled today -- he could have been wrapped in saran-wrap on the day he brought Greg back to work and refrigerated for all that he hadn't changed a hair.

“Hi, Greg,” he said, sliding into the chair next to his. His podmates stood up in unison and left the room.

“Just tell me what it is,” Greg said. “Just spit it out. You want me to pwn NORAD and start World War III, right?”

“Nothing so obvious,” the man said, patting his shoulder. “Just a little search-job.”

“Yeah?”

“There's a person we want to find. A person who's left the country, apparently headed for Mexico. She knows certain things that are, as of today, classified. She needs to be briefed on her new responsibilities.”

Greg stood up. “I'm not going to find Maya for you.” He pulled on his jacket.

“There are plenty of people here who will. It's up to you, though. You can work here with her, being productive, or you can find out just how rotten life can get -- while she works here, being productive with your co-workers.”

Greg stared at him, his hands balled into fists.

“Come on,” the rumpled man said. “Greg, we both know how this goes. When you said yes to me in your kitchen, you lost the option of saying no. It's not so bad, is it? Who would you rather have doing the nation's intelligence: you and your pals here in the Valley, or a bunch of straight-edge code-grinders in Virginia?”

Greg turned on his heel and left. He made it all the way to the parking lot before he stopped and kicked a wall so hard he felt something give way in his foot.

Then he limped back to his desk, hung his jacket on his chair, and logged back in.

#

It was a week later when his key-card failed to open the door to Building 49. The idiot red LED shone at him every time he swiped it. He swiped it and swiped it. Any other building and there'd be someone to tailgate on, people trickling in and out all day. But the Googlers in 49 only emerged for meals, and sometimes not even that.

Swipe, swipe, swipe.

“Greg, can I see you, please?”

The rumpled man hadn't shaved in a couple of days. He put an arm around Greg's shoulders and Greg smelled his citrusy aftershave. It was the same cologne that his divemaster in Baja had worn when they went out to the bars in the evening. Greg couldn't remember his name. Juan-Carlos? Juan-Luis? 756

The man's arm around his shoulders was firm, steering him away from the door, out onto the immaculate lawn, past the kitchen's herb garden. “We're giving you a couple of days off,” he said. 757

Greg felt a cold premonition that sank all the way to his balls. “Why?” Had he done something wrong? Was he going to jail? 758

“It's Maya.” The man turned him around, met his eyes with his bottomless basset-hound gaze. “It's Maya. Killed herself. In Guatemala. I'm sorry, Greg.” 759

Greg seemed to hurtle away from himself, to a place miles above, a Google Earth view of the Googleplex, looking down on himself and the rumpled man as a pair of dots, two pixels, tiny and insignificant. He willed himself to tear at his hair, to drop to his knees and weep. 760

From a long way away, he heard himself say, “I don't need any time off. I'm OK.” 761

From a long way away, he heard the rumpled man insist. 762

But one-pixel Greg wouldn't be turned aside. The argument persisted for a long time, and then the two pixels moved into Building 49 and the door swung shut behind them. 763

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Afterword: 764

This one came as a commission from *Radar* magazine -- now defunct, a casualty of the 2008 crash, but in 2007, this was the most widely circulated “lifestyle” magazine in the US. They asked me to write about “the day Google became evil.” I didn't want to cheap out and just write about the company selling out to some evil millionaire. If Google ever turned evil, it would be because a) evil had a compelling business-model and b) evil lay at the end of a compelling technical challenge. 765

I spent a lot of time talking off-the-record to Googlers, who are, to a one, the nicest people I know (OK, one exception springs to mind, but let's not air our dirty laundry in public, right?). I also had an incredibly productive conversation with the Electronic Frontier Foundation's Kevin Bankston, a profound and sharp-witted privacy lawyer. 766

I wanted to capture a company that was full of good people who do bad. There are lots of these. For example, *all* the Microsoft employees I know are fantastic and smart and caring and principled. But ethically and technically, most of what comes out of Redmond is a train-wreck. It's anti-synergy: a firm that is far less than the sum of its parts. I could easily see Google turning into that. I wish I understood how groups of good people trying to do good can do bad. 767

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Human Readable

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1. Nice networks don't go down

It was unthinkable that the invisible ants that governed all human endeavor should catastrophically fail, but fail they did, catastrophically, on the occasion of Trish's eighth date with Rainer. It took nineteen seconds for the cascade of errors to slow every car on the Interstate to a halt, to light up the dashboard with a grim xmas tree of errors, to still the stereo and freeze the tickers of information and context that they had come to think of as the crawling embodiment of the colony that routed all the traffic that made up their universe.

“We are going to be: So. Late,” Rainer said, and Trish swiveled in her seat to look at him. He was Fretting again, his forehead wrinkled and his hands clenched on the steering wheel. When they traded massages (third date) and she'd rubbed at his hands, she'd found them tensed into claws that crackled with knuckle-fluid when she bent each finger back and rubbed sandalwood-scented oil into it. He was mighty cute for a neurotic -- at least he knew it when he was being nuts. Not that'd he'd stop being nuts, but he'd cheerfully admit it.

“We are not going to be late,” she said. “We just need to manually route ourselves out of the dead spot and get back on the grid and we'll be on our way. We've got plenty of time.”

“Dead spot?”

“Yes,” she said. His forehead wrinkles were looking more klingon by the second. “Dead spot.” She forced a chuckle. “You didn't think that the whole world was down, did you?”

He relaxed his knuckles. “Course not,” he said. “Dead spot. Probably ends up at the turn-off.”

“Right,” she said. “We need a map. I'm navigatrix. You're pilot. Tell me where your maps are, then get onto the shoulder and drive straight.”

“Where my maps are? Jesus, what century do you live in? My maps are with the sextant and sundial, between my leeches and my obsidian sacrifice-knife.”

She laughed. “OK, pal, I'll find a michelin, you drive. Every car has a couple maps. They self-assemble from happy meal boxes.” She opened the glove-compartment and started

rooting through it while he pulled onto the shoulder and gunned the tiny two-seater along it.

“This is: So. Illegal,” he said.

“Naw,” she said. “I'm pretty sure you're allowed on the shoulder when the routing goes down. It's in the written-test manual. Learned it while I was helping my little cousin Leelee study. Aha!” she said, holding something up.

“You have a cousin named Leelee? That's uniquely horrible.”

“Shut up,” she said. “Look at this.” It was an old-fashioned phone, of a certain handsome retro line that made it look like a dolphin fucking a silver dildo, the kind of thing marketed to old people who wanted a device with its affordances constrained to collapse the universe of all possible uses for things that fit into your hand into the much smaller universe of, say, a cellphone.

“Yeah, my mom left that behind a couple years ago. I looked everywhere for it but couldn't find it. She must've been snooping in the glove-box. Serves her right. So what?”

“These things can unmesh and talk straight to a tower at a long distance, can't they?”

“I dunno, can they?”

“Oh yes, they can. Which means that they work in dead spots. So we can call and get directions.”

“You think you're pretty smart, huh, dumpling?”

She put her finger to her temple and made an adorable frowny thinky face, and held it until he looked at her and laughed. They'd discovered their ability to make one another laugh when he'd farted while taking off his kilt (second date) and had reflexively swung the hem back to make it appear that his mighty gust was ruffling the pleats.

“What's your mom's number?” she said.

He recited it and she tapped it in.

“Hi there! This is Trish, Rainer's friend? We're on the way, but the, well the, but the -- I mean to say, the grid's down or something. The car doesn't have any nav system, the dolby's out, the Interstate's a parking-lot... Oh, you too? God. Wonder if it's the whole country! So, we need directions from San Luis Obispo, to the cemetery, if possible.”

:...:

“Why yes, it's venti nice to be meeting *you*,” she said. “I've heard a lot about you, too. Yes, I'm giving directions, he's driving. Oh, that's so sweet of you. Yes, he *does* look like he's going to scrunch his forehead into his upper lip. I think it's cute, too. Right. Got it. Left, then right, then left, then a slight left, then up the hill. Got it. Whups! That's the duracell! Better go. Soon! Yes. Whoops.”

“So?” he said.

“So, your mom sounds nice.”

“You got the directions?”

“She gave me directions.”

“So you know where we're going?”

“I don't have a single, solitary clue. Your mother gives *terrible* directions, darling. Pull off at the next exit and we'll buy a map.”

“We are going to be: So. Late.”

“But now *they know* we're late. We have an excuse. You: stop Fretting.”

#

Once they were on the secondary roads, the creepiness of the highway full of stopped cars and crane-necked drivers gave way to a wind-washed soughing silence of waves and beach and palms. Trish rolled down the window and let the breeze kiss the sweat off her lip, watching the surfers wiping out in the curl as the car sped toward the boneyard.

“Are you *sure* this is the kind of thing you're supposed to bring a date to?”

“Yes,” he said. “Don't Fret. That's my job.”

“And you don't think it's even a *little* weird to take a girl to a cemetery on a date?”

“We're not *burying* anyone,” he said. “It's just an unveiling.”

“I still don't get that,” she said. “I keep picturing your mom cutting a ribbon with a giant pair of gold scissors.”

“Right, let's take it from the top,” he said. “And you'd better not be getting me to talk to stop my Fretting, because appealing to my pedantic nature to distract me is a *very* cheap trick.”

“I'm fluttering my eyelashes innocently,” she said.

He laughed and stole a hand through the vent in her apron-trousers and over her thigh. “Achtung!” she said. “Eyes on road, hands on wheel, mind in gutter, *this instant!*” She put her hand over his and he put down the pedal. His hand felt nice there -- too nice, for only eight dates and 20-some phone calls and about 100 emails. She patted it again.

“This is kind of fun,” he said, as they zipped past some surfer dudes staring glumly at their long-boards' displays, their perfect tits buoyant and colored like anodized aluminum with electric-tinted sun-paste.

“Ahem,” Trish said, squeezing his hand tight enough to make his knuckles grind together. “You were about to explain tombstone-unveiling to me,” she said. “When you got distracted

by the athletic twinkies on the roadside. But I am sweet-natured and good and forgiving and so I will pretend not to have seen it and thus save us both the embarrassment of tearing out your Islets of Langerhans, all right?" She fluttered her eyes innocently in a way that she happened to know made him melt.

"Explaining! Yes! OK, remember, I'm not particularly Jewish. I mean, not that my parents are, either: they're just Orthodox. They don't believe in God or anything, they just like Biblical Law as a way of negotiating life. I renounced that when I dropped out of Yeshiva when I was 12, so I am not an authority on this subject." 814

"Let the record show that the witness declared his utter ignorance," she said. "But I don't get this atheist-Orthodox thing either --" 815

"Just think of them as Mennonites or something. They find the old ways to be a useful set of rules for navigating the universe's curves. God is irrelevant to the belief." 816

"So they don't believe in God, but they pray to him?" 817

"Yeah," he said. The surfers were all coming in now, jiggling their boards and rebooting them and staring ruefully at the radical cutback off the lip, dude, gnarly, as they plodded up the beach. "The ritual is the important part. Thinking good thoughts. Having right mind. 818

"It's good advice, most of it. It doesn't matter where it comes from or how it got there. What matters is that if you follow the Law, you get to where you're going, in good time, with little pain. You don't know why or how, but you do." 819

"It's like following the ants," she said, watching the stop-and-go traffic in the other direction. "Don't know why they tell us to go where they do, but they do, and it works." 820

"Well, I guess," he said, using the tone of voice that told her that he was avoiding telling her how wrong she was. She smiled. 821

"*Anyway*. The thing about Jews -- ethnic Jews, cultural Jews, forget the religion here -- is that we're pretty much on the melodramatic end of the grieving scale. We like to weep and tear at our hair and throw ourselves on top of the coffins, right? So there's like 5,000 years of this, and during that time, a bunch of social scientists -- Rabbinical scholars -- have developed a highly evolved protocol for ensuring that you grieve your dead enough that you don't feel haunted by guilt for having failed to honor them, but not grieving so much that you become a drag on the tribe. 822

"When someone dies, you bury him right away, usually within 24 hours. This means that you spend an entire day running around like your ass was on fire, calling everyone, getting the word out, booking last-minute travel, ordering in from the caterers, picking out a box, fielding consoling phone-calls, getting the rabbi on the phone, booking the limo, so much crap that you can't spare even a second to fall to pieces. And then you bury him, and while you're at it, your family extrudes a volunteer to go over to your house and take all the 823

cushions off of one of the sofas, hang sheets over all the mirrors, and set out enough food to feed the entire state, along with an urn of starbucks the size of an oil-drum.

“Before the service starts, the rabbi gives you a razor-blade and you slash a hole in your lapel, so that you've got the rent in your heart hanging out there in plain sight, and once you get back home, you spend *seven days* grieving. You pray twice times a day with a quorum of ten men, facing east and singing the Kaddish, this really, really depressing song-prayer-dirge that's specially engineered to worm its way into the melancholy receptors of the Semitic hindbrain and make you feel really, really, really miserable. Other people come over and cook for you, all three meals. You don't see yourself in the mirrors, you don't sit on cushions, you don't do anything *except mourn* for a whole week. 824

“Then it's over. You take a walk, leaving by one door and coming back in by the other. You put the mourning behind you and start your new life without your dear departed. You've given over your whole life for a whole week, done nothing but mourn, and you're completely sick of it by then, so you're almost glad to be done. 825

“Then, six months or a year later, usually just before Jewish New Year's, which is in the fall, you have a tombstone erected at the gravesite. The stone-cutters tie a white cloth around it, and everyone gathers there, and there's a sermon, and that dirge again, and more prayer, and everyone has a good hard cry as the scabs you've accumulated are ripped away and all your pain comes back fresh and scalding, and you feel it all again in one hot second, and realize with a guilty start that you *have* been neglecting the memory of the loved one, which is to say that you've gotten on with your life even though his is over, which is to say that you've done perfectly healthy, normal stuff, but you feel totally, completely overwhelmed with guilt and love, which are kind of flipsides of the same emotion --” 826

“You don't believe that, do you?” She held her breath. 827

“Well, kind of. Not that they *should be*, but hell they *are*, most of the time, then.” 828

“Good thing we're not in love, then, right?” she said, in reference to their sixth date, when they'd decided that they would hold off on any declarations of love for at least an entire year, since they were most often moved to utter the Three Words of Significance when they were besotted with e.g. post-orgasmic brain-juice or a couple of cocktails. 829

“Yes, counselor.” 830

She shook her head. He *knew* she was an academic, not a practicing lawyer, but he loved to tease her about it, ever since she'd revealed (after third date, on the phone) that she'd spent about ten seconds in private practice after she'd worked for her congressman and before she'd joined the faculty at UCLA. 831

“You're out of order,” she said. 832

“This whole damned car is out of order!” he said. “So that's the ritual. You *said* you wanted 833

to meet the parents and sisters and aunts and grandmothers and cousins and uncles and nephews and in-laws the next time we all got together. This is it."

"Right," she said. "I asked for this." And she had, of course. Hadn't asked for the graveside elements, but she'd been curious to meet this big sprawling enterprise of a family that he was always nattering on about. This seemed as good an occasion as any. "So," she said. "Is this a traditional date among Your People?" 834

He chuckled. "Yes, this is Yom Shiksa, the ritual bringing of the gentile woman to the family so that she may become the subject of intense, relentless scrutiny and speculation." 835

She started to laugh, then saw that the tractors were stilled in the fields they were passing, that a train was stopped in its tracks, that the surfers were unable to get their roll-cage dune-buggies to take to the road. 836

"You all right, babe?" he said, after a couple minutes of this. 837

"Just wondering about the dead spot," she said. "I wish we knew what had happened." 838

"Nothing too bad, I'm sure," he said. "It's all self-healing. I'm sure we'll be back online soon enough." 839

#

They rolled into the parking lot for his family's *shul*'s section of the giant graveyard a few minutes after 1PM, just over an hour late, along with the majority of the other attendees, all of whom had had to navigate manually. 840

"Where are your sisters?" Rainer's mother said, even before he'd kissed her cheek. 841

Rainer screwed his face up in a scowl and dug in his pocket for a yarmulke. "Do I know? Stuck in traffic, Ma. The grid's down everywhere." 842

Trish watched this bemusedly, in her cool loose cotton apron-trousers and blouse. She scuffed her toe conspicuously and Rainer turned to her, and it was as though he'd forgotten she was there. She felt a second's irritation, then a wave of sympathy as she saw the spasm of anxiety cross his face. He was nervous about her meeting his fam, and nervous about who would arrive when, and nervous about where his sisters were with their enormous families and meek husbands, trapped somewhere on southern California's squillion-mile freeway network. 843

"Ma," he said. "This is my friend, Trish." 844

"Pleased to meet you, Mrs. Feinstein," Trish said. The old woman was remarkably well-preserved, her soft skin glowing with heat-flush, her thick hair caught in a tight bun and covered with a little scarf that reminded Trish of Rainer's yarmulke. She wondered if she should be wearing one, too. Mrs. Feinstein's eyes flicked quickly to her shoes, up her legs and boobs, to her face and hair, and then back to her face. She opened her arms and drew Trish into a hug that smelled of good, subtle perfume, though Trish knew so little 845

about scent that she couldn't have said which. “Call me Reba, darling,” she said. “It's so good of you to come.”

And then she was off, hustling to corral a wayward knot of horseplay-aged cousins, stopping to shake hands with the deceased great-uncle's poker buddies in their old-man pants, golf shirts and knit yarmulkes bobby-pinned to their thinning hair. 846

Trish took stock. Looked like every other graveyard she'd been in, which wasn't that many. At 35, she'd been to half a dozen family funerals, a couple of college buddies who OD'ed or cracked up their cars, and one favorite poli-sci teacher's service, so she was hardly an expert on boneyards, but something was amiss. 847

“What's with the pebbles on the headstones?” she whispered to Rainer, who was scanning the road for signs of his sisters. 848

“Huh? Oh. You drop those on the monument when you visit the grave, as a sign that someone's been there.” 849

“Oh,” she said, and began to cast about for a pebble she could put on his great-uncle's headstone once it was unveiled. There were none to be found. The ground had been picked completely clean. Looking at the thousands and thousands of ranged marble headstones, each topped with a cairn of stones -- and not just stones, either, toys and seashells and small sculptures, she saw now -- and she understood why. 850

“What are you doing?” Rainer asked. He might have been irritated, or just nervous. It was hard to tell when he was Fretting, and he was clearly going coo-coo for coco-puffs. 851

“Looking for pebbles,” she said. 852

He said :fuck: very quietly. “I meant to bring some. Damnit. I've got twenty relatives buried here and we're going to go past every single tombstone before we get to leave and I don't have a single rock.” 853

“Can you leave toys or other stuff, like on those stones?” 854

“Yeah,” he said. “I suppose. If I had other stuff.” 855

She opened her purse and pulled out the dolphin-dildo cellphone. “You still need this?” she said. 856

He smiled and his forehead uncreased. “You're a genius,” he said. 857

She set it down on the pavement and brought her heel down on it hard, breaking it into dozens of fragments. “All the pebbles we'll ever need,” she said, picking them up and handing them to Rainer. 858

He put his arm around her shoulders and squeezed. “I'm awfully fond of you, Counselor,” he said, kissing her earlobe. His breath tickled her ear and made her think of the crazy animal new-relationship-energy sex they'd had the night before -- she was still limping, and so was he -- and she shivered. 859

“You too, steakypaste,” she said. “Now, introduce me to all of your relatives.” 860

“Introduce you?” He groaned. “You don't think I remember all of their names, do you?” 861

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Afterward, they formed a long convoy back to the nearest family member's house -- a great aunt? a second cousin? Rainer was vague -- navigating by keeping everyone in sight, snaking along the traffic jam that appeared to have engulfed the entire state, if not the whole coast. 862

“You made that law, yes? We've all heard about you.” This was the sixth time someone had said this to her since they'd arrived and Rainer had made her a plate of blintzes, smoked salmon, fresh bagels, boiled eggs, and baby greens salad with raspberry dressing, then had been spirited away into an endless round of cheek-pinching and intense questioning. She'd been left on her own, and after having a couple of grave conversations with small children about the merits of different toys, she'd been latched upon by one of the Relatives and passed from hand to hand. 863

“I was involved in it, but I didn't write the law,” she said. 864

“Look at you, so modest, you're blushing!” the Relative said. She reached out to steady a cut-glass vase as it wobbled in the wake of two small boys playing keep-away with a third's yarlmulke, and Trish realized that this was probably the hostess. 865

“This place is just supercalafragilistic,” she said, with an economical gesture at the tasteful Danish furnishings, the paper books in a handsome oak bookcase, the pretty garden out one side window and the ocean out the back window. 866

“Thank you,” the great-aunt said. “My Benny loved it here.” She misted up. Trish finally added two and two, remembered the BENJAMIN chiseled into the marble headstone, and the blank spot on the other half of the tombstone, realized that this wasn't just the hostess, this was the *widow*, and felt about for a thing to say. 867

“It was a beautiful ceremony,” she said. She had a couple napkins tucked in the waistband of her pants, and without thinking, she extracted one and folded an angle into it, reaching for the corner of the great-aunt's eye. “Look up,” she said, and blotted the tear before it could draw a line of mascara down the widow's cheek. 868

The old woman smiled a well-preserved smile that reminded Trish of Rainer's mom. “You're a sweet girl,” she said. “Me, I'm not so good with names, and so I've forgotten yours.” 869

“I'm Trish,” Trish said, bemusedly. Rainer's grammar got yiddishized when he wasn't paying attention, and she adored the contrast between its shtetl credibility and his witty, smooth public banter-persona. It had attuned her to little phrases like, “Me, I'm not so good.” 870

The widow shook her hand. “I'm Dorothy. It's a pleasure to make your acquaintance. Would you like to come out to the garden with me?” 871

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Once they were seated, young male Relatives materialized and set up shade-umbrellas and brought out trays of iced juice. 872

“They're not after the inheritance, you know,” the old woman said with a snort. “Their parents are *very* well-off. They don't need from money. They just adore me because I've spoiled them rotten since they were babies and I'd take them swimming and to Disneyland.” 873

“You have a beautiful family,” Trish said. 874

“Do you have a big family, too?” The old woman put on a pair of enormous sunglasses and sipped at her pink grapefruit juice. 875

“Not like this one,” she said. There were a couple hundred people in the house, and Rainer had spent the whole car-ride back from the cemetery Fretting about all the relations who *hadn't* made it. 876

“Oh, this one! Well, this is a special case. This family accumulates other families. My Benny had a small family, and when he married me, they just joined us. All the high holidays, we ate here, or at my parents' place, God rest them. Your family is in DC?” 877

“All over.” 878

“But you're from DC, no?” 879

“Not really. I grew up in Chicago and Seattle.” 880

“But you made that law --” 881

“I really didn't, honestly! I was clerking for a Supreme Court judge when the case was heard, and I wrote his dissenting opinion, and when we lost, I quit and went to work for a PAC that was agitating for copyright reform to accommodate free expression, and then when Senator Sandollar got voted in and they started the Intellectual Property committee and made her chairman, I joined her staff as a policy wonk. So I worked on it, along with a couple thousand other people, not counting the millions who contributed to the campaign and the people who knocked on doors and so on.” 882

“How old are you, darling?” 883

“35,” she said. 884

“At 35, I was having babies. You -- listen to you. Listen to what you've *accomplished*! I'm proud just to *listen* to you. Rainer is lucky to have you. You two will get married?” 885

Trish squirmed and felt her face grow hot. Neither of them really believed in marriage. Whenever anyone brought the subject up around Rainer, he'd grimace and say, “Are you kidding? It'd make my mother *far* too happy -- she'd keel over from joy.” 886

There was some kind of disturbance down the beach, one that had been growing steadily 887

over the past several minutes, and now the Relatives were all turning their attention that way, to a couple of small boys in miniature suits who were ruining the shine on their shoes running in the sand like lunatics.

Something in the way they were running, the distant expressions she couldn't quite make out on their faces. It made her think back to high-school, to working as a beach lifeguard on Lake Michigan in the summers, and before she knew what she was doing, she'd kicked off her shoes and was running for the shore, her legs flashing immodestly through the vents in her apron-trousers. 888

She was still yards away from the hissing surf when she began to assess the situation. There was the small boy, bobbing in the ocean, where the undertow had spit him up after sucking him under. There was the swimmer, unconscious on the beach, face down. Couldn't tell if his chest was moving, but the small boy was in a suit, not swim-trunks like the swimmer, and that meant that he was part of Rainer's Family, which she had begun (on the eighth date, no less!) to think of as her own, and so she had him as her primary target before she reached the sea. 889

She didn't bother finicking with the buttons on her top, just grabbed her collar and yanked, leaving her in a bra that revealed less than some bikinis she owned, but did so through a cunning arrangement of lace, mesh, and structural engineering that was probably illegal in Texas. She undid the bows on each hip holding up her pants and stepped out of them, leaving behind a very small pair of white panties whose primary design consideration had been to avoid showing lines through thin trousers, with modest coverage of all her nethers coming in a distant second. 890

She plunged into the water without hesitation, moving swiftly but surely, taking care to keep her feet dug in against the undertow as she waded out toward the young boy. She was a strong swimmer, but the water was shockingly cold after the heat of the garden and the buzzing afternoon and it sucked at her calves and legs like a jacuzzi intake. Her breath roared in her ears as she rode the swells, and then she was soaked by a succession of breakers, and then she had the boy's little hand. 891

She hauled him to her, seeing that he was only five or six, and that his pouting lips were alarmingly blue and that his skin was as pale as cream. She scooped the water out of his mouth, hooked her arm around his neck and tilted his head back and began to slosh back toward shore. When she was waist-deep -- immodestly revealed in a bra that she was quite certain had gone completely transparent -- she pinched his nose and blew into his mouth, not quite getting her mouth out of the way before he vomited up a gush of saltwater, blintzes, diet coke, and bile. She spat and wished that she could duck her head and get a mouthful of ocean to rinse with, but she couldn't without dunking the boy, too, so she hauled him up out of the water and handed him to the Relative who was standing with his arms on the shore, his fine leather shoes soaked with cold seawater. 892

She looked for the swimmer, and saw that he was still face-down in the sand. “You, you 893

and you," she said, pointing at three young cousins whose wide eyes were flicking from her boobs to her crotch -- white underwear, Christ, why white underwear today? -- to the boy on the sand, who was mobbed now with Relatives whose hubbub had reached deafening proportions, "Go to the house, find an old-fashioned phone and call emergency services. Tell them where we are, and that we have two drowning victims, one a child, neither breathing. What are you going to do?"

The tallest of the three managed to make eye-contact long enough to say, "Find a cell-phone, call emergency, tell them where we are, two drownings, not breathing." 894

"Right," she said. "Come back when you're done and tell me that it's done." 895

"You, you," she said, picking out two tall uncles who looked like they'd worked out or played sports before they found whatever careers had paid for the nice suits they were wearing, "Carry him here and lay him down on his side." 896

She looked for Rainer and found his ass sticking out of the scrum around the boy. She snagged him by the belt and dragged him back. "Rainer," she shouted. His forehead was scrunched, but he was clear-eyed and grim and looked like he was listening to her, which she found very pleasing. "You need to get everyone back at least five steps from that kid, and make them quiet down," she said. 897

"Right," he said, and took off his jacket and handed it to her. 898

"Hold it yourself," she snapped, "I've got things to do." 899

"It's to wear," he said. 900

She surprised herself with a grin. "Thanks," 901

The Relatives were murmuring, or crying, or bickering, but Rainer *hollered*. "LISTEN UP," he said. "All of you get over there by that rock, NOW, or my girlfriend won't be able to save Jory's life. GO!" 902

And they went, amazingly, crushing back so quickly they looked like a receding tide. The tall uncles deposited the swimmer in the sand between them, and she checked his breathing and saw that it was good. 903

"Turn him on his side and tell me if he starts to choke," she said, and turned to the little boy, struggling to remember her rescue breathing. 904

#

She got the boy breathing and ended up with more puke on her face, on Rainer's jacket, in her hair. His pulse was thready but there. She turned to the swimmer and saw that he was a muscular surfer dude in board shorts with a couple of bitchun tatts and a decent body-paint job. He was breathing, too, but his heart was erratic as hell. She pressed two fingers to his throat. 905

"What happened?" she said. "Who saw it happen?" 906

One of the aunts stepped forward and said, “My son says they were playing --” 907

She held up her hand. “Where's your son?” she said. 908

“He's back at the house,” the aunt said, startling back. 909

“Send someone for him, then tell me what happened.” 910

The aunt looked like she'd been slapped, but the other Relatives were staring at her and so she had to talk, and then the boy arrived and he told it again and it was pretty much the same story, but she was able to get more details, as she began to examine both the boy and the surfer's bodies for cuts, bruises, breaks and punctures. She gave the boy's clothes the same treatment she'd given her own, gently but forcefully tearing them off, using a seashell to start the tears at first, then a pocket-knife that someone put in her hand. 911

The story was that the kids had been playing when they'd seen the surfer floating in the breakers, and they'd dared each other to fish him out, and the undertow had sucked them out to sea. One had gotten away, the other had ended out beyond the waves, and meanwhile, the surfer had beached himself on his own. 912

“Right,” she said. “Blankets and pillows. Elevate their feet and wrap them up good.” She stood up and staggered a step or two before Rainer caught her, and the crowd made a noise that was at once approving and scandalized. 913

“Get me to the sea,” she said. “I need to soak my head.” 914

So he walked her into the water, he still in his suit-pants and dress shirt and tie, and held onto her while she dunked her head and swirled a mouthful of salt water in her mouth. 915

“Where are the fucking paramedics?” she said, as she sloshed back out with him. 916

“There,” he said, and pointed at the horizon, where a Coast Guard clipper was zooming for the shore. “The cell-phone was dead, so I fired up a couple flares. You didn't hear them?” 917

“No,” she said. He could have set off a cannon and she wouldn't have noticed it. 918

She got back to the shore just in time to see the surfer convulse. She was on him in a second, kneeling at his side, doing airway-breathing-circulation checks, finding no pulse, and slamming him onto his back and beginning CPR. 919

Some time later, she was lifted off him and two paramedics went to work on him. Someone put a robe over her shoulders and a cup of juice in her hands. She dropped the juice in the sand and sticky liquid and beach sand covered her legs, which she realized now that she hadn't depilated in a week, and that made her realize that she'd spent a pretty crucial amount of time prancing around naked in front of her date's family, and that that was probably not on the timetable until the fifteenth date at *least*. 920

She looked up at Rainer, who was still in his shoes and as she was in bare feet loomed 921

over her. “God,” she said, “Rainer --”

He kissed her. “I love you, Patricia,” he said. 922

“Ooh,” she said, with a weak smile. “You're breaking the rules!” 923

“Can you let it go this once?” 924

She made her scrunchy thinky face and then nodded. “Just don't make a habit of it, you lunk.” 925

#

It would have been perfect if only the surfer hadn't died. 926

They didn't get home until well after midnight. Parts of LA appeared to be on fire as they inched their way along the freeway. It was weird to see LA at this speed. They were used to clipping along at 60 or 70 -- over 80 if the traffic was light -- flying over the freeway so fast that the scenery was just a blur. Only the year before, the *New Yorker* had run a 40-page paen to LA, a public apology declaring it the most livable city in America, now that it had licked its traffic problems. It balanced lots of personal space with thorough urbanization and urbanity. It was why they both lived there. 927

Now they seemed to have traveled back 50 years in time, to the bad old traffic-jam-and-smog days. Looters danced below, torching stores, and the traffic moved so slowly that some people were apparently abandoning their cars to *walk* home -- which made the traffic even worse. The smoke from the fires turned the sunset into a watercolor of reds and mustards and golds, tones that had blown away with the smog when the last gas-sucking Detroitmobile was retired for a plastic Nickle-Metal Hydride jellybean, and all the lanes were repainted to cut them in half. 928

It was nightmarish. When they got off the ramp at Studio City, they found homeless guys directing traffic with gas-tubes they'd torn out of the bus-shelters. The tubes glowed in the presence of microwave radio-frequency radiation, and as each of the trillions of invisible ants in the system attempted to connect with its neighbors and get the traffic set to rights again, the RF noise made the tubes glow like sodium lamps. 929

They coasted into Trish's driveway and collapsed in her living room. 930

“You were *wonderful*, darling,” Rainer said, peeling off the tracksuit that one of his cousins had scrounged from the gym-bag in her trunk and donated to Trish. Her skin was gritted with sand and streaked with stripes of sunburn. 931

“God,” Trish said, lolling back on the sofa, just letting him gently brush away the sand and rub lotion into her skin. “You spoil me,” she said. 932

“You're unspoilable,” he said. “Wonderful girl. You saved their lives,” he said. 933

“What a fucking day,” she said. “You think that my lifeguard training made up for my scan- 934

dalous undergarments in your family's minds?”

He snorted and she felt his breath tickle the fine hairs on her tummy. “You're kidding. My mom told me that if I didn't marry you, she'd have me killed and then fix you up with someone else from the family -- told me it was my duty to see to it that you didn't get away, just in case someone else fell in the ocean.” 935

He looked around at the blank walls. “Creepy not to have any news at all,” he said. 936

“There's a TV in the garage,” she said. “Or maybe the attic. You could find it and plug it in and find out that no one else knows what's going on, if you feel like it.” 937

“Or I could escort you to the bathtub and we could scrub each other clean and then I could give you a massage,” he said. 938

“Yes, or you could do that.” 939

“Where did you say the television was?” he said. 940

“You are going to be: In. So. Much. Trouble.” She twined her fingers in his hair and pulled him up to kiss her. 941

#

2. Progress pilgrims 942

It took three days for even the thinnest crawls to return to the walls. In the meantime, people dug out old one-to-many devices like radios and televisions and set them up on their lawns so they could keep track of the aftermath of The Downtime. 943

He slept over those three nights, because no one was going anywhere, anyway, and they had a running argument over how many dates this counted as, but truth be told, they had a wonderful time, making omelets for one-another, washing each other's backs in the shower, stealing moments of sex in the living room at two in the afternoon without worrying about being interrupted by a chime, ringer, bell or vibe. 944

When they weren't enjoying each other, they took coolers of fizzy drinks onto the lawn and watched the neighbor's TV set and saw the pundits describing The Downtime. The news-shows were having a drunken ball with this one: as the only game in town, they were free to bring a level of craft to their newsmongering that hadn't been seen since Trish's parents' day, when news-networks turned catastrophes into light operas, complete with soundtracks, brand-identities, logo-marks and intermissions where buffoons worked the audience for laughs. 945

“Oh, she's your favorite, isn't she?” Trish asked, goosing Rainer's bicep and taking a sip of his peach ginger-ade. The pundit had been in heavy rotation since the TV went back on the air. She was a Norwegian academic mathematician who wrote books of popular philosophy. She was a collection of trademark affectations: a jacket with built-up shoulders, a monocle, a string tie, nipple tassles, and tattooed cross-hatching on her face that made 946

her look like a woodcut of a Victorian counting-house clerk. Rainer loathed her -- she'd been on the committee to which he'd defended his Philosophy of Networks thesis, and she'd busted his balls so hard that they still ached a decade later when he saw her on the tube.

The pundit explained the packet-switching, using trains versus automobiles as a metaphor: 947
“In a circuit uniwerse, every communication gets its own dedicated line, like a train on a track. Ven I vant to talk to you, ve build a circuit -- a train track -- betveen our dewices. No one else can use those tracks, even if ve're not talking. But packet-svitching is like a freevay. Ve break the information up into packets and ve give every packet its own little car, and it finds its own vay to the other end. If vun car doesn't arrive, ve make a copy of its information and send it again. The cars have brakes and steering veels, and so they can all share the same road vithout too much trouble.”

Rainer grit his teeth and hissed at the set. “She's faking the accent,” he said. “She thinks 948
that Americans believe that anyone with a European accent is smarter than we are. She can pronounce vee and doubleyou perfectly well when she wants to -- she speaks better English than I do! Besides, *she stole that line from me*,” he said, “from my *thesis*,” he said, his face scrunching up again.

“Shh, shh,” Trish said, laughing at him. He wasn't really angry-angry, she knew. Just a 949
little stir crazy. He was a networking guy -- he should have been out there trying to make the network go again, but he was on sabbatical and no one at UCLA wanted to hear from him just then.

And then the pundit was off onto ants -- networks modeled on ant-colonies that use virtual 950
pheromones to explore all possible routes in realtime and emerge a solutions to the problem of getting everything, everywhere, in shortest time. Rainer kept barking at the TV, and Trish knew he was doing it to entertain her as much as for any reason, so she laughed more and egged him on.

The TV cut back to the news-dude, who was a very cuddly ewok who'd made his name 951
hosting a wheel-of-fortune, jumping up and down and squeaking excitedly and adorably whenever a contestant won the grand prize, his fur-plugs quivering. He cupped his paws to his cheeks and grinned.

“But ants aren't perfect, are they?” the ewok said. 952

“He's feeding her!” Rainer said. “She's going to go off on her stupid walking-in-circles bit 953
--”

“The thing about using wirtual ants to map out the vorld and make routing recommendations 954
is that ve can't really tell the difference betveen a good solution and a bad vun, without trying it. Sometimes, ants end up valking in circles, reinforcing their scent, until they starve to death. Ve might find that our cars tell us that the best vay from San Francisco to San Jose

is via a 1500 mile detour to Las Wegas. It may be true -- if all the traffic eweryvhere else is bad enough, that might be the fastest vay, but it may just be the ants going in circles."

"God, talk about taking a metaphor too far," he said. Trish thought that Rainer was perfectly happy to think about the ants as ants, except when someone raised a point like this, but she didn't see any reason to raise that point just then. 955

The ewok turned to the camera: "One scientist says we *should* expect more Downtimes to come. When we come back from this break, we'll talk to a University of Waterloo researcher who claims that this is just the first of many more Downtimes to come." 956

The screen cut over to a beautiful, operatic advertisement for some Brazilian brand of coca-cola, wittily written, brilliantly shot, with an original score by a woman who'd won three grammies at the Independent Music Awards in Kamchatka the year before. They watched it with mild attention, and Trish absently fished another bottle out of the cooler and chewed the lid off with her side-molars. 957

She looked at Rainer. He was gripping the arm-rests of his inflatable chair tightly, dimpling the hard plastic. She held the bottle to his lips and he took it, then she rubbed at his shoulders while he took a swallow. 958

"Let's go back inside and play," she said. "They won't have anything new to tell us for days." 959

#

The crawls were alive the next morning, exuberantly tracking across the walls and over the mirror and down the stairs. They picked out the important ones and trailed them to convenient spots with a fingertip and devoured them, reading interesting bits aloud to one another. 960

Soon the crawls had been tamed and only a few personal messages remained. Trish dragged hers over to the tabletop, next to her cereal bowl, and opened them up while she ate. Outside, she could hear the whisper of cars speeding down the road, and she supposed with a mingling of regret and relief that she should probably go into her office. 961

She opened her personal mail. It had been three days since she'd read it, but for all that, a surprisingly small amount had accumulated. Of course -- everyone else had been without connectivity, too. This was mostly stuff from the east coast and Europe, people who'd been awake for a couple hours. 962

She read, filed and forwarded, tapping out the occasional one-word answer to simple questions or bouncing back messages with a form letter. 963

Then she came to the note from the Coast Guard medic. He didn't mince words. It was in the first sentence: the surfer dude she'd rescued had had a second cardiac arrest on the boat. They'd tried what they could, but he hadn't recovered. He was a freak statistic of The Downtime, another person who'd lost his life when the ants spazzed out. They'd 964

recovered his board and found its' black-box. The accelerometer and GPS recorded the spill he'd taken after the loss of climate and wave-condition data from the other surfers strung out on the coast. He'd stayed up for about ten seconds before going under.

She stared numbly at the note, the spoon halfway to her mouth, and then she dropped the spoon into the bowl, not noticing that it splashed milk down her blouse. 965

She got up from the table and went into the kitchen. Rainer was there, in a change of clothes they'd bought from a mom-n-pop gap at the mall on the corner that had been taking IOUs from anyone who could show a driver's license with a local address. She grabbed his wrist, making him slosh starbucks down his front, she took the cup out of his hand and set it down on the counter, then put her arms around his chest and hugged him. He didn't protest or ask any questions, he just put his arms around her and hugged back. 966

Eventually, she cried. Then she told him what she was crying about. She let him tell her that she was a hero, that she'd saved Jory's life and almost saved the surfer's life, and she let him tell her that it wasn't her fault for sloshing into the ocean to rinse off the barf, and she let him tell her that he loved her, and she cried until she thought she was cried out, and then she started again. 967

He took her upstairs and he laid her down on the bed. He undressed her, and she let him. He put her in fluffy jammies, and she let him. He wiped away her makeup and her hot tears with a cool face-cloth, and she let him. He took her hand and ran his fingers over her fingernails, squeezing each one a little, the way she liked, and she let him. 968

“You're going to have a nice lie-down for a couple hours, and I'm going to be right beside you. I'll call the department secretary and tell him you're taking a personal day and will be in tomorrow. Then we're going to go see Jory and his family, so that you can see the boy whose life you saved, and then we are going to go for a walk in the hills, and then I'm going to put you to bed. When you get up in the morning, you can make an appointment to see a grief counsellor or not. Today, I'm in charge, all right?” 969

Her heart swelled with love and she felt a tear slip down her cheek. “Rainer,” she said, “you're a wonder.” 970

“You inspire me, darling,” he said, and kissed her eyelids shut. 971

#

Their thirty-fifth date was their last. 972

“You're going back to Washington,” he said, when he saw the boxes in her office. 973

“Yes,” she said. 974

He stood in the doorway of her office. Trish was painfully aware of the other faculty members in the corridor watching him. Their romance was no secret, of course. Everyone in the law department knew about him, all the network engineers knew about her, and they both took a substantial amount of ribbing about “mixed marriages” and “interfaith dating.” 975

Trish realized with a pang that it was likely that everyone in the law department knew that she'd decided to go back to the Hill but that he'd only suspected it until this instant. 976

“Well, good for you,” he said, putting on a brave face that was belied by the Fret wrinkles in his forehead. 977

“I'm sorry,” she said. “I should have told you once I decided, but I didn't want to do it over the phone --” 978

“I'm glad you didn't,” he said, holding up his hand. “Do you want to come out for dinner with me anyway?” 979

She gestured at the half-packed office. “The movers are coming in the morning.” 980

“Well then, do you suppose you could use some help? I could get some burger king or taco bell.” 981

She looked at him for a long moment, swallowing the knob in her throat. “That would be lovely. Mexican. I mean, `taco bell,'” she said. “Thank you.” 982

He let her pay for it -- “You're making the big bucks now,” he said -- and he was a surprisingly conscientious packer, padding her framed pictures carefully and wrapping her knick-knacks in individual sheets of spun fiber. 983

“Well then,” he said, once he'd finished writing out a description of his latest box's contents on its outside, “you always told me that Hill Rats were Hill Rats for life, I suppose.” 984

“Yeah,” she said. She knew she should explain, but they'd had the argument about it three times since the new PAC had contacted her and offered her the executive director position. The explanation wouldn't get any better now that she'd made up her mind. 985

The new PAC, The Association for a Human-Readable World, was the brainchild of some people she'd worked with while she was on the Hill. They'd asked her to hire a team, to scout an office, and then to camp out in the offices of various important committee chairmen until they passed a law limiting the scope of emergent networking meshes. The Europeans had enacted legislation requiring cops, hydroelectric agencies, banks, hospitals and aviation authorities to use “interrogatable” networks within ten days of The Downtime. With fifteen thousand dead in Western Europe alone, with Florence in flames and Amsterdam under two meters of water, it was an easy call. The US had scoffed at them and pointed to the economic efficiencies of a self-governing network, but the people who were funding Human-Readable World wanted to know where old concepts like “transparency” and “accountability” and “consent of the governed” fit in when the world's essential infrastructure was being managed by nonsentient ant-colony simulations. 986

“Be gentle with us, OK?” he said. 987

“Oh, I wish I had your confidence in my abilities,” she said, sucking on her big-gulp of coke. 988

He put down his food and looked hard at her. He stared longer than was polite, even for (ex-) lovers, and she began to squirm. 989

“What?” she said. 990

“You're not putting me on. Amazing. Patricia Lourdes McCavity, you have felled an empire and you are setting yourself up to fell another -- and it's one that I'm pretty heavily invested in, both professionally and financially.” 991

`Come on,“ she said. ”I'm good, but I'm not superwoman. I was part of a team.” 992

“I've read your briefs. Position papers. Opinions. Speeches. Hell, your press-releases. They were the most cogent, convincing explanations for intellectual property reform I'd ever read. You weren't the judge, but you were his clerk. You weren't the committee chairman, but you were her head staffer. Taco Bell underestimated you. Coke underestimated you. Starbucks underestimated you. Disney underestimated you. Vivendi and Sony underestimated you. Now you're running your own organization, and it's pointed at me, and I'm scared shitless, you want to know the truth. I'm not underestimating you.” He'd drawn his dark eyebrows together while he spoke, and lowered his head, so that he was looking up at her from under his brow, looking intense as the day they'd met, when he was delivering a brilliant lecture on ant-colony optimization to a large lay audience at the law-school, fielding the Q&A with such convulsive humor and scalding lucidity that he'd melted her heart. 993

She felt herself blushing, then wondered if she was flushing. She still loved him and still craved the feeling of his skin on hers, wanted nothing more than another lost weekend with him, taking turns being the strong one and being the one who surrendered, soothing each other and spoiling each other. Thinking of that first meeting brought back all those feelings with keen intensity that made her breasts ache and her hands flutter on the box she was eating off of. 994

“Rainer,” she began, then stopped. She took a couple deep breaths. “I'm not gunning for you, you know. You and I want the same thing: a world that we can be proud to live in. Your family's company has contributed more to the public good than any of us can really appreciate --” 995

He blushed now, too. She never talked about his father's role in the earliest build-outs of ant-based emergent routing algorithms, about the family fortune that he'd amassed through the company that bore his name still, 30 years after he'd stepped down as Chairman of the Board. Rainer was a genius in his own right, she knew, and his own contributions to the field were as important as his father's, but he was haunted by the idea that his esteem in the field was due more to his surname than his research. He waved his hands at her and she waved hers back. 996

“Shush. I'm trying to explain something to you. Between your father and you, the world has increased its capacity and improved its quality of life by an order of magnitude. You've beaten back Malthus for at least another century. That makes you heroes. 997

“But your field has been co-opted by corrupt interests. When you study the distributions, you can see it clearly: the rich and the powerful get to their destinations more quickly; the poor are routed through franchise ghettoes and onto toll-roads; the more important you are, the fewer number of connections you have to make when you fly, the better the chance that you'll get a kidney when you need it. The evidence is there for anyone to see, if only you look. We need standards for this -- we need to be able to interrogate the system and find out why it does what it does. That's an achievable goal, and a modest one: we're just asking for the same checks and balances that we rely on in the real world.” 998

He looked away and set down his taco. “Trish, I have a lot of respect for you. Please remember that when I tell you this. You are talking nonsense. The network is, by definition, above corruption. You simply can't direct it to give your cronies a better deal than the rest of the world. The system is too complex to game. Its behavior can't be *predicted* -- how could it possibly be *guided*? Statistics can be manipulated to `prove' anything, but everyone who has any clue about this understands that this is just paranoid raving --” 999

She narrowed her eyes and sucked in a breath, and he clamped his lips shut, breathed heavily through his nose, and went on. 1000

“Sorry. It's just wrong, is all. Science isn't like law. You deal with shades of grey all the time, make compromises, seek out balance. I'm talking about mathematical truths here, not human-created political constructs. There's no one to compromise *with* -- a human-readable emergent network just doesn't exist. Can't exist. It doesn't make sense to say it. It's like asking for me to make Pi equal three. Pi *means* something, and what it means *isn't* three. Emergent networks *mean* not-human-readable. ” 1001

She looked at him, and he looked at her, and they looked at each other. She felt a sad smile in the corners of her lips, and saw one tug at his, and then they both broke out in grins. 1002

“We're going to be seeing a lot of each other,” she said. 1003

“Oh yes, we are,” he said. 1004

“Across a committee room.” 1005

“A podium.” 1006

“On talk-shows.” 1007

“Opposite sides.” 1008

“Right.” 1009

“No fighting dirty, OK?” he said, raising his eyebrows and showing her his big brown eyes. She snorted. 1010

“Give me a hug and go home,” she said. “I'll see you at the hearings when they introduce my bill.” 1011

He hugged her, and she smelled him, thinking, *this is the last time I'll smell this smell.*

“Rainer,” she said, holding him at arm's length.

“Yes?” he said.

“I'm going to call you, when I have questions about ant-colony optimization, all right?”

He looked at her.

“I need the best expertise I can get. It's in your interest to see to it that I'm well-informed.”

Slowly, he nodded. “Yes, you're right. I'd like that. I'll call you when I have questions about policy, all right?”

“You're on,” she said, and they hugged again, fiercely.

Once he was gone, she permitted herself the briefest of tears. She knew that she was right and that she was going to make a fool out of him, but she didn't want to think of that right then. She felt the place behind her ear where he'd kissed her before going home and looked around her office, five years of her life in thirty banker's boxes ready to be shipped across the country tomorrow, according to a route that would be governed from moment to moment by invisible, notional, *ridiculous* insects.

She ate more taco bell. The logo was a pretty one, really, and now that it had been adopted by every mom-and-pop burrito joint in the world, they'd really levelled the playing field. She thought about the old Taco Bell mystery-meat and plastic cheese and took a bite of the ground beef and sharp Monterey Jack that had come from her favorite little place on the corner, and permitted herself to believe, for a second, anyway, that she'd made that possible.

She was going to kick ant ass on the Hill.

#

3. Conflict of Insect

Trish gathered her staff in the board room and wrote the following in glowing letters on the wall with her fingertip, leaving the text in her expressive schoolmarm's handwriting rather than converting it to some sterile font: “First they ignore you. Then they laugh at you. Then they fight you. Then you win.”

Her staff, all five of them, chuckled softly. “Recognize it?” she asked, looking round at them.

“Pee-Wee Herman?” said the grassroots guy, who was so young it ached to look at him, but who could fire a cannonload of email into any congressional office on 12 hours' notice. He never stopped joking.

The lawyer cocked an eyebrow at him and stroked her moustache, a distinctive gesture that you could see in any number of courtv archives of famous civil-rights battles, typically

just before she unloaded both barrels at the jury-box and set one or another of her many precedents. “It's Martin Luther King, right?”

“Close,” Trish said. 1028

“Geronimo,” guessed the paralegal, who probably wasn't going to work out after all, being something of a giant flake who spent more time on the phone to her girlfriend than filing papers and looking up precedents. 1029

“Nope,” Trish said, looking at the other two staffers -- the office manager and the media guy -- who shrugged and shook their heads. “It's Gandhi,” she said. 1030

They all went, “Ohhhh,” except the grassroots guy, who crossed to the wall and used his fingertip to add, “And then they assassinate you.” 1031

“I'm too tough to die,” the lawyer said. “And you're all too young. So I think we're safe.” 1032

“OK,” Trish said. “This is an official pep talk. They're playing dirty now. Last night, my car tried to take me to Arlington via Detroit. My email is arriving on a 72 hour time-delay. My phone doesn't ring, or it rings all night long. I've had to switch it off. 1033

“But what all of this means is that I've got more uninterrupted work-time than ever and I'm getting reacquainted with my bicycle.” 1034

“Every number I call rings at my ex-girlfriend's place,” the grassroots guy said. “I think we're going to get back together!” 1035

“That's the right attitude, boy-o,” the lawyer said. “When life gives you SARS, make sarsaparilla. I appear to be unable to access any of my personal files, and any case-law I query shows up one sentence at a time. I've discovered that the Georgetown University law-library makes a very nice latte and serves a terrific high tea, and I've set Giselle to work on refiling and cross-indexing twenty years' worth of yellow pads that had previously sat mouldering in a storage locker that I was paying far too much for.” 1036

“Which has given Giselle a rare opportunity to explore the rich civil rights history that you embody,” Trish said, looking pointedly at the paralegal. “But I suspect that she could use a hand, possibly from a grad student or two who could get some credit for this. Let's ask around at Georgetown, OK?” 1037

The lawyer nodded. The office manager pointed out that their bill-payments were going astray after they'd been dispatched to their suppliers but before they were debited from their -- dwindling -- account, which meant that they were getting a couple days' worth of free cash-flow. Only the media guy was glum, since he couldn't field, make or review calls or press-releases, which made him pretty useless indeed. 1038

“Right,” she said, and scribbled something on one of the steno pads she'd bought for everyone when their email started going down three times a day. “This guy owes me from back in the copyright wars -- I fed him some good stories that he used to launch his 1039

career. He was the ABNBC Washington bureau chief until last year and now he's teaching J-School at Columbia. Take the afternoon train to Manhattan and bring him back with you tonight. Don't take no for an answer. Tell him to bring his three most promising proteges, and tell him that they'll have all the access they need to produce an entire series on the campaign. Sleeping on our sofas. Following us to the toilet. Everything on the record. Do-able?"

"It's do-able," the media guy said. "I'm on it." 1040

Once they'd all cleared out, the lawyer knocked on her door. "You going to be all right?" she asked. 1041

Trish waved her hands at the piles of briefing books, red-lined hardcopies, marked-up magazine articles and memos from her Board of Directors. "Of course!" she said. She shook her head. "Probably. We never thought we'd get this far, remember? All this psy-ops shit they're pulling, it's just more proof that we're on the right track. No one should be able to do this. It's the opposite of democracy. It's the opposite of civil discourse." 1042

The lawyer smoothed her moustache. "Right on," she said. "You should be proud. This is a hell of a fight, and I'm glad to be part of it. You know we'd follow you into the sun, right?" 1043

Trish fluttered her hands. "God, don't give me that kind of responsibility." 1044

"All right then, into the ocean. We're making this happen, is what's important." 1045

"Thanks, babe," Trish said. She put on a brave smile until the lawyer had backed out of the office, then stared down at her calendar and looked at her morning schedule. Three congressional staffers, a committee co-chair, an ACLU researcher, and the head of the newly formed Emergent Network Suppliers' Industry Association -- a man she had last seen in her office at UCLA, backing away from a long and melancholy hug. 1046

#

When he rang off the phone and joined her, finally, she straightened out her smart cardigan and said, "Rainer, you're certainly looking... well." 1047

"...funded," he finished, with a small smile. The Emergent Network Suppliers' Industry Association's new offices were in a nice Federal Revival building off Dupont Circle, with lots of stained glass that nicely set off the sculptural and understated furniture. "It's not as grand as appearances suggest, Trish. We got it for a song from the receivers in the Church of Scientology's bankruptcy, furnishings included. It *is* nice though. Don't you think?" 1048

"It's lovely," she said. Around her, staffers bustled past in good suits and good shoes and smart haircuts. "Hard to believe you only set up shop a week ago," she said. 1049

"It came furnished, remember," he said. 1050

"Oh yes, so you said," she said, watching a kid who looked like he'd gone tops in his class 1051

at the Naval Academy put his ankles up on the plasticized return beside his desk and tilt his chair, throwing his head back with wild laughter at whatever it was some other Hill Rat (in her mind, it was a key Congressman's aide -- some old frat buddy of Mr Navy 2048) was saying at the phone's other end.

She looked back and Rainer and saw that he was staring where she had. 1052

“Well, it's a far cry from academic research,” he said. 1053

“I know you'll be very good at it. You can explain things without making it seem like an explanation. The first lesson I ever learned on the Hill was, `If you're explaining --'” 1054

“'-- you're losing,'” he said. “Yeah, I've heard that. Well, you're the old hand here, I'm just learning as I go. Trying not to make too many mistakes and to learn from the ones I do make.” 1055

“Do you want some free advice, Rainer?” 1056

He sat down in one of the chairs, which bulged and sloshed as it conformed itself to his back and butt. He patted the upholstered jelly beside him. “You may always assume that I would be immensely grateful for your advice, Trish,” he said. 1057

She sat down and crossed her legs, letting her sensible shoe hang loose. “Right. DC is a *busy* place. In academic circles, in tech circles, you might get together to feel out your opponent, or to make someone's acquaintance, or to see an old friend. You might get together to enjoy the company of another human being. 1058

“We do that in DC, *after* working hours. Strictly evenings and weekends. When you schedule a meeting during office hours, it has to have a purpose. Even if it appears to have no purpose, it has a purpose. There's a protocol to meetings, a secret language, that's known to every Hill Rat and written nowhere. What time you have the meeting, who's there, who's invited, who knows it, how long you schedule, whether you cater: they all say little things about the purpose of the meeting. Even if you have no reason to call the meeting, one will be read into it. 1059

“If this was any other city in the world, it would make perfect sense for you to look me up once you got to DC. We're still friends, I still think about you from time to time, but here in DC, you calling me over for a meeting, this kind of meeting, at this time of day, it means you're looking to parley. You want to strike a deal before my bill goes to the committee. I don't know how well you know the Hill, so I don't want to impute any motives to you. But if you took a meeting like this with anyone else, that's what they'd assume.” 1060

Rainer's forehead crinkled. 1061

“No Fretting,” she said. Then she smiled a sad smile. “Oh, Fret if you want. You're a big boy.” 1062

He twiddled his thumbs, caught himself at it, and folded his hands in his lap. “Huh,” he 1063

said. “Well. I *did* want to talk to you because it's been a while and because we meant a lot to each other. I *also* wanted to talk to you about the bill, because that's what I'm here to do, at a pretty decent salary. I *also* wanted to see you because I had an idea that you'd be different here in your native habitat, and well, that's true.”

She refused to let that make her self-conscious. Of *course* she was different, but it wasn't geographic. The last time they'd seen each other, they were lovers and friends. Now they were ex-lovers who were being paid to accomplish opposing, mutually exclusive objectives. She knew that there was a certain power in not saying anything, so she wrapped herself in silence and waited for him to say something. She didn't have to wait long. 1064

“Your bill is going to committee?” 1065

“Well, I certainly hope so,” she said. “That's what I'm here for, after all. The discussion draft has been circulating for a week, and we're confident we'll see it introduced and assigned to committee by the end of this week. That's what we're told, anyway. It's got strong bipartisan support. Selling Congress on the importance of human-generated governance is pretty easy. Wouldn't want to be in your shoes.” 1066

He grinned. “You're trying to psych me out.” 1067

“Maybe,” she said, grinning back. “But that's nothing compared to the psych job that we've been getting down at my office.” She told him about the phone weirdness, the oddball traffic-management. “Someone on your side has a funny sense of humor.” 1068

His smile faded. “You're still trying to fake me out,” he said. “If you're seeing corruption in the net, it's because you're looking so hard, you can't help but find it. You're reading malice into accident. Dead spots aren't personal, you know. This is a law of nature -- the networks emerge solutions, they're the best they can come up with. If you don't like the results, talk to nature, not me.” 1069

She shrugged. “Whatever, Rainer. I know what's happening. You'll believe what you want to believe.” She pursed her lips and made an effort at controlling her irritation. “It's really happening, and it's not helping your side. If you know who's responsible, you might let him know that the dirty tricks are what convinced Senator Beauchamp's staff to green-light the bill. Conspiracy is supposed to be beneath the surface. It doesn't look so good when it's exposed to fresh air and sunshine.” 1070

“You've got to be kidding,” he said. “Doesn't matter, I suppose. All right, message received. If I happen to run into someone whom I think should hear it, I'll be sure to pass it on, OK?” 1071

“That's all I ask,” she said. 1072

“You want to talk about the bill now?” 1073

“Have you seen the discussion draft?” 1074

He squirmed. “No,” he admitted. “I didn't know it existed until just now.”

“I'd offer to send you a copy, but I expect it would take a week to arrive, if it ever did. Why don't you ask that guy,” she gestured at the Navy man, “to get you a copy? He looks like he knows his way around. And then drop by my office if you want to chat about it.”

She stood up and tugged at her cardigan again. “It's been very nice seeing you,” she said. She picked up her coat and her mitts. “Good luck settling in.”

He gave her a hug -- which felt weird, hugging was strictly west-of-the-Mississippi, and she broke it off firmly -- and showed her to the door. The first snows were coming in, and the steps were slightly icy, so she maneuvered them slowly, carefully. When she reached the road, he was no longer in the doorway. He was standing right behind her, breath coming out in foggy huffs.

“Trish,” he said, then stopped. His arms dropped to his sides and his shoulders slumped.

“Rainer,” she said, keeping her voice calm and neutral.

“God,” he said. “God. How'd this happen, Trish? Look, I've never been happy the way I was with you. I haven't been that happy since. God, Trish --”

“Rainer,” she said again, taking one of his hands, firmly, motherly. “Rainer. Stop it. You're here to do a job, and your job requires that you and I keep it on a professional level. It doesn't matter how it happened --” But it did, didn't it? She'd left him to come east and do something he thought of as wrong-headed and backwards and superstitious. But she'd left him, not the other way around. And he'd never recovered, though she'd built herself a new life here. It wasn't a contest (but she was winning anyway). “It doesn't matter. We respect each other. That's enough.”

He deflated and she said, “Oh, come here,” and gave him a long and soulful hug, right there on the street, knowing that she was giving the hug and he was taking it. Then she let him go, spun him round, and gave him a little push back toward his office.

By the time she reached the corner and looked back over her shoulder, he was nowhere to be seen.

#

That afternoon, her phone started ringing normally, with actual people on the other end. Her outbound calls were connected. Her email was delivered. Her car got her home in record time. She sighed as she eased it into her driveway and carried her briefcase inside and poured herself a very small glass of Irish whisky so rare that it had been known to make grown men weep. Normally, she saved it for celebrations, but if she was celebrating something, she was damned if she knew what it was.

Her phone rang as she was licking the last few drops of liquor from the little glass. It was the lawyer, with news.

“I just stopped by the office and found a messenger on the doorstep. He had hard-copy of a press-release from Senator Beauchamp's office. They're introducing the bill in the morning. Congrats, kid, you did it.” 1087

Trish set the glass down and said :whoopee: very quietly and very emphatically. 1088

“You're durned tootin',” the lawyer said. “And double for me.” 1089

Of course, it wasn't over by a long shot. Getting a bill introduced was not the same as getting it through committee. Getting it through committee was not the same as getting it passed in the Senate, and getting it passed in the Senate was not the same as getting it passed in the House, and then who the hell knew what the hereditary Chimp-in-Chief in the Oval Office would do when it was passed through the bars of his cage with his morning banana. 1090

But she had ridden back into town less than a year before, and she had gone from nothing to this. The ACLU was supporting the bill, and EFF, EPIC, all the old civ-lib mafia had opened their arms to her. She poured herself one more very small whisky, gave herself a fragrant bath and put herself to bed, grinning like a fool. 1091

#

“There are four news-crews, six print reporters, and a couple of others here to see you,” the office-manager said. The office phones were out again, but that hadn't stopped a fair number of determined people from figuring out that they could actually move their physical being from one part of Washington to another and have a real, old-fashioned face-to-face. The lawyer and she had each taken a dozen press “calls” that morning, with their embedded reporters from Columbia J-School perched obtrusively in the corners of their offices, taking copious notes and filming constantly. 1092

“Others?” 1093

“A mixed bag. Some Hill people, some I'm not sure about.” 1094

Trish stood and stretched out her back, listening to it pop. She usually worked in bursts, typing or talking for an hour, then taking a little walk to gather her thoughts and touch base with her co-workers. Today, she'd been glued to her seat from 7AM to after lunchtime, and her back and butt were shrieking at her. 1095

She walked into the front area, trailed by her reporter. She recognized some of the journos and some of the Congressional staffers, and a local rep from a European Privacy think-tank in Brussels, and -- Rainer. 1096

He was turned out in a very natty suit and a homburg, a fashion that had recently come back to DC, and she knew that he'd been put together by a personal shopper. Her own Board had suggested to her, matter-of-factly, that she should get one of her own once the bill cleared committee, since she'd be doing tons of press and as sharp a dresser 1097

as she fancied herself, she was no pro. Her prodigious talents, they assured her, lay elsewhere.

He took her hand with both of his and gave her a long, intense hand-shake that drew stares from the journos and the think-tank man. 1098

“Nice to see you again, Ms. McCavity,” he said, somberly. 1099

“A pleasure as always, Mr. Feinstein,” she said. 1100

“I'm sorry to drop in on you unannounced,” he said, “but I hoped that I could have just a moment of your time.” Belatedly, he remembered to take off his silly hat and then he fumbled with the right way to hold it, settling for dropping it to his waist and upending it. She thought he looked like a panhandler in a Charlie Chaplin movie and she suppressed a smile. His curly hair had been gelled into a careful configuration that reminded her of the glossy ringlets of a black poodle. 1101

“I suppose we can do that,” she said. She turned to her other visitors. “Who's got a 3PM deadline?” she said. Two of the print-reporters held up their hands. “You then you,” she said. “Who's got a 5PM filing deadline? 6PM? 10PM?” She triaged them all, promised to meet the think-tank man for dinner at an Ethiopian place in Adams-Morgan, and led Rainer into her office and closed the door. 1102

He looked at her embedded reporter and cocked his head. 1103

“Sorry, Rainer,” she said. “I have a shadow for the duration. Just pretend he isn't here. You don't mind, do you dear?” she said to the reporter, who was very young and very bright and missed nothing. He shook his head and made some notes. 1104

“The bill's dead,” Rainer said, after he'd sat down. 1105

“Oh really?” she said. 1106

“Just heard from Senator Rittenhouse, personally. He takes the position that this should be in Commerce, not Judiciary, and is calling hearings to make that happen.” 1107

Rittenhouse was another powerful committee chairman, and this wasn't good news. What's more, he was in the pocket of the network operators and had been for a decade, so much so that editorialists and talk-radio types called him “The Senator from The Internet.” 1108

Still, it wasn't catastrophic. “That's interesting,” she said, “but it's a far cry from killing the bill. It's pretty standard, in fact. Just slows things down.” She smiled at him. He was just a kid sometimes, so out of his depth here. He reminded her of the Relatives she'd met that day, the little boys in their miniature suits running on the beach. 1109

He shifted in his seat and fondled his hat-brim. “Well, I guess we'll see. My press-liaison has set up a post-mortem debate on one of the news-networks tonight, and I thought you might want to represent the other side?” 1110

She smiled again. He was twice the rhetorician that she was, but he had no idea how to 1111

play the game. She'd have to be careful to bruise, not break him.

#

“We, as a society, make trade-offs all the time,” Rainer said. He was wearing a different suit this evening, something that Trish had to admit looked damned good on the studio monitors (better than her frumpy blouse and wool winter-weight trousers). “We trade a little bit of privacy for a little bit of security when we show identification before going into a federal building --” 1112

The ewok held up his paw. “But how much should we be willing to trade, Ms. McCavity?” 1113

She looked into the camera, keeping her eyes still, the way she'd been told to if she didn't want to appear tourettic. “Wickett, when Franklin said, `Those willing to give up a little liberty for a little security deserve neither security nor liberty,' he wasn't spouting empty rhetoric, he was laying the groundwork for this enduring democratic experiment that we all love. Look, we're not opposed to the use of autonomous networks for *some* applications, even *most* applications, with appropriate safeguards and checks and balances. No nation on earth has the reliance that we do on these networks. Are they an appropriate way of advising you on the best way to get to the mall on a busy Saturday? Absolutely, provided that everyone gets the best advice the system can give, regardless of economic status or influence. But should they be used to figure out whom the FBI should open an investigation into? Absolutely not. We use judges and grand juries and evidence to establish the sufficiency of a request to investigate a private citizen who is considered innocent until proven guilty. We learned that lesson the hard way, during the War on Terrorism and the Ashcroft witch-hunts. Should we trade grand juries and judges for ant-colonies? Do you want the warrant for your wiretap issued by an accountable human being or by a simulated ant-hill?” 1114

The ewok turned to the camera. “Both sides make a compelling case. What do you think? When we come back, we'll take your calls and questions.” The lights dimmed and it adjusted its collar and cracked its hairy knuckles on the table before it. Ever since it had made the move to a pbs, it had been grooming its fur ever-more conservatively and trying out a series of waistcoats and short pants. It turned to her and stared at her with its saucer-sized black button eyes. “You know, I just wanted to say thanks -- I had self-identified as an ewok since I was five years old, but Lucasfilm just wouldn't license the surgery, so I went through every day feeling like a stranger in my body. It wasn't until your law got enacted that I was able to find a doctor who'd do it without permission.” 1115

She shook its paw. “It wasn't my law, but I helped. I'm glad it helped you out.” She unconsciously wiped her palm on her thigh as the ewok turned to his make-up boy and let him comb out its cheeks. She stared at Rainer, who wasn't looking good. She'd had him on the ropes since their opening remarks, and the ewok kept interrupting him to let her rebut -- and now she knew why. 1116

Rainer had his phone clamped to his head, and he was nodding vigorously and drumming his fingers. He was sweating, and it was making his hair come un-coiffed. Trish's own phone buzzed and she looked down at in surprise. It was her voice-mail, coming back to life again. It had started when she got to the studio -- when she got within a few yards of Rainer, she realized. Messages coming in. She'd transcribed a dozen in the green-room before they'd dragged her into makeup. 1117

The studio lights blinked and Rainer popped the phone back into his pocket and the ewok turned to look back into the camera, examining the ticker scrolling past his prompter. He introduced them again, then turned to Trish. 1118

“Ms. McCavity, Alberto in San Juan writes in wanting to know what changes we should institute in the networks.” 1119

She said, “It's not my place to say what technical changes the networks need to have. That's where experts like Mr. Feinstein come in. We'd ask the administrative branch to solicit comments from people like him to figure out exactly what technical changes could be made to allow us to remain competitive without giving up our fundamental liberties in order to beat the occasional traffic jam.” 1120

“Mr. Feinstein?” 1121

He grinned and leaned forward. “It's interesting that Ms. McCavity should disavow any technical expertise, since that's what we've been saying all along. If she's getting stuck in traffic, it's because there's a *lot* of traffic. The ant-nets route *five thousand percent more traffic* than our nation's highways ever accommodated without them, and they've increased the miles-per-hour-per-capita-per-linear-mile by *six thousand, four hundred percent*. You're stuck in traffic? Fine. I get stuck sometimes too. But for every hour you spend stuck today, you're saving *hundreds* of hours relative to the time your parents spent in transit. 1122

“The other side of this debate are asking for something impossible: they want us to modify the structure of the network, which is a technical construct, built out of bits and equations, to accommodate a philosophical objective. They assert that this is possible, but it's like listening to someone assert that our democracy would be better served if we had less gravity, or if two plus two equaled five. Whether or not that's true, it's not reasonable to ask for it.” 1123

The ewok turned to her. 1124

She said, “Well, we've heard a great deal about the impossibility of building democratic fundamentals into the network, but nothing about the possibilities. This hard, no-compromise line is belied by the fact that we know that the rich and powerful manipulate the network to their own advantage, something that statistics have proven out --” 1125

“See, this is *exactly* how these Human-Readable types do it, it's how their media-training goes. They are here to ask for changes to *technical* specifications, but they disavow any 1126

technical knowledge, and when they're called on this, they spout dubious `statistics' that `prove' that up is down, black is white, and that millionaires can get to the movies in half the time that paupers can. The Emergent Network Suppliers' Industry Association represents the foremost experts in this field, but you don't need to be an expert to know that these networks *work*. The ants take us where we want to go, in the shortest time, with the highest reliability. Anyone who doubts that can dig out her map and compass and sextant and try to navigate the world without their assistance, the way they do in Europe."

Her mouth was open. *Media training*? Where did he get this business about *media training*? "I'm not sure where Mr. Feinstein gets his information about my media training from, but personally, I'd rather talk about networks." She paused. "Let's talk about Europe, where they *have* found ways of creating transparency and accountability for these `unregulatable' algorithms, where the sky *hasn't* fallen and the final trump hasn't sounded. What do they know that we don't?" 1127

"What indeed?" the ewok said, breaking in and giving her the last word again. "More of your questions after this break." 1128

They got in their cars together after they'd scrubbed off their makeup and shaken paws with the ewok, riding down in the elevator shoulder to shoulder, slumped and sweaty and exhausted. They didn't speak, and the silence might have been mistaken for companionable by someone who didn't know any better. 1129

They got off at the same floor in the parking garage and turned in the same direction, and Trish spied his car, parked next to hers, the last two on the floor. Quickening her step, she opened her door and turned the car on, backing up so that she was right behind Rainer. 1130

He backed out slowly, looking at her quizzically in his rearview, but she refused to meet his eye, and when he pulled out, she rode his bumper. 1131

"Sweet fancy Moses," she breathed, as the traffic parted before them, allowing them to scythe through the streets, onto the beltway. She hung grimly onto his bumper, cutting off cars that tried to shift into her lane. Moving this fast after so much time stuck on the roads -- it felt like flying. She laughed and then got a devilish idea. 1132

Spotting a gap in the passing lane, she zipped ahead of Rainer and swerved back into his lane so that she was in the lead. As though a door had slammed shut, the traffic congealed before them into a clot as thick as an aneurysm. She hissed out a note of satisfaction, then waited patiently while Rainer laboriously passed her again, and the traffic melted away once more. 1133

It was tempting not to get off at her exit, but she had to get some sleep, and so she reluctantly changed lanes. There wasn't much traffic on the road, but every traffic light glowed vindictive red all the way to her house. 1134

The Chairman of her Board messengered over a hand-written note of congratulations that 1135

was on her doorstep. Beneath it was a note from Rainer's great-aunt, with the best wishes of his mother in neat pen beneath it. She read its kind words as she boiled the kettle, and put it into her pile of correspondence to answer. Rainer's great-aunt wanted to know if she had met a nice boy in DC yet, but she didn't come right out and say it -- too subtle for that. The women in Rainer's family got all the subtlety, and they recognized their own kind. It was why she and the old lady kept writing to each other; that and so that the Relatives could reassure themselves that someone in full possession of lifeguardly skills and a level head was watching out for Rainer's interests.

This business of hand-written, hand-delivered notes and letters was actually kind of charming, she thought as she put her feet up on her coffee table and opened up her flask of very special Irish whisky again. 1136

#

She and Rainer went head to head in half a dozen more skirmishes that month -- her phone popping back to life every time she got within shouting distance of him. The on-again/off-again hearings in both Judiciary and Commerce never quite materialized. 1137

She was better at playing the game, but he was a fast learner, and he had much deeper pockets and working network infrastructure. Her Board approved her renting out an empty suite of offices below their office and converting them to bedrooms for her staff for days when their cars couldn't get them home. They secretly borrowed elderly network appliances from relatives or bought them in the dollar-a-pound bin at the Salvation Army, but always, within a few hours of being in the possession of someone in the employ of the Association for a Human-Readable World, the devices would seize up and lose their routes to the network. Their offices started to fill up with dead soldiers, abandoned network boxes that no one could get online. 1138

The embedded journalists went home after the second week. Their own gear was seizing up, too, as though the curse of the Association for a Human-Readable World was rubbing off on them. They vowed to return when things got interesting again, but they were of no use to anyone without working cameras, mics, and notepads. 1139

Christmas came and went, and New Year's, and then February arrived and the city turned to ice and slush and perpetual twilight. The paralegal quit -- she needed a job where the phones worked so that she could call her girlfriend. The media guy took a series of “personal days” and she wasn't sure if he'd show up again, but it didn't matter, because the press had stopped calling them. 1140

Then came the second Downtime. 1141

It struck during morning rush-hour on Valentine's Day, a Monday, and it juddered the whole country to a halt for eight long days. The hospitals overflowed and doctors used motorized scooters to go from one place to another, unable to spread their expertise around with telemedicine. Firemen perished in blazes. Cops arrived too late at crime-scenes. Grocery 1142

stores didn't get their resupplies, and schools dug out old chalk-boards and taught the few students who lived close enough to walk. Fed cops of all description went berzerk, and could be seen walking briskly from one federal building to another, their faces grim.

And suddenly, miraculously, every journalist, policy-wonk, staffer, advisor, clerk and cop in DC wanted to have a chat with the Association for a Human-Readable World. 1143

#

She hired three more people that week, and borrowed four more from fellow-traveler organizations. Paying their salaries for the next four weeks would bottom out the group's finances, but she knew that this was now or never, and the Board backed her, after some nail-biting debate. 1144

Rainer showed up on the fourth day of the Downtime, and she found him standing, bewildered, in the hustle of her office as her staffers penned notes on steno pads to their contacts on the Hill and handed them to waiting bicycle couriers in space-program warmgear that swathed them from fingertips to eyeballs. She plucked him out of the bustle and brought him back to her office. 1145

“I've got a hell of a nerve,” he said, sitting in her guest-chair. 1146

“Really?” she said. “I hadn't noticed.” 1147

“Well, I haven't been showing it off. But I'm about to. I need advice. My office is falling apart. You've been living with no communications and no travel for a year now, you know how to make it work. We're completely lost. I've come to throw myself on your mercy.” He looked up at her with his big brown eyes, and then they crumpled shut as he made his Fretting face. 1148

“You're playing me, Rainer,” she said. “And it won't work. Whatever I feel for you, I've got a job to do, and if this Downtime tells us anything, it's that I'm doing the right thing, and you're doing the wrong thing.” 1149

He hung his head. He wasn't even the slightest bit natty that day. She supposed that his personal assistant was stuck in Fall's Church or Baltimore or somewhere, unable to get into the city. Judging from the slush and road-salt on his shoes, he must have walked the two miles between their offices. 1150

“What's more, I don't have any advice to give you, in particular. We're not faring well here because we're doing something differently -- we're faring well because we're doing what we've been at all along, because of a network outage that you claim is impossible, is a figment of our imagination. Those bike messengers: we've been their best customers for months now. Everyone else is begging for service from them, but they're always here when we need them. We've got beds and changes of clothes and toilet-kits in the offices downstairs. We've been living through a Downtime for a couple of quarters now -- we've hardly noticed the change. If you want to cope as well as we are, well, you can go back in 1151

time, rent out spare offices to house your staff, establish a good working relationship with a bike-messenger company, learn to navigate the Metro and the freeways by map, and all the other things we've done here."

He looked defeated. He began to stand, to turn, to leave. 1152

"Rainer," she said. 1153

He paused. 1154

"Close the door and sit down," she said. 1155

He did, looking at her with so much hope that it made her eyes water. 1156

"Here's my offer," she said. "You and I will lock ourselves in this office with the last draft of my bill. My staff will run interference for me with the Judiciary committee, and we will draft a version of my bill that we can both live with. We will jointly take it to Senators Beauchamp and Rittenhouse, with our blessings, and ask them to expedite it through *both* committees. Every Congresscritter on the Hill is sitting around with his thumb up his ass until the lights come back on. We can get this voted in by Tuesday." 1157

He stared down at his hands. "I can't do it," he said. "My *job* is *not to compromise*. I just can't do it." 1158

"Come on, Rainer, think outside the box for a minute here." Her heart was pounding. This could really be it. This could be the solution she'd been waiting for. "Even if the bill passes, there's going to be a long deliberation over the contours of the regulation, probably at the FCC. You'll be able to work on the bureau staffers and at the expert agencies, take ex-parte meetings and lobby on behalf of your employers. It's all we've ever asked for: an expert discussion where the public interest gets a hearing alongside of private enterprise and government." 1159

But he was shaking his head, standing up to go. "You're probably right, Trish," he said. "I don't know. What I know is, I can't do what you're asking of me. They'd just fire me." 1160

"If the Downtime continues, they won't be *able* to fire you -- they won't even know what you're up to until it's too late. And then they'll make the best that they can out of it. No one is better qualified to represent your side in the administrative agencies." 1161

He put his ridiculous hat on and wrapped his scarf around his neck, and they looked each other in the eyes for a long moment. She waited for the involuntary smile that looking into his eyes inevitably evoked, but it didn't come. 1162

"I don't understand you, Trish. You won this incredible victory for cooperation, for collective ownership of our intellectual infrastructure. Ant-networks demand the same cooperation from the nodes, that my phone pass your car's messages to his desk. Let's just set aside the professional politics for a second. Just you and me. Tell me: how can you *not* support this?" He looked at her out from under his brows, staring intensely. He swallowed and said, "It was the surfer, wasn't it?" 1163

“What?” she said. 1164

“The one who died. That's why you're doing this. You want to make up for him --” 1165

She couldn't believe he'd said it. Taken such a cheap shot. “I'm surprised you didn't save that one for television, Rainer. Jesus. No, I'm doing this because it's *right*. In case you haven't noticed, your self-healing, uncorruptable network is *down*. People are suffering. The economy is tanking. The death toll is mounting. You won't even bend one *inch*, one *tenth of an inch*, because you're worried about losing your job.” 1166

“Trish,” he said, “I'm sorry, I didn't mean --” 1167

Her office door opened and there stood her embedded journalist. “I just got in from Manhattan,” he said. “Can I set up in that corner there again?” 1168

“Be my guest,” she said, grateful for the distraction. Rainer looked at her, forehead scrunched, and then he left. 1169

#

“It's a good thing you're not over him,” the lawyer said, pouring her another victory whisky. The bill had passed the House with only one opposing and two abstentions, and had squeaked through the Senate by five seats, at five minutes to midnight on the eighth day of the Downtime. They were halfway to the bar (where the office manager had been feeding twenties to the bartender to stay open) when the grid came back up, crawls springing to life on every surface and cars suddenly zipping forward in the characteristic high-speed ballet of efficiently routed traffic. They'd laughed themselves stupid all the way to the bar and after a brief but intense negotiation between the lawyer and the barman, he'd produced a bottle of Irish that was nearly half as good as the stuff Trish kept at home. 1170

“I'm going to pretend you didn't say that,” Trish said, sipping tenderly at the booze. 1171

“Come on, girl,” the lawyer said, twirling her moustache. “Be serious. You two had so much sexual energy in that room, it's a wonder you didn't make the bulbs explode. It's how you got inside each other's heads. You weren't selling the committee, you were selling *him*, and that's what made you so effective. We're going to need that again at the FCC, too -- so no getting over him until after then.” 1172

Trish drank her whisky. She didn't know what to say to that. He'd looked ten years older tonight, in the corridors, whispering to his committee members, to his staffers, his face drooping and wilted. She supposed she didn't look any better. It had been, what, three days? since she'd had more than an hour's sleep. 1173

“I don't get it,” she said. “How could he be so dumb? I mean, it's obvious that the system is being gamed. Obvious that we're being targeted through it. Yet he sits there, insisting that white is black, that up is down, that the network is autonomous and immune to all corruption.” 1174

“It's like a religion for them,” the lawyer said. “It doesn't need explaining. It's just right-living. It's the Law.”

Trish thought back to the ceremony in the graveyard, the dirge and the prayers to a god no one believed in. Had Rainer really renounced his faith when he dropped out of Yeshiva?

“Here's to a human-readable world,” Trish said, raising her glass. Around her, the staffers and borrowed staffers and hangers-on and even the barman raised their glasses and cheered. It was warm and the feeling swelled in her tummy and up her chest and through her face and she burst out in what felt like the biggest smile of her life.

#

She'd learned a long time ago never to send email while drunk, but it had been too much last night.

“What if, Rainer, what if -- what if the reason for the Downtimes is that someone is manipulating the network and that's breaking it. Did you ever wonder about that? Maybe the network *is* as good as you say it is -- until someone screws it up by trying to get preferential treatment for his pals.

“Wouldn't that be a kick in the teeth? We get five squillion percent increases in across-the-board routing efficiency, but in the end, it's never enough for people who can't be happy unless they're happier than someone else.

“The thing that saves the human race, but if we adopt it, it will destroy us. Irony sucks.”

She'd signed it “Love,” but even drunk, she'd had the sense to take that out before sending it. Saying “Love” would have been no more appropriate than saying, “You know, I *did* save your cousin's life.” She'd called in no favors, she'd run no blackmail, and she'd won anyway.

He rang her doorbell at 5AM. She was barely able to drag herself out of bed.

“I figured you'd be getting up to deal with the press soon,” he said, and she groaned. He was right. She'd earned some time off, but it'd be a month before she could take it. Too much press to do. She appreciated anew how much work it must have taken to be any of her old bosses from the copyright wars: the judge, the senator, the executive director of the PAC.

She was in her robe, and he was in jeans and a UCLA sweatshirt. He didn't have any gel in his hair, which was matted down by the knit cap he'd been wearing. He looked adorable.

“They fired me this morning,” he said.

“Oh, hon --” she said.

“I would have quit,” he said. “I'm outmatched.”

She felt herself blush. Or was she flushing? She was suddenly aware of his smell, the boy smell, the smell that she could smell in his chest, in his scalp, in his tummy, lower... She straightened up and led him into the living room and started the coffee-maker going. 1189

“When do you fly back, then?” she said. 1190

He looked at her, smiling. “I don't know,” he said. “I haven't booked a ticket.” 1191

She felt an answering smile at the corners of her mouth and turned into the fridge to fetch out some gourmet MREs. “Bacon and eggs or pancakes?” she said, then laughed. “I guess bacon is out,” she said. 1192

“Oh, I'm willing to bet that that bacon hasn't been anywhere near a pig,” he said, “but I'll have the pancakes, if you don't mind.” 1193

She set everything to perking and went into the bedroom to pull on something smart and camera-friendly, but everything was in the hamper, so she settled for jeans and a decent shirt from last-year's wardrobe. 1194

When she opened the door, he was standing right there, taller than her. “I think you're right,” he said. “About the network. It's the best explanation I've heard so far.” 1195

She wrapped herself in silence again, waited for him to say more. 1196

“You see, the *true*, neutral network is immune to corrupting influences and favoritism. So the existence of corruption and favoritism means that what we've got *isn't* a true network. Which means you're right! We need to have a hearing to get to the bottom of this, so that we can build the true network.” He smiled bravely. “I thought maybe you could use an expert in your corner who'd say that in a hearing?” 1197

“Thanks,” she said, and slipped under his arm and back into the kitchen. Suddenly, she wanted very much to be back at her office, back with her staff, talking to reporters and overseeing a million details. “I'll think about it.” 1198

“I'm giving up my apartment at the end of the month -- next Monday. I won't be able to afford it without the Association's salary,” he said. 1199

Her place was big. A bedroom, a home office, a living room and a dining room. It was a serious deal for DC, even outside the beltway. It could easily accommodate a second person, even if they weren't sleeping together. 1200

Her office -- her staff -- the press -- the bill -- her Board. 1201

“Well,” she said, “I've got to get going. I'll shower at the office. Got to get there in time to catch the Euro press-calls. Let me put your breakfast in a bag, OK?” 1202

He looked whipsawed. “Uh, OK. Can I give you a ride?” 1203

“No, I'll need my car this afternoon. Thanks, though.” She kept her voice light, didn't meet his eyes. Kept thinking: her office -- her staff -- the bill. 1204

“Well,” he said. He turned for the door. Stopped. She tensed. He turned back to her. “Trish,” he said.

“It's OK,” she said. “It's OK. We just have religious differences, is all.”

She slipped past him and into her car, and left him standing in her driveway. As she asked the car to plot a route for her back to the Hill, she dug through her purse for a pocket-knife. At the next red light, she took her lapel and slashed at it, opening a rent in her shirt that reflected a little of what her heart was feeling. It made her feel a little better to do it.

- For Alice

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Afterword:

I wrote this story for Alice, who was then my girlfriend and is now my wife. Alice is smart as anything and I wanted to show off to her.

So I stole two ideas: Eric Bonabeau's ground-breaking work on “ant-colony optimisation” (the basis of his consulting firm Icosystem, built on work he did at the Santa Fe Institute) and Natalie Jeremijenko's provocative notion of “legible computing” -- that is, computing whose results can be interpreted by laypeople. Eric's handing the keys to the kingdom to emergent systems that are spookily good but can't be interrogated. Natalie wants a Protestant Reformation for computing in which we can all understand what's being discovered by our computer systems. These two ideas are both fantastic, but they can't peacefully coexist, or can they?

~~-~-~-

Liberation Spectrum 1213

The tiny multinational lumbered across the Niagara Falls border in its tour-bus, Lee-Daniel at the wheel, sipping iced mocha from the flexible straw that he'd threaded through a series of eyelets on his jacket. He'd been driving all the way since Akwesahsne, reciting mnemonic sleep-dep chants and steadily consuming the lethal blend of bittersweet chocolate and espresso, but after 20 straight hours he was in deadly danger of falling straight to sleep and head-onning the bus into a Jersey barrier or a bullet train or a minivan. 1214

Once they were on US soil, he pulled the bus over at a temporary roadhouse and set the handbrake. He eased himself out of the driver's perch, chafing his narrow ass and thighs to get the blood flowing there again, and gave forth a drawn out "*gaaaah*" as the pins and needles stabbed into his sweat-marinated muscles. He heard the rest of the company rousing itself behind him. First, the investors in the front row, then the rest of the board of directors in the row behind them, then four rows of middle-managers and finally the great mass of front-line workers, techs, customer service reps, trouble-shooters, antennamen, switchwomen, chicken-pluckers and left-handed bottle-stretchers. 1215

He flipped the windows to transparent and let the sun shine in, provoking groans from the company. MacDiarmid, the angel investor who'd been in since the multinational had been able to fit in a sedan, threw astrong arm around Lee-Daniel's shoulders. "You OK?" he said. The tone had phony solicitousness; MacDiarmid and Lee-Daniel had been through half a dozen disasters, from hostile takeover attempts to roadblocks to high-speed engine failure, and Lee-Daniel knew a fake when he heard it. 1216

"I'm fixing to lay down and die," Lee-Daniel said, stretching theatrically, his pipe-cleaner arms straining. "You're street-legal in New York, right? How about you drive the bus for the next couple shifts?" 1217

"Seriously?" MacDiarmid said. His black hair was showing grey now, but his eyebrows were still fierce and black, his eyes still sharp in their nest of whiskey-cured crows-feet. 1218

It was rare for Lee-Daniel to cede the wheel to anyone else -- it was his damned company and he'd drive the damned bus. Lee-Daniel saw the shareholder confidence eroding before his eyes. 1219

"Just for a while, OK? Not permanent, just for a day or two, just long enough for me to get over the sleep-deficit and re-grow some stomach lining." It was hard being CEO of a mobile multinational. The shareholder oversight was murder. 1220

MacDiarmid looked closely at him, then smiled and gave him a burly man-hug that smelled of sandalwood soap and good liquor. "Yeah, of course, of course. I'll put it to the Board Meeting tonight at dinner. Can't have the CEO burning out at the wheel, that's what I'll say, don't worry about it, LD." 1221

"Thanks, Mac," Lee-Daniel said. "How about we get some eats?" He put his hand on the 1222

geometry-reader beside the wheel, re-authenticated to the bus, then hit the hatches. Doors hissed open at the back, at the front, at the middle, fresh dusty air rushing in all at once in an ear-popping whoosh. The bus knelt ponderously and the company piled out.

MacDiarmid hustled away to join the rest of the investors, his exquisite hand-made leather shoes slapping the paving, the cuffs of his wool tailor-made slacks shushing over their gleaming upper, and as Lee-Daniel locked the bus down and armed it up, he watched the angel investor whisper in his co-shareholders' ears. Lee-Daniel couldn't hear the words, but six years at the wheel of Cognitive Radio, Inc. had schooled him well in the body-language of investors and he knew his days with CogRad were numbered. 1223

#

The roadhouse was the kind of TAZ that got less entertaining at the square of the amount of time spent within its animated walls. The first minute was painful, an overbright eternity of authenticating to the roadhouse-area-network and establishing credit with the system. Once they had their tokens -- poker-chips adorned with grinning, dancing anthropomorphic dollar, Euro and Yen symbols -- there came the second minute, twice as horrible as the first, as they struggled in the guts of the giant vending machine, trying to fathom the actual products represented by the branded messages that tailored themselves to your personal demographic, your stated and implicit preferences, the messages that danced across your field of vision as you perused the racks in the roadhouse's aisles. 1224

The third minute was twice as horrible as the first two minutes, as you finalized your selections by waving your poker-chip at different displays, then tried to take receipt of your goods from the floor-level fulfillment chutes while fending off the imprecations of the upsell displays set into the floor-tiles. “Lee-Daniel! People who bought tuna-melts also bought thousand-hour power-cells. People who bought OralCare mouth-kits also bought MyGuts brand edible oscopycams. People who bought banana-melatonin rice-shakes also bought tailor-made sailcloth shirts by Figaro's of London and Rangoon.” 1225

The horribleness of the roadhouse went asymptotic to infinity at minute four, as you sat down and tried to eat your rubbery tuna-melt hunkered down at a table crowded with middle-managers in need of reassurance while swatting away the buzzing aerostats that probabalistically routed towards those diners with the highest credit ratings, delivering pitches whose tone and content had been honed by genetic algorithms that sharpened them to maximal intrusiveness and intriguingness. It took a genetic algorithm to make a high colonic sound like an afternoon at a spa. 1226

“I'm getting too old for this shit,” said Joey Riel, a 17-year-old metis whose fluency in English, French and Ojibwa had made him the youngest middle manager in CogRad history, eight months before. He'd started griping about his road-weariness within days of his promotion up from antennaman. It made him fit in with the other, older middle managers, who were coffee-soured lifers whose time on the road had drummed out any footloose spirit they might have once possessed. 1227

Further down the arcade, the investors were waving their tokens over a trading table, playing the instant futures market. An aerostat overhead mirrored the gameplay, and as Lee-Daniel watched, MacDiarmid doubled his money on a short-odds bet on two cherries and a lemon, then Earnshaw lost big when his long-odds investment on uranium and coal came back with two windmills and a photovoltaic array. 1228

“Amen to that, bro,” said Elaine, who ran two squads of surveyors. She was all lean muscle and blackfly repellent and mail-order outdoorwear, handily capable of living off the land for weeks while trekking the bush, homing in on optimal repeater locations. At the Akwesahsne Sovereign, she'd broken the hearts of a half-dozen starry-eyed Mohawk Warriors who'd puppydogged after her as she shlepped the length and breadth of their territory, warchalking neon arrows to indicate RF shadows cast by especially leafy trees and outcroppings of granite Canadian Shield. That was before the S√ªret√© du Quebec arrived on the scene and it all went pear-shaped. 1229

“Me, too,” said Mortimer, the security man who really *was* too old for this shit, Lee-Daniel reflected, scratching at his fussy little caterpillar moustache. He'd been protecting the old dodderer from the Board of Directors, who saw him as an insurance nightmare. Mortimer's hands shook, he was nightblind, and he was 98 years old, and there wasn't enough rejuve in the world to give him the mental flexibility required by the modern age. Lee-Daniel had stripped him of his sidearms, even the nonlethals, at the same time as he'd promoted Joey Riel. Now Mortimer carried a loudhailer through which he could bark orders in his old cop voice, the voice that made your asshole clench up and your shoulders itch for a soon-come bullet. 1230

The investors howled again, and the aerostat told them all that MacDiarmid had cleaned up bigtime, paying out 100-to-1 on an investment in Shell Oil collectibles -- two derricks and a shell. The Series A/Series B investors crowded around him, giving him awe-stuck backslaps. The other two might be the fronts for gigafunds, but that was all they were: fronts. They were the Voice of the Money while the company was on the road, junior associates who needed to make a good score on their wanderjahr if they wanted to make partner. Mac was solo money, a shrewd individual investor who'd acquired his 15-share in CogRad with no more investment than a year's worth of gas and roadhouse meals while Lee-Daniel was getting the show on the road. 1231

“The rich get richer and the poor get children,” Joey Riel said, shaking his head at the investors and the board carrying MacDiarmid off to a private dining room for their dinner and nightly board-meeting. 1232

“Those Mohawks got you all full of bolshy horseshit, didn't they?” Mortimer said. The Mohawk Warrior Society talked a good anarcho-syndacalist line. Most of the Sovereigns that CogRad unwired were interested in setting up a local telco as part of some economic development scheme -- as far as they were concerned, tax-free packets were the new tax-free cigarettes. 1233

But the Mohawk Warriors in Quebec were in it for the samizdata. They had big plans for their cognitive radio network. They'd peered with two upstate New York networks and an Algerian satellite backbone, and they were reselling enciphered proxy-time on their network to anyone who wanted it, providing an anonymizing relay for any and all data, regardless of origin, destination or payload. 1234

Lee-Daniel knew he should have gotten them to pay upfront. Nothing got the blackshirts interested in private wireless networking like routing suspicious real-time chatter between Burmese guerrilla cells and suspected movie-swappers in DC. But that wasn't how CogRadio had been built. The native bands that were desperate enough to assert that their ancestral treaties didn't encompass the RF spectrum couldn't afford to lay out cash for CogRadio's hardware, training and remote administration. CogRadio was as much a bank as a technology startup. 1235

But the Canadian government took a hard line on anything that looked like separatism. Four CogRadio employees who'd been unlucky enough to get stuck on the wrong side of the barricades during one of the Warriors' traditional shoot-outs with the S√ªret√© wouldn't be coming back to work for 10-to-15, eight with good behavior. 1236

With the investors off out of sight, the managers and the front-liners shucked their veneer of civility and began to get wild, ordering drinks and health-insurance-invalidating carbo-treats. Elaine sucked down three tequila cartons and glared bleary hostility at him. 1237

“The fuck do you know about *anything*, hey?” she said. “You're supposed to be in charge of things, but you don't take a shit without clearing it with those bastards.” She jerked her head over her shoulder at the closed door of the private dining room. “And when you *do* make a decision, you fuck it up.” The smell of old sweat and booze made his eyes water. 1238

Mortimer hitched himself erect, creaking up from his seat. “That's enough of that,” he said in his cop-voice, laying a still-strong hand on Elaine's shoulder. “If you don't like your job, you can give notice, but you'll keep it polite as long as you're working here.” 1239

Elaine tried to shake his hand off, but he kept his grasp firm. Lee-Daniel had been through one or two of these in the first year, and he knew that Mortimer knew what he was doing. Things could get awfully heated up at times like this. 1240

“You're hurting me,” Elaine said. “Let go.” 1241

“Apologize to the man,” Mortimer said, the voice of authority. “You're out of line.” 1242

Joey Riel leapt on Mortimer's back, his arms locked around Mortimer's neck. “Don't you touch her, you pig,” he hissed. Mortimer took hold of Joey's thumb and twisted it into a come-along and Joey let go, dancing around and clutching his hand. 1243

“You broke my fucking thumb!” he said, and then Elaine was on her feet, shouting incoherently, right up in Mortimer's face, darting her head at him like a striking cobra. The 1244

front liners broke off their gaming and boozing and necking and rushed over, hooting for blood.

Lee-Daniel felt the old adrenalin, the “leadership” brain-reward that he got when it all came down to a crisis. He jumped up on their table, scattering their dinners' active packaging, which curled and waved as it flapped to the floor, cycling through its upsell ads. 1245

“Enough!” he roared. It wasn't a cop-voice, but it was a voice nevertheless -- the voice of the man who signs the paycheck, the disappointed father who was going to turn the bus around and take the company home *this instant* if he didn't get respect. Lee-Daniel didn't have to use that voice often, but its rarity was part of its effectiveness. 1246

It didn't work. Elaine still shouted, Joey Riel was digging through the drifts of trash for a weapon, and the front-liners were still cheering their bosses on. “*Enough*!” he said again, just to check, but it didn't work any better the second time around. 1247

He got down off the table and circled Mortimer, who had the mic for his loudhailer clipped to his belt. Lee-Daniel snatched it up and hit the Talk button, dialing the volume up to max with his thumb. 1248

“*Enough*!” he said, and the loudhailer amplified his voice to staggering volume. At max, it was meant to be used to signal passing aircraft. Inside the vending-machine's claustrophobic bowels, it was like a bullet ricocheting through their skulls. Some of the more delicate antennamen dropped to their knees, their hands clutched to their heads, and Mortimer staggered back into Lee-Daniel, nearly knocking him off his feet. 1249

Lee-Daniel cut the volume in half and hit talk again. The company shied back when the speaker array on Mortimer's bandolier *pop*ped to life. “All right, enough. Company meeting. Get chairs, sit on the floor, whatever. Right here, right now.” He handed the mic back to Mortimer, who wiped it down with care and clipped it back to his belt. 1250

He gave Mortimer his poker-chip. “Get a bag of ice for Joey,” he said. “And thanks, man.” 1251

Mortimer gave him the cop-stare and trudged off to one of the vending banks and started prodding methodically at its display. 1252

“All right,” Lee-Daniel said, again, looking into the expectant, upturned faces of his company. “All right. 1253

“It's been a rough week for all of us. But we've had rough weeks before. Remember Wisconsin? That was in our first year, and the FCC looked like it was going to impound every bit of gear we owned. We spent a month on the Reservation, borrowing and borrowing to pay off the lawyers. No one got paid. I ate enough venison and corn-bread to last me a lifetime.” 1254

Wisconsin was legendary. That was when they'd acquired the Series A investor, who'd converted its debt-instruments to capital when the Lac du Flambeau Ojibwa signed up 1255

their thousandth customer and started sending royalties to the company's e-gold account. Only Mortimer had actually been with the company long enough to remember the incident first-hand, which was good, since three quarters of the company had quit after the third week and he'd had to fire two more when they got caught hitting on some of the women on the Rez.

“But we saw it through,” he said, looking significantly at Mortimer, who kept mum. “And we'll see this through. You might think that it was a mistake to go to Canada, and I understand why it might seem that way to you. But let me put your mind at ease. 1256

“It wasn't a mistake. 1257

“It was a risk that we took to expand this business. If you want your options to be worth something, someday, this company's going to have to *grow*. We've been growing at 20 percent per quarter for the past three years, and that's right on track. Maintaining that growth is going to necessitate excursions out of the USA. We'll be going back to Canada -- better prepared, wiser, more cautions -- but we'll be going back. The Caribbean, too. South America and Mexico. I shouldn't have to tell *you* that radio has no borders. Wherever there's unencumbered spectrum, we'll be there. There's *never* going to be a `routine' job, whatever that means. Every job will be different. If you're looking for a `routine' job, you're in the wrong business. 1258

“We're headed for the Seneca sovereign in Cattaraugus next. There'll be a week of R&R there: fishing, hunting, gaming. They have a decent theater there that's doing a Beckett revival, and I've got half-price tickets if you want `em. 1259

“Half-price tickets for those who stay, that is. Because I want to make one thing clear: If you don't like the way I run this company, you shouldn't put up with it. Give me your notice, I'll cut you a check and you can get lost. That's your remedy. That's your *only* remedy. I'll be sitting right here, any of you want to give your notice tonight.” 1260

He sat down at a table and helped himself to someone's carton of crantini, gave it a shake to cool it down, then took a nonchalant sip. 1261

The silence was broken by the door to the investors' dining room hissing open. The Series A investor stepped out into the chaos of the main concourse and crooked a finger at Lee-Daniel. 1262

“We'd like to speak with you, if we may,” he said, and swung the door wide. 1263

#

Akwesahsne was supposed to be a cakewalk. The Canadian Radio and Television Commission -- Canada's RF Feds -- were softies, more worried with ensuring that 30 percent of the entertainment product on the airwaves was “Canadian Content” than with monitoring ultra-low-power, ultra-wide-band cognitive radio experiments in rural Quebec. The Mohawk Warrior Society, whose reservation was a Siamese twin with another Rez in upstate 1264

New York, were accustomed to the American way of doing biz, had even underwritten MBAs for a bunch of the bros, which explained the animated growth-charts back-linked to hundreds of diverse spreadsheets maintained by research committees across the continental Mohawk Nation infrastructure.

But they did indeed talk a line of bolshy horseshit in the Mohawk Warriors Society. 1265

The first hint came from the guard in the pillbox at the Akwesahsne main-gate. The CogRadio magic bus pulled up, abuzz with new-gig energy, the anticipation of thirty skilled professionals who'd been crammed into a bus for four solid days, ready to tear each others' throats out. The gate-woman was all of seventeen, not that you could tell at first, so crufted-up was she with obsolete martian armor/arms and sensory array. 1266

But once she came onto the bus for her customs inspection and removed her immersive headgear, it was obvious that she was no older than the switch girls who drifted in and out of the CogRad bus, using it as a means of making a little e-gold between footloose adventures in the Great American Heartland. 1267

A seventeen-year-old with a defensive array of fast-acting anti-serotonin misters was a lot less threatening thana thirty-year-old would have been, and orders of magnitude less terrifying than a similarly armed innovation-sick fifty-year-old would have been. Joey Riel came forward, stinking of something between sweat-socks and Doritos, and greeted her in familiar, colloquial French, something flirty by the sound of it, and she gave him a wry, patronizing smile. 1268

“Why do you speak French, Brother? Why not greet me in Kanien'k√©ha, or Cree, or even Ojibwa? When we speak whiteman words, they make us think whiteman thoughts.” She turned to the bus and gave them a long stare. “Hello, whitemen,” she continued, “hello whitewomen. Welcome to the Mohawk Warrior Society autonomous zone. No weapons. No sex with First People. No drinks or drugs. No whiteman tobacco. 1269

“Cook your own meals, wash your own plates, step lightly on the land. You can observe our nightly meetings if you are respectful, but it's more important that you come to the seminars afterwards. There are lectures, role-playing exercises, personal storytelling, theater of the oppressed, newsblogging, warblogging, linkblogging, puppet-making, outreach, filterbusting. Whiteman guests are welcome here, provided that they're willing to help the cause.” 1270

Lee-Daniel had heard variations on this speech before, but they usually came from hotheads who argued against renewing CogRad's maintenance contract, not the official greeter before they'd even started the gig. He knew well enough to take it in stride and move on, but Joey Riel was blushing furiously at having been shot down for insufficient indianity by this highly macha hottie, and so he waved some verbal dick, asking something in Ojibwa, all testicular. 1271

She fixed him with a withering stare. “You're not the first apple I've met,” she said. Apple 1272

-- red on the outside, white on the inside. “And you're not the most pathetic. But you're an apple and you've forgotten who you are, and that means that you don't mean anything to me except a sad story and a warning to other First People.”

Joey Riel's hands balled up into fists and the investors shifted nervously. Lee-Daniel got to his feet and interposed himself between them. 1273

“Ya-tay-hay, madam,” he said. “Thank you for your welcome. Can you tell me where I should park the bus? We've got a lot of work to do today, while there's still light to work by.” 1274

#

“You need to understand, it's not *personal*,” MacDiarmid said, for the third time. 1275

Lee-Daniel set down his ridiculous second-hand crantini carton and climbed slowly to his feet. “*You* need to understand, Mac, that I don't *care* if it's personal. Whether you're forcing me out of this company, this company that *I* built with my own two hands, this company that is hitting every goddamned milestone, this company that is returning good dividends on your preferred stock, whether you're forcing me out because you're not *my friend anymore* --” he said this ina pinched, Mickey Mouse voice “-- or whether you're forcing me out because you think that it's `for the best' doesn't matter to me at all. I don't care if you're doing it because you're protecting your investment or because your astrologer told you to, I still won't stand for it.” 1276

The Series A and Series B investors, who'd started off looking uncomfortable, visibly squirmed during this. They weren't accustomed to interpersonal conflict in the course of conducting their affairs. But Mac took it all in stride. Angels have to be prepared to slug it out to protect their investment. 1277

“You don't get to stand for it, LD,” MacDiarmid said, sipping at a frosty can of slushy ginseng-infused Long Island iced tea. “You don't get a say in it. When the investors are united, you don't have the equity to overrule us. The severance package is generous, the noncompete is lightweight, and you get to go with your dignity intact.” He didn't need to add that fighting the board would mean a significant change to that picture. 1278

“What'd they promise you, Mac?” Lee-Daniel asked. He'd shrewdly chosen his investors for their mutual animosity, believing that bitter enemies like the Series A gigafund and the Series B terafund would never come together, and that Mac, who'd been screwed on deals by principles from both funds, would never toss his lot in with them. “What do that have that's worth your throwing away this entire investment?” 1279

“No one's throwing away anything. There comes a point in any business's life-cycle where the founders get out of their depth and we need to transition in a professional CEO. You've got a good job with CogRad, LD, and we recognize that, but if we're going to ensure steady growth, we need seasoned leadership.” 1280

“Seasoned?” He barked a laugh. “Mac, I *invented* this business! We're five years ahead of our closest competitors -- who only got that far by copying stuff *I* invented. Who the hell could possibly be more `seasoned' than me?” 1281

“You've never run a Fortune Five company,” the Series A man said. “You've never had more than fifty people working under you. Executive search firms --” 1282

MacDiarmid waved ahand crusted with three class-rings at the gesticulating Series A punk, who barely looked old enough to smoke. He'd only been out of B-school for a year and he'd only been on the bus for a month, but here he was, telling Lee-Daniel that they'd blown corporate funds, *money he'd earned*, on a slick-ass headhunter who'd spent it getting old frat-brothers laid at fancy hotels on Hawai'i while negotiating how much of Lee-Daniel's company they would end up with once they stole his job from him. 1283

The punk shut up. 1284

“Mac,” Lee-Daniel said, sitting down again, pulling up a chair. “Come here Mac, take a seat, talk to me. I want to hear this from you, from the beginning.” 1285

Mac stood, exchanging significant looks with the Series A and Series B investors. 1286

“Come on, Mac, screw that. You and me, end-to-end.” That was CogRad jargon from back in the old days. The Internet was end-to-end, which meant that any two points could communicate without an intermediary interfering in the bytestream. In CogRad, you didn't talk person-to-person or man-to-man, you talked end-to-end, just like the connectivity they brought to the Rez. “I own fifteen percent of this company, same as you -- you owe me a decent explanation.” 1287

MacDiarmid stood fast. 1288

“Get in the fucking chair, Mac,” Lee-Daniel said, hating the whine in his voice. “If you want me to go along with this, get in the fucking chair. 1289

“Mac, I'm sorry. Sorry if I flew off the handle. I'm a grownup, you're a grownup and we both care about CogRad. Get in the chair and tell me about this. Please.” 1290

MacDiarmid sat. 1291

“Listen up, LD. You've done excellent work here. Be proud. You started something good, something that will grow and grow and that you can retire on. But you can't keep this up forever. If I thought for a second that you'd take orders from someone else, I'd offer to keep you on as COO or VP of Research and Development. There's no way, though -- no one would ever be able to tell you what to do in this company. 1292

“You're great at the dirty work. You can get a crew onto a Rez, get the terminals sited and installed and burned in. You can boss a bunch of egomaniacs and social retards on long road-trips. For six years, we've needed someone at the helm who could do all that stuff. 1293

“But it's time to settle into the next phase. We're going abroad, and it needs a delicate touch. If *Canada* ends up in a firefight, what'll it be like in *Guatemala*?”

#

Lee-Daniel and his people had had to work around a lot of surveying constraints. There had been a burial ground at the Moapa River Indian Reservation that was freaking *perfect* for a repeater-array, with a commanding view of the entire goddamned Rez. But no matter how tempted the Paiute elders were by the thought of getting out of the cutthroat slots biz and instead taking a piece of every casino's action by offering secure connectivity for phones and data, they couldn't see their way clear to permitting CogRad's surveyor crew to head up there and start hammering in stakes for the repeaters.

The Akwesahsne Warriors took the cake, though. A fat, middle-aged man in camou fatigues decorated with pow-wow badges who called himself “Meatloaf” gave them a two-hour briefing. He had a topo map of the Rez and the surrounding areas stuck up on the wall of the school auditorium, and they sat around it in the fading light of the sun that streamed through the steel-reinforced windows.

“The areas that have post-its are strategic. No one except a Warrior goes within 20 meters of these.”

“Sixty feet,” Lee-Daniel translated for the surveyors and the antennamen, who were products of the American educational system and hence impedance-mismatched with the entire metric-speaking world.

“Sixty feet,” Meatloaf said. “You'll know you've gotten too close if you find yourself at the bottom of a ten-foot pit with two broken legs. Don't go near the strategic areas, OK?”

Elaine stood up and began to pace the map's length. She unsnapped a laserpointer from her gearpig bandolier and began to hit each strategic area in turn.

“All the high-ground, right?”

Meatloaf nodded.

“The perimeter, too, right?”

He nodded again.

Elaine gave Lee-Daniel a look, then ran the dot of her pointer over each of the strategic areas again. Some of the surveyors groaned and whispered to the antennamen and the switchgirls.

Lee-Daniel cleared his throat. “Meatloaf,” he said, “all respect, but well, this won't work. Our radios operate on line-of-sight. If we can see it, we can shoot it at half a gigabit a second -- slower if there are a lot of leaves and stuff in the way. If we can't see it, we can't shoot it. Zero bits per second. We need high-ground, we need perimeter, otherwise we're just wasting your time.”

Meatloaf shook his head. “Radio radiates. I can't see the cell-tower, but I can still reach it with my phone.” 1307

“That's dumb radio,” Lee-Daniel said. “If we want to have a conversation and we're out of sight of one another, we can communicate, but only if we shout. That's fine for us, but it's not so good for the people between us, right, Mortimer?” 1308

Mortimer, who'd been through one or two (hundred) of these demos before, took his cue from outside the doorway, hitting it with the loudhailer dialed up about half way. “Right,” he said. 1309

“That's how dumb radio works. You had a bunch of bands that you could communicate in -- cellular, TV, AM, FM, cops, air-traffic, whatever -- and rules and licenses for each, governing how loud everyone gets to shout.” Taking their cues, the CogRads started to gabble all at once, in stripes through the ranked chairs, saying “AM AM AM” or “TV TV TV” or “cellular cellular cellular.” 1310

“Smart radio -- *cognitive radio* -- is much more clever. Instead of shouting loud enough to be heard across the entire distance, cognitive radios cooperate with one another. When I need to talk to Mortimer, I first check around to see what channels are least occupied and most close to me, then I send my message to the best candidate.” He turned to Elaine, who'd come to stand by his shoulder. “Tell Mortimer that it's time to come back,” he said. 1311

Elaine turned to a switchgirl who'd positioned herself a few feet away and said, “Tell Mortimer it's time to come back,” she said. 1312

The switchgirl turned, but the next person in the chain, a customer service rep, had his phone headset in and was having a hushed support call -- it was faked, just part of the script, but he gave a good impression of helping someone tech a network problem at a distance, tracking a nonexistent support-script across his HUD and prodding at the air with a dataglove. 1313

“Aha,” Lee-Daniel said, “here's where it gets tricky. What if one of the radios between us is too busy to relay a message? We've got two options. We can wait -- which we'll do, if we have to, but it adds latency to the message -- or we can find an alternate path.” 1314

The switchgirl -- a network engineer he'd hired himself from a backwater DeVry at a job-fair in Tulsa, who ran a little to fat but was still broad-shouldered from her time on the rowing machine she shlepped compulsively from gig to gig, facts that Lee-Daniel could recall with ease even if he couldn't remember her name -- turned back and passed the word onto a surveyor who was standing a little ways out of the way, who relayed it to Joey Riel, who was by the doorway, who stuck his head into the corridor. 1315

Mortimer sauntered back into the auditorium. He put the mic to his lips and boomed “You want something, boss?” 1316

Lee-Daniel clamped his hands to his ears along with the rest of the crew. “No need to 1317

shout," he said to Mortimer. "Is there?" he said to Meatloaf.

#

"So, what's the critical path, Mac?" Lee-Daniel asked. "Who's going to run this circus between tonight and your *executive search* coming through with an empty suit to sit in the driver's seat?" 1318

"We thought you'd stay on, LD, help with a smooth transition." 1319

"Why would I do that?" Lee-Daniel said. 1320

The Series A and Series B investors watched them like a tennis-match, silent, eyes shining. 1321

"Why don't you two get us a couple beers, OK?" Mac said to them. They mooched off petulantly. "LD, I hope you'll stay on because you have a significant stake in this company. We don't want to dismantle CogRad, we want to *grow* it, turn it into something big and important. We need your help still, to make this work. It's your show, we know it. We can't make the transition without you." 1322

He knew that Mac was blowing smoke, massaging his ego. But he was good at suppressing his ego for the good of his company. *The* company. Not his company, not anymore. "What's in it for me?" 1323

Mac made a face and leaned in close, whispering. "Look, *they* don't want you to stay. I had to fight, hard, to keep you in, even during the transition. I put a lot on the line for you. *I* know that your job can't just be filled by a warm body, *I* know that you're the only one who can train your successor. We can make this company *really* big -- you'll be able to retire on your share in 18 months if we go according to plan. We're going to franchise out, start new busses in Latinamerica, Asia and Africa in four months, turn it all into a turnkey solution, something that scales. We'll raise 10 billion on IPO if we raise a cent, you just watch. I've been through this, LD, and I know what a success smells like. This will be a success -- your success -- if you play along. If you don't, well, we could all end up in the shitter. Canada was the last straw for them. We either go on without you or we don't go on at all, do you understand?" 1324

The Series A and Series B men returned with a couple of novelty beers in aerosol cans. Mac and Lee-Daniel sprayed their throats with the brew and swallowed, making faces. This was high style in the circles the Series A and Series B men traveled. 1325

"I see," Lee-Daniel said. "So I either walk out of here as interim CEO, knowing that I'm gone in a couple weeks, or I walk out of here fired. Is that the deal?" 1326

"That's the deal," the Series A man said. "And I don't see anyone offering anything better." 1327

MacDiarmid gave him a shut-up-asshole look, then spread his hands out. 1328

“When I raised money from you, we did it over the course of several weeks. We talked to lawyers. They exchanged documents. I don't think it's reasonable for you to expect me to sign anything now without at least consulting a lawyer.” 1329

“You want several weeks?” the Series A man said, with mock incredulity. 1330

“Half an hour,” Lee-Daniel said. “I don't think that's too much to ask.” 1331

#

They settled for Warrior escorts for the antennamen and the surveyors. The Warriors were resentful at first, but they came around. 1332

Lee-Daniel went out with a crew that Elaine was leading, up on the northern border of the sovereign. She had two junior surveyors with her, all of them loaded with positioning gear that tied into Galileo, the European GPS network -- the Galileo gear cost a fortune, but they'd found that their American GPS kit often mysteriously stopped working when they were working on projects in the territorial USA. They'd ordered the Euro stuff from a bunch of anti-globalization activists who'd found that the same thing happened in any city hosting an economic summit. Europeans were more likely to treat infrastructure as sacrosanct, while the US was only too happy to monkey with GPS for tactical reasons. 1333

The surveyors and the Warriors kept their distance as they set out, one Warrior leading and one bringing up the rear. Elaine would call for a break every five or ten minutes and do magic with her many devices, chattering into her cellphone to communicate with the other crews, make sure they weren't overlapping or diverging too widely. 1334

The woods had a high canopy, which was good news. When they started out, they'd focused on getting above the leaf-line, since leaves badly scattered RF signals, but they'd ended up with networks that were only reachable by people who were twenty feet off the ground. They'd blown a fortune downlinking the relays to ground-level stations with omnidirectional yagi antennae. 1335

But then Lee-Daniel had had a brainstorm -- build the network *below* the leaf-line. Heavy canopy starved out any foliage that grew below the tree-tops, leaving a clear line-of-sight (modulo the treetrunks, which were largely RF transparent) on the forest floor. That pushed CogRad from a theoretical project to a real success, and Akwesahsne was just the sort of woods that the CogRad gear thrived in. Within a week, the entire Rez would be unwired at 500 megabits/second, enough connectivity to move whatever data they could find a use for. 1336

The frontmost Warrior, a girl of about 16, started off treating Elaine's halts as a nuisance, but after the fifth one, when Elaine unshipped some especially tasty laser-based theodolites and a high-sensitivity digital altimiter, the girl's curiosity overcame her, and she crowded in close to watch Elaine work. She didn't say anything, but thereafter, it was clear that she was fascinated by Elaine and her masterful use of all her toys, bangles and bobs. 1337

Elaine noticed it, of course. She was like a magnet for teenaged girls -- competent, beautiful, in charge. At the next stop, she handed the girl a can of pink spraychalk and directed her to mark the sight-lines. The girl almost dropped the can, but then recovered and puffed up a bit, marching off to lay down the hot pink lines. The Warrior at the rear, a man of indeterminate age who wore a camou balaclava, rolled his eyes, but that was OK; Lee-Daniel was figuring out a way to get him engaged, too. 1338

At the next stop, a bare ridge that overlooked the woods on one side and the public highway on the other, Lee-Daniel tapped the other Warrior on his shoulder, then gestured at a travois on which Elaine's juniors had been hauling their satellite tester. He cocked his head, then bent down to take one end, and the other Warrior fell in at the other end. The two juniors looked relieved and hitched up their packs, breaking out protein bars from their belt-pouches. 1339

And so it went. By the time they reached the next ridge, the girl (“Mermaid”) had introduced herself, and the man (“Cobra”) had done likewise, removing his balaclava to reveal a middle-aged face handsome but for the deep acne scars. 1340

And so it went, for all the CogRad crews, who'd never had explicit training in making friends with the locals on a gig, but who had learned from the example set by Lee-Daniel and by the middle-managers who'd learned it from him. 1341

Elaine gave Mermaid a cheap theodolite with an integrated compass, GPS and altimiter, and a little booklet on how to use it, and the next time Lee-Daniel saw her, she was leading a group of even younger girls on a series of surveying missions around the Indian School. 1342

#

“Privacy, please,” he said. 1343

“We're standing all the way over here,” the Series B man said, from the across the little table. “How much more privacy do you want?” 1344

Lee-Daniel shook his head in exaggerated disbelief and then MacDiarmid led them back out to the communal area. 1345

Once they were gone, he flipped open his phone and called Joey Riel. 1346

“What?” he said. 1347

“You're fired,” Lee-Daniel said. “I hate to do it, kid, but it's coming down from the investors. You, Elaine, all the customer service reps, all but the two most senior antennamen and switchgirls.” 1348

“What the *fuck*?” Joey Riel said. 1349

“Keep it down,” Lee-Daniel said. “Just keep it easy. They're coming out now to do a head-count and sort out the order for the firings -- they're going to do it in small groups. I 1350

wanted to let you know, because you've only just gotten your promotion, so you might get severance at the old salary-level, so I thought I'd give you a little extra time to make some calls and line up some money before the roadhouse cuts off your credit. You're going to need a ride, too."

"What?" Joey Riel said. He sounded *purple*, ready to bust. He cursed in three languages. 1351

"You heard me. Keep it to yourself, OK? I gotta go." He snapped his phone shut, wondering how long it would take before everyone in the company knew: five minutes? Ten? 1352

He called his lawyer. 1353

#

It wasn't his idea to bring the investors along on the perimeter walk. This was a purely ceremonial event, only initiated once the real post-install survey had been completed and he was sure that there was network integrity. But networks must not only be integrated, they must be *seen* to be etc, so they split into four crews and walked the perimeter. 1354

They used ruggedized videoconferencing tablets as they went, digital clipboards whose screen was divided into a two-by-two grid, each square with the feed from one of the crews. The data went over the localnet, and streamed out over the uplinks to residents of any other unwired sovereign that wanted to welcome the newest Rez to the party. 1355

The four parties each took a direction and hiked out to the most-distant corner of the Rez and then began walking counter-clockwise, keeping in constant communication. A little blinkenlight in each quadrant mapped the throughput to and from that host, five bars all the way and not a single frame dropped if all went according to plan. 1356

The investors were with Northeast party, along with Joey Riel, Meatloaf and Mermaid. Not Mac, he was on the bus, where he usually spent the dusks and dawns, in air-conditioned gloom out of the mosquitos' range. But the Series A and Series B men went Northeast, while Lee-Daniel took the opposite corner, Southwest, with Elaine and the hard-line girl from the gate on the first day and Cobra, who'd taken to watching the sunsets with him and sharing a pint of bourbon, not saying anything. 1357

They reached the perimeter and began to pace it off. Over the audio on the videoconferencing tablets, he heard the investors' labored breathing, the slipping of their impractical Oxfords on the slippery humus that carpeted the forest. 1358

It was a nice early-fall day, with bloody streaks of sunset on the horizon and the crisp smell of damp and wind and sap dripping from the maples. Lee-Daniel loved an autumn walk in the woods, hell, who didn't, and so he was pretty relaxed by the time he got half-way around the Rez, an hour later, in the growing gloom. 1359

It was then that bright beams of light stabbed at them from all sides. Behind him, he heard 1360

Cobra curse and then he was shoved aside and down as Cobra and the girl took up back-to-back positions with their weapons -- a gas-fogger for her, a hunting rifle for him -- at ready.

“Surete,” Cobra hissed. Surete du Quebec -- the Provincial cops. 1361

He'd done the research, knew that the SQ and the Warriors hated each other. The Mohawk Warriors Society had been fired in a kiln bricked with SQ beatings, shoot-outs and gassings. But the Akwesahsne Rez had been at peace for almost three years! Why the hell couldn't this have happened *tomorrow*, when they were on the road? 1362

Lee-Daniel knelt down and dialed down the screen brightness on his tablet, then peered at it. His own quadrant showed his long, narrow face, uplit like a Jack-O-Lantern by the screen, eyesockets black and deep, cheeks hollow and stippled with patchy three-day beard. Two of the other quadrants were black -- the tablets were offline or broken. The final one showed the Northeast party, skinny Joey Riel holding a thick branch in one hand and a rock in the other, ridiculous alongside Meatloaf and Mermaid, who had already fitted their masks and goggles and drawn their sidearms, crouching back to back against each other. 1363

The investors hove into view, whey-faced, lips skinned back from their teeth, eyes crazy-white. 1364

“Get down,” Lee-Daniel said, leaning into the mic. “Head to the bus.” 1365

“It's dark,” the Series A man said, jinking from foot to foot, making the camera sway seasick. 1366

“The bus,” Lee-Daniel said. “Get in the bus. Get everyone to the bus. This isn't our fight.” He looked around for Elaine, but he didn't see her. Headed for the bus, that's what you did in an emergency. Fuck. 1367

It was an emergency. There was an even tramping of feet ahead of him, behind him, to his left and right. He stood, slowly, and put his hands in the air. 1368

“I'm not a combatant,” he said, loudly, but in a steady voice. 1369

He walked toward the bus, hands still in the air. “I am not a combatant,” he said again. A laser dot climbed his toe, his leg, centered on his gut. He looked down at it. 1370

“They will shoot you, you know,” Cobra said. “They shoot. They think they're playing cowboys and indians.” He sounded very calm. 1371

“I am not a combatant,” he said again, taking another step forward. A second red dot joined the first, climbing his leg and resting within inches of the first, dancing and bobbing like a firefly. From the woods, someone barked in French. 1372

“I surrender,” Lee-Daniel said. 1373

“They don't speak English when they don't want to,” Cobra said. “If I were you, I'd get down 1374

and stay down." Then he yelled something defiant in French. The girl behind him tittered nervously.

"Cobra's making them mad," she said, giggling again.

Lee-Daniel turned around slowly, getting away from the harsh white light. Green blobs swam in his vision. He began, very gently, to sink to his knees, when out of the corner of his eye, he spotted Elaine and two of her crew, in silhouette, up in the boughs of a maple that they must have climbed as soon as the SQ arrived on the scene. More steps from the brush, the light coming closer.

Cobra called out more French, three lights on him, his rifle at his shoulder. Two laser-dots danced on him, and Lee-Daniel had an irrational urge to slap them away, like horse-flies.

The young girl hit her fogger, spraying a thick, opaque cloud of gas. "Cover your eyes," she said, and giggled again. Lee-Daniel pulled his shirt up over his face and dropped. He belly-crawled blindly, towards where he thought Elaine and her crew had been treed.

He knocked his head on a tree-trunk and gasped involuntarily, getting a lungful of the gas, which made him retch into the depths of his shirt, bringing on more gasps and more retching. He rolled for the clearing's edge, hit another tree and got to his knees, heaving like a dog. He still had hold of the tablet, and when he could open his eyes again, he looked into it, saw the investors still staring at him, wide-eyed.

"Go!" he hissed. "Jesus, get to the goddamned bus."

"Are you all right?" they said.

"I'm fine," he said. "Go go go!"

#

The CogRad drunk-ons were legendary. When you spent weeks at a time in the deep bush on dry reservations, lugging gear and fighting with bitch physics, you needed to unwind. On the off-days, it was traditional for a drunken riot to ensue. Lee-Daniel occasionally partook, enough to be friendly, but never so much that he lost control. He set a sane example, and the crew followed it, and so the most harm that a big booze-on would cause was a gang-wide neolithic hangover, swampy and hot and damp.

But the drunk-on that was proceeding when Lee-Daniel stumbled out of the dining-room was like a heavily sponsored Bosch painting. Elaine was alternately necking with and slapping Joey Riel; Mortimer was collapsed on a heap of still-steaming rum-toddy cartons; the Customer Service Reps were playing kick-the-can with their ringing cellphones. The aerostats and the advertorial screens had automatically adjusted to overcome the ambient noise level, and were consequently pitching their jingles and come-ons at megaphone levels.

The Series A and Series B men were huddled together out front of the roadhouse, along with MacDiarmid.

“That's some scene, huh, boss?” Lee-Daniel remarked as he stepped into the cool night, sucking up the fresh air and the moonlight.

“What'd you tell them?” the Series A man said.

“Tell them?” he said.

“They think they're all fired,” MacDiarmid said. “Why do they think that?”

“Just road-crazies. Like when they thought they all had West Nile. They get worked up. Egomaniacs and social retards.” He was speaking in the grudging half-sentences that Cobra had preferred. Talking like that made him feel crazy and brave and alien.

“What are you going to do about it?” the Series B man said.

“Nothing,” Lee-Daniel said.

There was a crash from the bus. One of the surveyors had beaten in the safety-glass skylight and dropped down inside. They watched a headlamp's beam jump crazily around the bus's interior, high, low, left, right.

“What's he doing?” the Series A man said. Lee-Daniel knew that the surveyor in the bus snored, that he did tricks with a butterfly knife, that he sent money home to his little sister in Muncie. He couldn't remember his names. He was no good with names. But he knew his people.

“What you do, when you get fired. Stealing office supplies.”

The surveyor crawled back out of the sunroof with a pillowcase stuffed with schwag, then lit out down the freeway's shoulder in the direction of Buffalo.

“He won't be the last,” Lee-Daniel said.

“No,” said MacDiarmid. “I don't expect he will.”

“But they're *not fired*,” the Series B man said. Lee-Daniel didn't know either of the investors' names. Fucking spear-carriers, fronts for unimaginable, implacable wealth, charged with returning 400 percent over three years on a national-budget-sized fund.

“Tell them,” Lee-Daniel said. “They don't listen when they're like this.” They don't listen to people like you, not ever.

#

“Get down,” he said to Elaine. She was wedged into a crook and tied off with an improvised harness made out of nylon rope and carabiners from her vest. “We've got to get back to the bus!”

“They'll shoot us,” Elaine said.

“They can't see us,” he said. Laser sights danced in the fog. He heard the crack of Cobra's rifle. 1403

“He's scared,” Elaine said. Next to her, also tied off -- where did Elaine keep that many carabiners? -- was a young surveyor, one they'd just picked up in Montana, a kid with a shaved head who had shyly asked him for a job after meeting Elaine at the local Army-Navy store and getting a lecture on which gear to buy and why. He was wrapped around the branch like a serpent, locked at the ankles, thighs and wrists. 1404

“So am I,” Lee-Daniel said. “They're shooting. It's natural. Get him down. Push him off the branch if you have to.” 1405

“What about him?” she said, gesturing at the branch below her. There was another surveyor, a forty-something lunk who didn't wash enough and farted too much and blamed it on everyone. He was balding and his comb-over hung limply at one side of his head as he hugged the trunk. 1406

“Push him too,” Lee-Daniel said. 1407

The tablet, stuck in his waistband, spoke. It was the Series B man. “Don't give them any more advice. You shouldn't be liable for what they do in this situation. Return to the bus.” 1408

Lee-Daniel shrugged up at her, caught a whiff of gas that set his eyes to watering and looked back at the clearing. Cobra was lying on his side, face away from them. The girl was holding his hand, face covered by a placid mask, but he heard her sob. 1409

“Now! Back to the bus!” 1410

Lee-Daniel climbed the tree. He got up to the first surveyor's branch, Ole Stinky, and he gave the man a shove. He fell like a stone. He stepped on Stinky's branch, grabbed the kid by an arm and yanked, hard. The kid dropped, too. “Down,” he said to Elaine, and dropped, landing on the kid. 1411

“Leave them,” the Series A man said. “We aren't insured --” 1412

He helped the kid to his feet, then Stinky. In the clearing, the Surete had surrounded the girl. Her hands were up, glistening with blood. One turned towards them and shouted something in French, raising his (her? hard to tell with the martian armor) sidearm. Lee-Daniel froze, and then a red dot appeared on the SQ's leg, traveling up to his (her?) crotch. One of the other SQs pointed and the SQ with the gun looked down, then dropped his (her?) arm and leapt back. 1413

Elaine jumped down, holding her laserpointer in her hand. 1414

“Run!” Lee-Daniel said, shoving at the two surveyors, then taking off, running blindly in the moonlight, whacking into tree-trunks, tripping. 1415

The bus was crowded with CogRads and he vaulted up the steps and slammed into the 1416

driver's seat, authenticating on the palm-reader and putting the bus through its warm-up/lock-down urban defense checklist. He was vaguely aware of more bodies coming in, then he slammed the door-close button as the shutters unrolled over the windows.

He hit the internal lights, stood and turned around. “Count off,” he shouted, over the buzz of conversation. 1417

Automatically, MacDiarmid said, “One,” as he had at every count since he'd signed on and gotten the first investor's chair. 1418

He turned to the Series A man expectantly. “Fuck that,” he said, in an uncharacteristic burst of blue talk. “Drive, goddamit! Now!” 1419

Lee-Daniel pointed at him and said, “Two,” then pointed at the Series B man and said, “Three.” He pointed at the middle-managers behind him and they began to count off methodically. 1420

The Series A man turned around and shouted, “Shut the fuck up or I'll throw your ass out of the fucking bus. *Drive*! ” 1421

Lee-Daniel looked at Mac. “Better drive, LD,” he said. 1422

They were already 20 miles off from the Rez when Elaine told him that Stinky and the kid never got on the bus. 1423

#

Three more raiders looted equipment off the bus. Lee-Daniel played a little game with himself, betting on which one would be the next to turn raccoon. He was two for three within twenty minutes. 1424

“Stop them!” the Series A man said. 1425

“Why?” Lee-Daniel said. 1426

“They'll ruin us!” the Series B man said. 1427

“They'll ruin *you*.” Lee-Daniel said. “There go the satellite uplinks. Wow. Good retirement benefit.” 1428

“What do you want?” the Series A man asked. 1429

“Sell me your stake. He sells Mac his stake. The paperwork's inside, on the fax machine.” 1430

“You're joking,” the Series A man said. 1431

“That's the deal,” Lee-Daniel said. “And I don't see anyone offering anything better.” 1432

There was a tinkle from the bus and Joey Riel sped away with a stack of optical switches, off into the night, staggering slightly from the burden and the booze. 1433

“I need to call the partners,” the Series A man said.

“You have fifteen minutes. Better not take much longer,” Lee-Daniel said, as an expensive crash resounded from the direction whence Joey Riel had gone.

“Fifteen minutes?” the Series B man said, whitening.

“You want several weeks?” Lee-Daniel said. He wiped his palms on his thighs and kept his grin off his face. It'd be good to get back in the driver's seat.

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Afterword:

I wrote this for Bruce Sterling's Turkey City workshop in Austin, TX. I was nervous and thrilled to be invited. Bruce is one of my idols -- and he's now a friend and colleague, and my daughter's godfather, besides. We'd corresponded, sat on panels together, but this, this was levelling up. It was a hell of a workshop, and it was also where I met Raph Koster, now also a good friend (as well as an astute and inspiring game designer and theorist).

I'd admired a play by Dewayne Hendricks to use Indian land in the USA to test out cognitive radio applications, on the basis that these sovereign territories were not under FCC jurisdiction. He'd found various tribal leaders who were excited by the idea. Cognitive radio may just be the most radical, game-changing technology on our immediate horizon -- if it works.

In the meantime, I couldn't shake my memories of the brutal standoff at Oka, in Quebec. This is a Mohawk reservation whose sacred burial ground the local town decided to expropriate for a golf-course. The situation escalated and soon there were heavily armed Mohawks and heavily armed cops and heavily armed soldiers all pointing automatic weapons at each other. I never forgot the desperate bravery of the Mohawk Warrior Society.

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Power Punctuation! 1443

Hi, Mom! 1444

Wow, you won't believe what happened today. First of all, I was nearly late for work because my new roommate is worried about the electrical and he pulled out all the plugs last night, even my alarm clock! His name is Tony, and I think he is either weird or crazy, or maybe both! He keeps saying that the Company uses the plugs to listen to our minds! He unplugged all the electricals and put tape over them in the middle of the night. When I woke up this morning, my room was totally black! I had my flashlight from work on the chair near my bed, and I used that to find the living room. Tony was sitting in his shorts on the sofa, in the dark, watching the plug behind the TV. Hey, I said, you watch the television, not the plug, and then he said some bad words and told me that he didn't want me plugging in *anything*. He is skinny like Jimmy got when he had the AIDS, but he is not sick, he is hyperkinetic, like Manny was when he went to the special school. That is why he is management and I still work on a truck. If I have to be skinny and crazy to be management, I'll take the truck all day long! 1445

So I got dressed and ran out of the apt and took all those stairs up to the slidewalk because there was a big line up of people waiting for the elevators, like always, and I didn't have time to wait, because my watch was already warning me that I was going to be late as if I didn't know! I ran all the way to the garage, around all the people on the slidewalk, who don't know to walk right and stand left like you always told me. Life up here in the city is different from back home and no doubt at all. 1446

My watch knew that I wasn't in the garage at 8:25 and it started counting down the minutes till I was late. Its voice gets higher and higher and more and more excited as I get closer to being late, and I thought it was going to bust something as I ran through the door of the garage. It told me that I'd had a close call, but I'd made it, and I felt pretty good about that. 1447

Wendell, the day supervisor, smiled at me when I came in, which he *never* does, and I got nervous that maybe my watch was wrong about my being late, except that my watch is never wrong. Jap, he said, you're on special truck 982 today. I said what's that, and he told me that it was a great honor and then he said I'd like you to meet your pusher for today, Rhindquist. 1448

So I shook Rhindquist's hand. He was a kind of old, fat, short guy, and his uniform was old fashioned looking and not as smart as the one I wear, that you liked so much in the photo I sent home last month. So right away I thought that he was some kind of moron and I was being punished for being late. He said, pleased to meet you, Jasper, and he didn't sound like a moron, but more like one of those guys on your TV stories that are rich and powerful and in charge. I said call me Jap everybody else does and he said twenty years ago the All Nippon Anti Defamation League would have put a stop to that and I laughed 1449

even though I didn't get the joke until later. It is that Jap is also short for Japanese, which is like the Moonies but they are from Korea.

Let's roll `em out, Rhindquist said, and hopped on the back of the truck and held on tight. I 1450
got in and did my ten point startup safety check like they taught me. By point four, he was banging on the side of the truck and saying Let's go! and I leaned out my window and said that I wouldn't skip my safety check for nobody and he said some bad words and I said that I would have to start over again and he'd better keep quiet or we'd never get out of there. My watch said I did right, which made me feel good. I hoped that Rhindquist's watch told him off for trying to shortcut on safety!

We rolled out a little late. I drove to my first pickup, which is the side of Finance 38. 1451
Finance 38 is a very, very tall building and all no windows because they don't want spies from other cities seeing them and their money. I drove over the Severe Tire Damage yard and passed through three security gates and backed up to the shredder bay. I did my four point shutdown safety check and Rhindquist banged on the truck again and said more bad words but I ignored him. His watch must be busy all the time, telling him not to be so mean!

I went through the metal-detector and into the Finance 38 and the guard's watch and my 1452
watch talked to each other for a while and then the guard stopped pointing his gun at me and said, You're late now move this stuff out of here and I said OK and started moving the boxes. Finance 38's boxes are very heavy, and there sure are a lot of them! Every day, there are fifty boxes, as big as the big TV at the community centre back home. I am getting very strong working at this job, Mom! My arms are bigger every morning.

I moved the boxes back to the truck. I left them for Rhindquist, who started opening them 1453
and pushing the papers inside into the hopper. On my normal truck, 3528, my pusher is Vasquez, who is very fast at pushing the papers. Rhindquist was slow, so that by the time I,Äôd moved half the boxes back to the truck, there was no more room to be move the rest! I thought that for a guy who,Äôs always in a big hurry, he sure works slow!

So I went into the truck, with my flashlight. And there was Rhindquist, and do you know 1454
what he was doing? He was reading the papers before putting them into the shredder! What are you doing? I said, you aren,Äôt allowed to do that! He gave me a look, not like he was angry, but like he thought *I* was a moron or something. My watch told me that I should report him right away, and I started to go back into Finance 38 to use the guard's phone, but Rhindquist did something with his own watch and my watch stopped working! You broke my watch! I said to him!

He said, That's from the Blues Brothers, and he said, What do they do, attach the disposal 1455
baskets to the laser printers? This is all junk, none of this needs secure disposal! And I said, you broke my watch, Rhindquist, and everything in the Finance Buildings needs secure disposal, it's in the manual.

He said, I didn't break your watch, I just shut it off for a while. It will be OK, trust me. Come 1456

here, have a look at this.

Mom, I did it! I read the paper in his hand, with my flashlight. It said, Johnson, your performance review has been rescheduled for 1630h on Friday, 78th floor boardroom. 1457

This is crap! Rhindquist said. This doesn't need secure disposal. He kept digging through the papers, and looking at them before shoving them in the shredder. Every time he looked at one, he said, Crap, and then put it in. I couldn't stop watching. I thought we were going to be fired! Or put in jail! Then he said, Aha! He showed me the paper, it said, CONFIDENTIAL at the top, and I felt like I was going to sick up, I was so scared. It said RE ORG CHART, and it had lots of names with dotted lines connecting them to other names. Rhindquist winked at me and put it in his pocket -- his old-fashioned uniform had pockets! 1458

I thought I figured it out then. Rhindquist was a spy from another city! They talked about spies in Basic Training, and what to do when you found one. You are supposed to make sure they won't go anywhere, then contact security. So I ran as quick as I could out of the truck and slammed the door and security-locked it from the outside, and then I climbed over all the boxes of unshredded documents from Finance 38 and ran to the security guard. I said, there's a spy in my truck, and he's reading the papers! And he said, What? I said, My pusher is a spy! I caught him reading the papers and putting them in his pockets! The security guard looked like he thought I was crazy! I said, Really! And he picked up his phone and spoke in Securitese to the other security guards and then there were sirens and lots of cars and guards with armor and guns, Mom! 1459

They surrounded the truck and unlocked it and Rhindquist stepped out with his hands in his pockets. He said, Quality Auditor, boys, radio it in. The security guards looked like they wanted to shoot him, but one of them talked into his phone and then shouted out at all the security guards in Securitese and they went away! 1460

Rhindquist walked over to me and said, Jap, you aren't the brightest bulb on the marquee, but you think fast and you follow orders. I said, I am as smart as the next person and I do my job. I said to the security guard from Finance 38, aren't you going to arrest him, he's a spy!? And the security guard said, Look, he's management. He's allowed to do this. 1461

And Rhindquist put his arm around my shoulders and said, You're stuck in a loop, son. New data: I'm not a spy, I'm your boss, and you did right, even if you have blown the audit. How'd you like a promotion? 1462

And I said, you're management? 1463

And then, do you know what? He said, Jap, my boy-o, I am Rhindquist J McBride, CEO, President, and Chairman of the Board of the File-O-Gator Corporation, The Incorporated Township of File-O-Gator, Ontario, and File-O-Gator International Holdings, Limited. I'm *in charge*! 1464

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Hi Mom! 1465

Thanks for the pictures from Buddy's wedding. He sure looks handsome in a suit! You're right, he should dress nice more! 1466

I'm dressing nice, too. Rhindquist J McBride has made me a Special Vice President! I'm management! Not management like my crazy roommate, Tony, who isn't my roommate anymore. They moved him and gave me the whole apt to myself, and I can plug in anything I want to, whenever I want to! I'm Real Brass! I only drive my old truck number 3528 two days a week now, and Vasquez has a different driver who I've never met the other four days. Vasquez says he is not as careful as I am, and sometimes, he makes them late! And he says, now that I'm running the show, can I make sure that his performance appraisal shows that it's the new guy's fault? I said I would look into it. 1467

I haven't had a chance to look into it yet, because the other four days, I go to Operations 1 and sit in a beautiful office on the top floor, one hundred floors above ground! They keep me busy, Mom! Rhindquist comes into my office and sits in the chair by the door, and talks on his phone, and asks me all kinds of crazy questions, like, Do I think that the pinheads in HR know their ass from a hole in the ground? And I say Yes, and he says, What makes you think so? 1468

So I told him about Basic Training, and how I learned the history of File-O-Gator, and memorized our Vision Statement, which is, The File-O-Gator Organization is a diverse multinational sovereign power that is a World-Class Leader in its fields of Operations, a status it has achieved through the diligence and responsibility of its Human Resources, which are the Heart of every Organization. I told him about how the HR Sergeant was always fair about our Training Appraisals, and how he always knew when someone had been goofing in the showers and made sure that they got disciplined. And I told him about how I played the Anthill Simulator and learned how the one drone doesn't know why he's moving a grain of sand, but that from the Queen's seat in the middle, it all makes sense. I told him that whenever my watch asks me to do something I didn't understand, or when something weird happens to me, like my crazy roommate Tony covering up all the plugs, that I remember the Anthill Simulator and I do my job. 1469

Rhindquist laughed and said Jap, my bright boy, you are a treasure, a walking focus-group. I'm not paying you enough. And then he gave me a raise! He called someone on his phone and said, Give my boy a raise, and they did! I am sending home a little money as an attachment with this note, and a picture of me in my Special Vice-President's suit. 1470

Every afternoon, Rhindquist shuts off his phone and my watch, and a pretty secretary wheels in a big TV. We watch movies! Rhindquist says he likes to unwind with a movie at the end of the day. The movies are old and funny, and I've never seen them before. Rhindquist sure has, though! He knows most of them by heart! Yesterday, we watched one called Educating Rita, and Rhindquist told me that I am like Rita. I already had that figured out, though. Rita is a dumb girl from England, Ltd., and she works as a hairdresser 1471

until someone from management teaches her all about life. I liked the movie a lot. I think that Rhindquist will teach me lots and lots about management, too.

My crazy old roommate Tony works in Operations 1, too, in the basement. I know this because this morning I saw him getting off the slidewalk and going to the basement elevators. He sure looked worried. I ran up to him and said Hi and he looked at me in my suit and his eyes bugged out and then he said Hi, too. 1472

I told Rhindquist about him, and he said that he thought Tony had interesting prospects and he would keep an eye on him. I tried to tell him about Vasquez and the new guy but then his phone rang and he talked for a long time. He sounded angry, and he shouted that he didn't care what it took -- get him Redmond! Even if you have to nuke it! I have a small TV on my desk, and I used it to look up Redmond, but it kept saying, See Microsoft. I asked Rhindquist about it and he said that Redmond is what Microsoft used to be called before they incorporated. He is always talking like that, calling things by their old names. 1473

It was quitting time then, so I went home and wrote you this letter. 1474

#

Hi Mom! 1475

I am real sorry to hear about Buddy. I know he must feel sad. I didn't think that Carla was a spy, either, but now that she's been arrested, I guess that Buddy should feel lucky that he didn't stay married to her long enough to have little spy babies! 1476

This is my third week as Special Vice President. I'm doing well for myself! Crazy Tony is now my assistant! He sits at a smaller desk in my office with me and Rhindquist, and Rhindquist asks him the same crazy questions he asks me, but Tony's answers are always weird. He has been in management stream since the second grade, and he has read all kinds of TV that I've never even heard of. Rhindquist doesn't know about it, either. He says that Tony is paranoid, which means that he thinks everyone is out to get him. Tony said that even paranoids have enemies, and Rhindquist laughed so much, I thought he would bust. 1477

Some days, Rhindquist is very sad, and on those days, we just watch movies. I've seen My Fair Lady, Pygmalion, Trading Places, The Prince and the Pauper, and a whole bunch more. They are all about poor people like you and me who become rich and powerful like Rhindquist. Mom, I think it means that Rhindquist wants me to be in charge! I haven't said anything, but I am trying to get ready. I am learning Word Power at night with the TV in my apt. I am not using it yet, because I want to make sure I am very good at it before I do. 1478

I told Rhindquist about Vasquez and the new guy, and do you know what he did? He sat down at my desk and he opened up Vasquez's file on my TV and he gave him Excellents in all of his Appraisal Categories! Can you believe it? There's nothing he can't do! He 1479

said, You gotta give the working stiffs a Christmas present now and then, right, Jap? I said, Sure.

But I don't know. The Performance Appraisals are supposed to be *scrupulously* fair -- that's one of my Power Words, it means *very*. It doesn't seem right to just treat them like a bunch of numbers. It's Vasquez's whole life! It's good that Rhindquist gave him all Excellents, because that means that he'll probably be promoted this year, maybe he'll end up a dispatcher or even a trainer. But what if Rhindquist had decided to put Needs Improvements down? It would have ruined Vasquez for the rest of his life! It's full of arbitrary -- that means that it doesn't make sense. 1480

I haven't talked to Rhindquist about this. I don't want to seem stupid. Tony and I talked about it on the slidewalk, though. He said that I was very stupid if I still believed that Performance Appraisals meant anything. He said that the only Appraisal that counts is the one they get from reading your mind. I laughed and called him paranoid. He said, I take that shit from Rhindquist but I don't have to take it from an ignorant farm-boy like you. I got scared for a second, and then I remembered that I was Tony's boss! Tony, I said, I should fire you on the spot. (That was from one of the movies we watched) Then *he* looked scared and he said Sorry, sorry! I said, What makes you think anyone could read your mind? 1481

And he said, What makes you think they can't? I said, Well, if Rhindquist could read my mind, he would have known that I was going to call out Security the day we met, at Finance 38. Tony said, Rhindquist is just a puppet of the Ones In Charge. They pull his strings and he dances for them. 1482

I said I didn't understand and Tony looked at me with pity. He said, The Ones In Charge are running all the cities, Microsoft and England and BBD&O and Red Stripe. They know everything that's going on. This is all a game for them. 1483

And I said, Boy, you don't know anything! BBD&O is our biggest enemy! File-O-Gator is locked in a death-struggle with them, it said so on the news this morning! 1484

Jap, Tony said, we're not fighting BBD&O -- File-O-Gator is. *We're* riding a slidewalk back home. Can't you tell the difference between fighting and riding a slidewalk? 1485

And I said, Of course I can! That's full of sophistry! (Another Power Word, which means cow-patties) We're part of File-O-Gator. File-O-Gator is fighting BBD&O. That means we're fighting BBD&O, Ergo. (That means, So there!) 1486

Tony laughed and said, That's where you're wrong! File-O-Gator is just the long arm of one of the Ones In Charge. He probably slept with the wife of the One In Charge who runs BBD&O, and now they're fighting it out. 1487

I laughed at Tony and said, You keep talking about the Ones In Charge! Everything you say is stupid unless you believe in the Ones In Charge! What makes you think that there are any Ones In Charge? 1488

There *has* to be, Tony said. Who else is running the show?

Rhindquist is! I said.

Tony looked at me like I was stupid. I'm pretty sick of him looking at me like that. Tony said, If Rhindquist is running the show, then how come he has time to waste on you?

I wanted to say something, but I didn't know what. Tony sure makes me angry! I got off the slidewalk and went home and wrote you this letter.

#

Hi Mom!

Gosh, poor Buddy! How can *he* be a spy? I played with him all my life! I never saw him being a spy! He'd have to be pretty sneaky to be a spy! I don't think he's a spy! I'm sure that the manager at his disciplinary hearing will figure out that he couldn't be a spy!

I am learning Power Punctuation now. I have been using my Power Words with Rhindquist all week, but he doesn't seem to notice. I think that if I start sending him Written Reports that are Power Punctuated, he'll notice that I'm really making effortful progress!

Today, Rhindquist sent Tony back to his old office to bring up all their Secure Document Storage Containers. It was the first time that Rhindquist and I were alone together since Tony was made my assistant, and I had a private talk with Rhindquist.

I said, “Are you really in charge?”

Rhindquist stared at me. “What is that supposed to mean?” he asked.

I said, “Tony says that `If you were `in charge;' that you wouldn't have time to squander with us. He says: `You're just a puppet of the `Ones In Charge'”

Rhindquist smiled and shook his head. He said: “Tony thinks he's pretty smart -- huh?”

I smiled back at him because I thought he thought Tony was crazy. “He sure does!” I said.

Rhindquist said: “Well, even `paranoids' have enemies!”

I said, “Wow! Do you mean: `Tony is right?'!”

He said, “Well, no one except weirdos like me would want to know what's in Tony's brain, so I don't think he really has to worry about anyone reading his mind! But he's right about one thing: even though I'm in charge of File-O-Gator, I'm not necessarily running the show. I have *investors*. Pray God you never meet them, Jap. They'd eat you alive.”

I said, “But they taught me in Basic that you started File-O-Gator with just one truck and a shredder! And that you shrewdly parlayed your meager holdings into a powerful organization by strategically deploying your human resources!”

He laughed! “Strategically deploying human resources? I paid the mob to scare the s**t

out of the guys driving the other trucks!”

I thought that the drivers of the other trucks must've been pretty gutless if they let someone scare them away from their appointed responsibilities, but I didn't say so. 1507

Rhindquist looked at me like he was sorry he'd said what he said. “Oh, I didn't *hurt* anyone. Just put the fear of God in them. Then I picked up their routes, borrowed some cash, bought some more trucks, and the rest is history. I just sort of stumbled along with it, best as I could. 1508

“Sometimes, I wonder how it all happened. One minute, you're shredding papers in Toronto, the next, you're buying the place! I can't see that I was a whole lot smarter than any of the other guys who were doing the same thing. . . I did design the uniforms, though. They were pretty sharp -- nicer than the potato-sacks you guys wear these days.” 1509

I like my uniform, Mom, and I wear it with pride. If it had been crazy Tony making fun of my uniform, I would have maybe hit him, but when Rhindquist said it, I just had to look like I understood and smile at him. 1510

I said, “You've done a lot more than design the uniforms! You run the show! You said so!” 1511

He looked at me like I was a little kid and shook his head. “If I was running the show, would I be amusing myself by pulling random Quality Audits on the trucks?” 1512

Crazy Tony walked in then. He looked at us and said, “What?! What are you two talking about?” 1513

Rhindquist said, “Jap here was just explaining to me how you don't think I'm in charge.” Tony looked scared and Rhindquist winked at me. 1514

Tony looked at me like he wanted to kill me! 1515

Tony said, “Do you really want to discuss this? Here? In this place, with all the ears and eyes in this room?” 1516

Rhindquist laughed and laughed and laughed. “Ears and eyes? Tony, you're beautiful, you twisty little weirdo. A real laugh riot.” 1517

Tony's face got red and he looked fit to bust. “Fine, then. Let's talk. Talk about the Calabrese and the Gnomes and the Tongs and the Masons and the Posses! How'd you like that?” 1518

Rhindquist tried to stop laughing, but he couldn't. “Jap, there's nothing more dangerous than a little knowledge!” He didn't say it to me, though, he said it to Tony. Tony was so angry, he shook! 1519

Just then, Rhindquist's phone rang. He said, “McBride here,” which is how he always answers. Then he said, “Yes, sir! That's fabulous!” He covered the bottom of the phone 1520

and said, “Why don't you guys take the rest of the day off, huh?” And then he opened the door and sent us out!

When I got home, my TV was already on, with a Special Bulletin: BBD&O was our sister city, and the two of us were fighting a life-and-death battle with Microsoft. There was also a message from Rhindquist, and attached to it was a copy of another old movie, 1984. 1521

It was boring. 1522

#

Hi Mom! 1523

I can't believe it! They gave Buddy life? Jeez! I'm going to talk to Rhindquist about this -- this is ridiculous! 1524

Today was Tuesday, so I was on the truck with Vasquez. I got to the garage nice and early, and my watch congratulated me. It kind-of bothered me. I guess I'm just getting used to working in my office, with the watch switched off. 1525

By the time we made our first stop, at HR 102, I was ready to throw my watch out the window! It had told me *eight times* how great I was: when I got to the garage; when I did my safety-check; when I stopped at three red lights; when I backed up to the document disposal dock; when I cleared security; and when I lifted the boxes with my legs instead of my back. To tell you the truth, it made me feel pretty stupid. I felt like I was a puppy, getting patted on the head. 1526

By lunch, my watch had given me 57 positive feedbacks. I mentioned it to Vasquez. 1527

He said, “I don't know what you're complaining about. It beats having it shout at you all the time. It just means you're doing all right. When I'm out with the new guy, this thing never shuts up. It just yammers on and on about how late we are, how many more pickups we have to do, what percent of our pickups we've been late for. I got so mad last week, I shouted at it: `Don't tell me! Tell the retard who's driving!'” 1528

We both laughed at that. I said, “Sure, it's better to get loved-off than it is to get chewed-out, but don't you feel like an idiot, having a machine telling you what a great job you're doing?” 1529

My watch said that I was lowering morale and I should stop. I got so angry, Mom! I told it to mind its own business! It said that it *was* minding its own business and did I want it to connect me with a maintenance operator to evaluate its judgment? 1530

I'd never mouthed-off to my watch before. The idea of talking to a real person about it scared me, but I remembered that even though I was driving a truck, I was also a Special Vice president, and that made me almost everybody's boss. I said, “Yes!” Vasquez looked at me like I'd gone nuts! 1531

A few seconds later, a new voice came out of my watch. “How can I help you, Mr White- 1532

head?" The voice was smooth and oily, like the man from Physical Plant who used to come around to collect the rent back home.

All of a sudden, I didn't know what to say. I said, "My watch is irritating me." 1533

The voice said, "Have you developed a rash? Is there visible chafing?" 1534

I said, "No. It's irritating me mentally. It never shuts up." 1535

The voice didn't say anything for a while, then it said, "Well, from my records, I see that you have a 98% positive-feedback-index. In fact, your watch hasn't given you any corrective feedback in weeks, with the exception of a mild correction about anti-morale speculations." 1536

I felt stupid, like one of those guys in Basic who carped about every little thing. I said, "Well, I'm just getting tired of having a machine tell me when I'm right and when I'm wrong. I can figure that out on my own." 1537

The voice said, "I see." And then it didn't say anything. 1538

I tried to wait until the voice said something else, but the quiet made me very nervous. I said, "I don't mean to be rude or anything. I am very conscientious about my job. It's just that I feel like a moron or something, always having the watch tell me what I'm doing." I knew that I wasn't expressing myself very well, but I couldn't remember any of my Power Words just then. "It bugs me, you know?" 1539

The voice said, "I'm sorry, but I'm afraid that that's not my business. I'm in maintenance. If you have a concern about HR policy, you'll need to take it up with them." 1540

I thought about my HR Sergeant in Basic, and tried to imagine telling him that I didn't want my watch to talk to me anymore, and nearly jumped out of my skin. "That's OK," I said. "My lunch is almost over. I'll try them after my shift." 1541

The voice said, "Thank you for calling Maintenance! Have a nice day!" Then my watch told me it was time to get in the truck and start driving again. 1542

Vasquez kept looking at me all day like I was some kind of crazy. 1543

#

Hi Mom! 1544

Tell Buddy he doesn't have to keep on calling me to say thanks. I'm just glad that he and Carla are all right. Tell him to enjoy his promotion! 1545

When I got to the office this morning, I found Rhindquist wearing his old-fashioned pusher's uniform. I hadn't seen it since the day we met. I was surprised by how normal he looked in it: he could have been any pusher. 1546

"Well, aren't you dressed for success?" I asked him ironically. 1547

He spun around and said, “I've got something new. For three of the days that you're here, I'll be on a truck with Vasquez. You fill in for me, take any calls, handle any business. Order up some movies. We'll meet up on the fourth day here and I'll answer any questions you have. If something urgent comes up, give me a call.” 1548

I felt a little out of my depth, but I wanted to demonstrate my take-charge attitude to Rhindquist, so I smiled and said, “Can-do, boss! Knock `em dead!” 1549

Tony came in and snorted a snide laugh at Rhindquist. Rhindquist raised an eyebrow at me, and I took the hint. “What are you smirking at, mister?” I barked, like my old Sarge. “You find something amusing about the official uniform of a representative of this organization?” 1550

He cast his eyes down and mumbled “No.” 1551

I was enjoying myself. I said, “I can't hear you, mister!” 1552

Tony looked at me, his eyes focused in space beside my head. “No, sir!” he said. 1553

“Get downstairs and see what the pinheads on the third floor are shredding. Sort it, box it, and have it on my desk by lunch, hear me?” 1554

“Yes, sir!” Tony shouted and hustled out of my office. 1555

Rhindquist shook his head and looked admiringly at me. “Sonny-boy, you're going to do just fine,” he said. 1556

“You know it!” I said. 1557

Rhindquist gave me a big thumbs-up and left me alone. 1558

So there I was, alone, in my office, in charge. Sort of. 1559

I played with my TV for a while. The TV at the office gave me all kinds of access that I didn't have at home. I clicked on something, and there were the personnel files! I felt like a snoop, but it was too fun to stop. I opened my file, and Vasquez's, and a whole bunch more. Boy, the Company sure knows a lot about us! My file went all the way back to the Infirmary where I was born, and then I clicked on your name, and there was everything about you! 1560

Mom, I didn't know you had your tubes tied! 1561

I followed our family tree up and down, and I came to Buddy. His file was spotless, all the way up to the spying thing. I clicked on the name of the Security Manager who'd “caught” him, and do you know what? He was engaged to Carla last year! Carla is his ex-girlfriend! 1562

Well, it was pretty easy to see what was going on, let me tell you. Buddy got married to Carla, and her ex-boyfriend had them locked up. I tell you, I was so angry, I felt like I would bust. But I'm smarter than that. All it took was a few minutes' typing and wham, I'd gotten 1563

Buddy and Carla out of jail, given them promotions, and had the Security Manager busted down to a janitor. I bet that confused him!

So it really wasn't much. It scares me to have that much power, Mom, but it feels good, too. I made sure that all my friends back home were set up all right, too. 1564

You just wait till your Christmas bonus, Mom! 1565

Tony came up at lunchtime, with three big boxes of papers. He'd sorted out the memos, personal documents and the inter-departmental communications. They were pretty interesting reading! Especially the personal documents: shopping lists, letters home, love-notes and gossip. It was like being the queen ant, sitting in the middle of the hill, seeing what all the drones were up to. I sent Tony out to get some more. 1566

It was getting onto movie time when the phone on my desk rang. I answered it, “Jasper Whitehead, Special Vice-President.” 1567

The person on the phone shouted at me, “Get me McBride, now!” 1568

I felt sick. I said, “I'm sorry, he's not available right now. I'm filling in for him. Can I be of service?” 1569

The person laughed at me. “Well, maybe you can at that, son! Rhindquist has been promising to do something for me for months now, I guess he's just been too busy. Do you have his access codes?” 1570

I said I did, and turned on my TV. 1571

“Good boy,” he said. “Now, I want to find docket 09.3457. You know how to open a docket?” 1572

I told him I did and found the docket. It was called “Microsoft,” and it had a long Action-Item List attached to it. I didn't really get most of the Action Items, but they were all checked off except one. 1573

“OK -- there's an unchecked item at the bottom of that list. It's called, `Deploy Strategic Negotiation Tool.' You see it?” 1574

I said I did. 1575

“Check it off,” he said. 1576

I did. The TV asked me if I was sure. I said I was. The TV asked me again. I said I was, again. I told the man I was done. 1577

“Good kid. Thanks! Tell McBride I like his new hire.” 1578

He laughed again and hung up before I could say “You're welcome.” 1579

My phone rang again. It was a reporter from PR 43, and she wanted to know all about my dynamic leadership in handling the Microsoft Crisis. I didn't really understand the question, 1580

but they taught me what to say to the press in Basic. I said, “The File-O-Gator Organization is a diverse multinational sovereign power that is a World-Class Leader in its fields of Operations, a status it has achieved through the diligence and responsibility of its Human Resources, which are the Heart of every Organization.”

The reporter sounded impressed. I thanked her and hung up and turned on the TV and flipped around. There was a reporter lady on the screen, showing satellite maps of Microsoft, like a weather map. Except that instead of lighting bolts or a smiling sun, there were tanks and soldiers and flames. The TV said that bold directives from Special Vice-President Jasper Whitehead had brought an end to the Microsoft conflict. It said that a classified number of File-O-Gator troops had occupied the conflict-zone, deploying strategic neurotoxins and nonlethal influenza vectors, resulting in an estimated 85% compliance-and-conversion rate among the Microsoftians. 1581

Tony came in with more boxes and looked at me. He said, “God, what's eating you?” 1582

I told him. I didn't know what else to do. I thought that maybe I could get Rhindquist on the phone, but he'd left me in charge. 1583

Tony smiled, but it wasn't a happy smile. “Well, there you go. You've made your first executive decision.” 1584

I said, “I didn't make any decision!” 1585

He just laughed and pointed to the TV, which was showing pictures of a city just like File-O-Gator, the buildings all collapsed and burning. He said, “Sure looks like an executive decision to me.” The picture panned over an apartment building that was split down the middle, the apartments naked and exposed, the people who lived there dead and sprawled or alive and hanging over the edge, vomiting. 1586

Oh, those poor people! 1587

I didn't know what I was doing! 1588

I spent all last night throwing up, and I'm not sure if I'm going to go to the office today. 1589

#

Hi Mom! 1590

Well, I didn't go to work yesterday. Instead, I got out of bed, sat on the sofa in my shorts, and turned on the movies. My watch got loud and angry, so I stuck it underneath my pillow. Then, messages started appearing on my TV. I ignored them. I ate some cereal around 11, and I threw it up right away, so I stopped trying. 1591

Someone knocked on my door after lunch, but I was watching a good part in Wall Street, so I didn't answer it. 1592

I fell asleep after Wall Street, and woke up after 18h, because someone was really giving 1593

my door a pounding.

I opened the door, not caring that I was wearing my shorts. It was Rhindquist. He looked sad, and beaten. You know what he did? He gave me a hug! Boy, that was weird. 1594

He came in and sat on the sofa. I sat next to him. He didn't say anything, just picked up the remote and put on a funny movie, Blazing Saddles. When that was over, he put on The Princess Bride. I never laughed so much! 1595

We watched movies all night. They were all funny. They took my mind off things. We both fell asleep, sitting on the sofa, but when I woke up, I was in bed, and Rhindquist had put the blanket over me. He was asleep on the sofa. His phone was on the TV, and its batteries were on the floor. 1596

I was really hungry, so I ate three bowls of cereal and some toast and an apple, and I must've woken Rhindquist up, because he came into the kitchen. 1597

“Little man, you had a busy day, huh?” he said. 1598

I said, “I can't do it.” 1599

He got a GatorCola out of my fridge and drank it. It was pretty strange to have the CEO of the whole Company drinking a Goke in my kitchen for breakfast. It really made him seem like you and me, not like a powerful guy from the stories. 1600

He burped. 1601

He said, “I understand.” 1602

I said, “Why did you do this to me?” 1603

He said, “You've been in my shoes now. Wouldn't you do anything to get out of them?” 1604

I said, “But why *me*?” 1605

He sighed. He said, “This sounds worse than I mean it. I thought you were ignorant enough to enjoy it.” 1606

I said, “Thanks a lot.” Is there anyone out there who *doesn't* think I'm a retard? 1607

He said, “I don't mean it in a bad way, really. I thought you were na√Øve enough to just do the job, take the perks, and sleep well at night. I was wrong. You're too smart.” 1608

It didn't make me feel any better. I went back and sat on the sofa and put on a movie, Horsefeathers. 1609

Rhindquist watched the movie with me, and when it was over, he said, “You don't have to do the job.” 1610

I said, “So what now? You pick some other poor retard and give him the old screw-job?” 1611

He said, “I guess so.”

I said, “In that case, I'll do it.”

His mouth dropped. He sat down and put on a movie, Pink Flamingos. What a sick movie!

When it was over, he said, “In that case, I'll do it.”

And then I had the best idea I've ever had. It was so good, I couldn't say anything for five whole minutes. Mom, you sure didn't raise any idiots!

#

Hi Mom!

Well, today was just *fine*. Me and Rhindquist got to the garage in the nick of time and it's a good thing that he turned our watches down because they give me a headache!

Vasquez was waiting for us when we got there and he had on his mad face for the other guys but when me and Rhindquist got on the truck, he smiled and winked at us.

I drove and Rhindquist hung onto the back and he shouted at me to go faster and I just ignored him! He kept on shouting saying, You pinhead my grandma drives faster than you do and she's been dead for years! And that made me laugh so hard I nearly rolled the truck and Rhindquist nearly fell off and he was pretty quiet after that!

We got to Finance 38 and I started lifting the boxes and Rhindquist as usual took too long to push them. The security guard and me both laughed at the big pile of boxes outside the truck, and he offered me a smoke, but I said no thanks.

I went inside and told Rhindquist to Get it in gear! And he just tossed me the paper he was reading. It said MEMO TO ALL EMPLOYEES REGARDING NEW SECURITY MEASURES. And underneath, it said, EFFECTIVE IMMEDIATELY ALL AC OUTLETS ARE TO BE COVERED WHEN NOT IN USE.

We laughed and laughed and laughed, and then my watch blipped back on even though Rhindquist had turned it off! It said, “Laugh it up, retards!” in Tony's voice.

Rhindquist put his arm around my shoulders and said Jap my prodigy, when you are right, you are *right*. He's the perfect man for the job.

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Afterword:

This is the first story I ever sold to Patrick Nielsen Hayden, who also bought “The Things that Make Me Weak and Strange Get Engineered Away” and all of my novels. I wrote it in one big gulp while shut in at a hotel room in Montreal on a business trip. It was snowing outside, and I could see the shredding vans moving through the streets below, and I typed and typed until my hands hurt.

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Visit the Sins

Sean had a way of getting his way -- a way of delivering argument that implied that everyone in earshot was savvy and bold, and that the diatribe-du-jour was directed at the Enemies of Art ranged without. His thesis advisor bought it every time. Sean turned in his due-diligence, a bunch of theses written in the last century: collected memoirs of the survivors of electroshock, lobotomies, thalidomide. His advisor signed off and within twenty-four hours, he was debarking in Orlando and renting a car to take him to the Home.

He didn't tell his father. He'd have to, eventually, before he could finish the thesis. But for now, it was just him and Grampa, head-to-head.

#

Grampa was switched off when Sean found him on the ward, which throbbed with a coleslaw of laser-light and videogames and fuck-pix and explosions and car-wrecks and fractals and atrocities.

Sean remembered visits before the old man was committed, he and his dutiful father visiting the impeccable apartment in the slate house in Kingston, Ontario. Grampa made tea and conversation, both perfectly executed and without soul. It drove Sean's father bugfuck, and he'd inevitably have a displaced tantrum at Sean in the car on the way home. The first time Grampa had switched on in Sean's presence -- it was when Sean was trying out a prototype of Enemies of Art against his father's own As All Right-Thinking People Know -- it had scared Sean stupid.

Grampa had been in maintenance mode, running through a series of isometric stretching exercises in one corner while Sean and his father had it out. Then, suddenly, Grampa was between them, arguing both sides with machinegun passion and lucidity, running an intellect so furious it appeared to be steam-driven. Sean's tongue died in his mouth. He was made wordless by this vibrant, violent intellect that hid inside Grampa. Grampa and his father had traded extemporaneous barbs until Grampa abruptly switched back off during one of Sean's father's rebuttals, conceding the point in an unconvincing, mechanical tone. Sean's father stalked out of the house and roared out of the driveway then, moving with such speed that if Sean hadn't been right on his heels, he wouldn't have been able to get in the car before his father took off.

And now, here was Grampa in maintenance mode. He was sitting at a table, flexing his muscles one-at-a-time from top to bottom. It was an anti-pressure-sore routine. Sean guessed that it was after-market, something the Home made available for low functioning patients like Grampa.

Sean sat down opposite him. Grampa smiled and nodded politely. Sean swallowed his gorge. The ones who had not had the surgery had been scattered, unable to focus. Then they had the operation, and suddenly it wasn't a problem anymore. Whenever their attention dropped below a certain threshold, they just switched off, until the world regained

some excitement. It had been a miracle, until the kids stopped making the effort to keep their attention above the threshold, and started to slip away into oblivion.

“Hello, Grampa,” Sean said.

Grampa stared at him from dark eyes set in deep, wrinkled nests. Behind them, Sean could almost see the subroutines churning. “Sean,” Grampa said. Woodenly, he stood and came around the table, and gave Sean a precise hug and cheek-kiss. Sean didn't bother returning either.

He put the recorder on the table between them and switched it on.

#

Grampa was a moderately wealthy man. He'd achieved much of that wealth prior to his retirement, working as a machinist on really delicate, tricky stuff. The family assumed that he did this work switched off, letting the subroutines run the stultifying repetitions, but in his prelim research, Sean had talked to one of Grampa's co-workers, who said that Grampa had stayed switched on more often than not. Grampa had acquired the rest of the wealth shortly before Sean's father had sent him south, to the Home. The years-old class action suit brought by the guilty, horrified families of accidental zombies had finally ended with a settlement, and all the Survivors became instant millionaires in trust.

For all the good it did them.

“How are you?” Grampa asked, placidly.

“I'm working on my thesis, Grampa. I'm here to interview you -- I'll be around for the next couple weeks.”

“That's nice,” Grampa said. “How's your father?”

“He's fine. I didn't tell him I was coming down, though. You're a touchy subject for him.”

Grampa settled back into his chair. Sean was distantly aware of other Survivors on the ward, gabbling and twitching at videogames and smoking all at once. They were high-functioning -- they could be switched on with simple stim; Grampa only switched on for important occasions.

Sean said, “Dad wishes you'd die.”

That did it. It was easy to tell when Grampa was switched on; the rhythmic, methodical maintenance twitching was replaced with a restless, all-over fidget; and his eyes darted around the room. “Is he in some kind of financial trouble? He doesn't need to wait for a bequest -- I'll write to the trustees right now.”

Sean restrained himself from saying hello again, now that Grampa was switched on. He kept himself focused on the task of keeping Grampa switched on. “He wishes you'd die

because he hates you and he hates himself for it. When you die, he can stop hating you and start mourning you. He knows it wasn't your fault. That's why I'm here. I want to collect your stories and make some sense out of them, before you die." Sean took a deep breath. "Will you stay switched on?"

Grampa looked uncomfortable. "Your grandmother used to ask me that. I'd promise her I'd do it, every time, but then. . . It's not voluntary, Sean. It's reflex." 1649

"It's a learned reflex, Grampa. It's not breathing. You didn't ask to have the surgery, but you learned the reflex all on your own. You *allow* your attention to drop below the threshold, you *allow* the chip to switch you off. Some people do it less," he jerked his head at the other old men and women, playing their twitch games and shouting argument at each other. "Some don't do it at all." 1650

"Bullshit!" Grampa said, leaning forward and planting his hands on his knees -- aggro Type-A body-language that Sean often found himself assuming. "Urban legend, kid. Everyone learned it. Once you had the surgery, you couldn't help it. You know what I'm talking about, or you wouldn't be here. Your father, too -- if he was ever honest enough to admit it. You've both got it as bad as me, but no one ever tried to *cure* you." 1651

"I don't have it," Sean said. "I just got off a three-hour plane-ride, and I was able to just look out the window the whole way. It didn't bother me. That's not coping mechanism, either -- I never even *wanted* to watch the seat-back vid or chat up my neighbor." It wasn't true, actually. He had fidgeted like crazy, splitting the screen-in-screen on the seat-back into sixteen quads and watching as many stations as he could. He'd tried to assemble his thoughts on his recorder, but he'd been too wound up. Eventually, somewhere over Georgia, he'd surrendered to the screen and to counting powers of two. 1652

Grampa pierced him with his stare. "If your ego demands that you believe that, then go ahead." 1653

Sean restrained himself from squirming. He focused himself on directing the discussion. "What do you like best about the Home?" 1654

Grampa considered the question for so long that Sean was afraid he'd switched off. "No one makes me feel guilty for switching off. No one tells me that I'm weak. Except your father, of course." 1655

"Dad's been here?" Sean said, shocked. "When?" 1656

"Your father visits every month. He shouts at me until I switch on, then he leaves. He does it because the doctor told him that if I didn't switch on more often that they'd move me to the zero-function ward. Sounds fine to me, and I tell him so, but he's never thought much of his brain-damaged old man." 1657

"Where do you go when you're switched off?" Sean asked. It was a question that was supposed to come later in the interview, maybe on day two, but he was rattled. 1658

“I don't know. Away.”

“Is it like sleep?” Sean said, forgetting the rule that you never ask the subject a simple yes/no question. His heart thudded in his chest, like he was giving the first interview of his life.

“No.”

“How is it different from sleep?” Sean asked.

“I usually switch on for sleep -- my subconscious is pretty good at entertaining me, actually. When I switch off, I just. . . go away. I remember it later, like it was a book that got read directly into my brain, but I'm *not there*. It's fucking great. You'd love it, Sean. You should get the surgery. I hear that there's a lot of black-market clinics where you can get it done: South-East Asia. The sex-trade, you know.”

Sean struggled to keep the discussion on-track. Grampa was often hostile when he was switched on, and his father always rose to the bait. Sean wasn't going to. “How do you know that you're not there? Maybe you're there the whole time, bored stupid, screaming in frustration, and you forget it all as soon as you switch on?”

Grampa raised an eyebrow at him. “Of course I am! But that's not the *me* that's important -- *I'm* the one that counts. And I get to fast-forward past all the slow parts. Which this is turning into, I'm afraid.”

Grampa's eye's stopped seeking out the ward's corners, and he slipped back into maintenance mode. The noise and lights of the ward closed in around Sean. He scooped up his recorder. “Thanks, Grampa,” he said, woodenly. “I'll see you tomorrow.”

“Bye, Sean,” Grampa said, and came around the table for another hug and kiss.

#

Sean checked into the first motel he found, the Lamplighter Inn, on a dreary strip populated with disused water-parks and crumbling plazas. He lay down on the bed, fed the Magic Fingers, and played back the recording.

It was junk. The noise of the ward masked nine words in ten, and what words made it through were empty, devoid of any kind of emotional freight. He tried to transcribe it longhand, filling in the blanks from memory, but couldn't keep his mind on it.

He took off his sweaty, wrinkled T-shirt and slacks, dumped out his suitcase on the chipped, cigarette-burned table, and found his bathing suit.

There was one other guest by the pool, an old, old woman in a one-piece with a skirt, wearing a sunhat tilted to shade her from the last of the pounding Florida sun. Sean gave her a perfunctory nod and jumped in.

The water was piss-warm, thickly chlorinated. It felt like swimming in pungent sweat. Sean

managed one lap and then crawled out and sat in a sway-backed deck-chair.

“I wouldn't go swimming in that if I were you,” the old woman said, in a husky, nicotine-stained voice. She clattered a grin at him through her dentures. She was the color and texture of rawhide, not so much tanned as *baked*. 1673

“Now you tell me,” Sean said, squinting at her under his hand. 1674

“Old Ross doesn't like dealing with the pool, so he just keeps on shoveling in the chlorine. Don't be surprised if you're blonde in the morning. My name's Adele. You here for long?” 1675

“A couple weeks, at least,” Sean said. 1676

Adele smiled and nodded. “That's good. That's fine. A good stretch of time to see the Parks. Don't miss Universal, either -- I think it's better than Disney. Most people don't bother with it, but for my money, it's better.” 1677

“I don't think I'll get a chance to visit either,” Sean said. “I've got a lot of work to do down here.” He waited for her to ask him what kind of work, and mentally rehearsed the high-concept speech that he'd given a thousand times while working on the thesis proposal. 1678

“What a shame,” she said. “Where did you come down from?” 1679

“Toronto,” he said. 1680

“Lord, not another snowbird!” she said, good-naturedly. “Seems like half of Canada's down here! They come here to get away from the winter, then they complain about the heat! What do they expect, that's what I want to know! Was your flight good?” 1681

“It was fine,” Sean said, bemusedly. “A little dull, but fine.” 1682

“So, you're here for a few weeks,” Adele said. 1683

“Yes. Working,” Sean said. 1684

“Nice work if you can get it!” Adele said, and clattered her dentures again. “I moved here, oh, five years ago. To be near my boy. In the hospital. I used to work, but I'm retired. Used to work at a dairy -- answering the phones! You tell people you used to work in a dairy, they think you were milking the cows! Old Ross, he gives me an annual rate for my room. It's better than living in one of those gated places! Lord! How much shuffleboard can a body stand?” 1685

“Your son is sick?” Sean said. 1686

“Not sick, no,” Adele said. “You wouldn't believe the roaches you get down here! Old Ross fumigates regular, but Florida roaches don't seem to care. I've lived in New York, and I've seen some pretty big roaches in my day, but not like these. Like cats! My boy, Ethan, he'd clean and clean our apartment in New York, quiet as you please, a good boy. Then he'd 1687

see a roach and whim-wham, he'd be talking, joking, skipping and running. Old Ross says there's nothing he can do -- he says, `Adele, this is *Florida*, and the roaches were here long before us, and they'll be here long after, and nothing we do is going to keep them away.' That's all fine and good, but let me tell you, I've never seen a roach in the Home when I was visiting Ethan. *They* know how to keep them out. Maybe it's all the shouting. Lord, but they do shout!"

A small lightbulb blinked in Sean's mind. "Is Ethan very high-functioning?" he asked, carefully. 1688

Adele glanced sidelong at him and said, "The doctor says no. But I think he is. He's always walking around when I'm there, doing push-ups and sit-ups. He's not a young man, Ethan -- sixty this year! When his father was that age, he didn't do any push-ups, no sir! But the doctor, he says that Ethan's at zero function. Doctors! What do they know?" 1689

"How old was Ethan when he had the surgery?" Sean asked. 1690

"Just seven," Adele said, without changing her light tone, but Sean saw knives of guilt in her eyes. "He was going to be held back in the first grade, or sent to a special school. They sent a doctor around to explain it. Ethan was smart as a whip, everyone knew that, but he just couldn't *concentrate*. It made him miserable, and he'd pitch these hissyfits all the time. It didn't matter where he was: the classroom, home, out on the street -- in church! He'd scream and shout and kick and bite, you've never seen anything like it. The doctors, they told us that he'd just keep on getting worse unless we did something about it. 1691

"It seemed like a miracle. In my day, they'd just drug you up." 1692

Sean knew the names of the old drugs: Ritalin, Cylert, Dexedrine. Anything that would keep you still and numb. Then came the surgery. 1693

Adele brightened. "You should really try to at least visit Universal for an afternoon, you know. It's lovely." 1694

"They're going to move my grandfather to the zero-function ward, I think. If he doesn't spend more time switched on, they will." Sean said. "I want to get his story before they do it." And if not his stories, the *reasons* -- reasons for who Sean was, who his father was. 1695

"What a nice grandson you are! You know, it seems like no one cares about their grandparents anymore. Old Ross's grandchildren haven't visited once in the five years I've been here." 1696

#

Sean gave Adele a ride the next day. She wore the sunhat and a lightweight cotton dress and sandals, and looked frail and quaint. 1697

Sean thought Adele would get off at a different floor, to visit Ethan, but she walked with 1698

him across Grampa's ward.

Grampa was sitting just where he had been the day before. His chin was shaved blue, and he was impeccable. He was methodically slicing and eating a hamburger. 1699

“Grampa,” Sean said. 1700

“Hello, Sean,” Grampa said. He laid his knife and fork in a precise X on his plate and pushed it aside. 1701

“This is Adele. Her son is in the zero-function ward. She wanted to meet you. Adele, this is my grandfather, Brice Devick.” 1702

“Pleased to meet you, Adele,” Grampa said, and shook her hand. 1703

“Likewise,” she said. “Do you know my Ethan? I'm worried that he doesn't seem to have any friends here.” 1704

“I haven't met him,” Grampa said. 1705

“Well, would you do an old lady a big favor? Go and visit him. Your grandson tells me you're smart -- Ethan is as smart as a whip. You two should have lots to talk about.” 1706

“I will,” Grampa said. 1707

“I'm sure you two will get on very well. It was a pleasure to meet you. Excuse me, I'm sure Ethan's wondering where I am.” 1708

Sean waited until she was out of earshot, then said, “Her son's a fucking vegetable. You're about eighty percent of the way there. You're spending so much time switched off, you might as well be dead.” 1709

“What do you know about it?” Grampa said, fidgeting. 1710

“I know plenty,” Sean said. “Plenty! You spent less than fifteen percent of the time switched off until you hit college. Then you switched off for months at a time. You used it for a study aid! I pulled your logfiles, when I was at Dad's -- he's had them ever since you were declared *non compis*. You're a junkie, Grampa. You don't have the willpower to kick your habit, and it makes my Dad nuts. I never knew you, so it just makes me curious. Let's talk about the first time you remember switching off.” 1711

Grampa snorted. “That's a *stupid* question. You *don't* remember switching off -- that's the whole point.” 1712

Sean rolled his eyes. “You know what I mean. You may not remember switching off, but you'll remember switching on. Switching on *has* to be memorable, doesn't it? Isn't that the whole point?” 1713

“Fine. I switched on for about 20 minutes in a movie that I snuck out of school to see when I was twelve. It was in French, and it had made a lot of noise because it had a sex scene with a live pig. I saw that scene, and two others -- another sex scene and a scene where 1714

this woman cuts the pig's throat. I loved it. All my friends had done the same thing, but by the time the good parts had come around, they were too bored to enjoy them. I just caught the highlight reel."

"How long until you next switched off?"

"I don't know. A while."

"It was two days. I have the logfile, remember, Grampa? Don't jerk my chain. You switched off during Friday dinner. Did your parents notice?"

"Of course they noticed! They loved it! For once, I wasn't kicking the table-leg or arguing with my sisters or stuffing sprouts in my pocket. I cleaned my plate, then sat and waited until everyone else was done, then I did the dishes."

"How'd you like it?"

"I loved it! I hated family dinners! I just got the highlight reel again -- dessert! I remember that fucking bowl of pudding like I was eating it right now. My mother couldn't cook for shit, but she sure opened a mean package of Jello Pudding."

Sean found his mood matching Grampa's, aggressive and edgy. "How did you and Grandma end up getting married? I can't imagine that she was hot for a zombie like you."

"Oh, but she *was*, Sean, she *was*!" Grampa waggled his eyebrows lasciviously. "Your Grandma didn't like people much. She knew she had to get married, her folks expected no less, but she mostly wanted to be off on her own, doing her own thing. I'd come home, switch off, clean the place, do any chores she had for me, then go to bed. She loved to have sex with me switched off -- it got so that if I accidentally switched on while we were doing it, I'd pretend I was still off, until she was done. It was the perfect arrangement."

"But she divorced your sorry ass after ten years," Sean said.

"You got a girlfriend, Sean?" Grampa said.

"No," Sean said.

"You *ever* had a girlfriend?"

"Yes," Sean said, feeling slightly smug. Never ask yes/no question.

"Why'd she leave you?" Grampa asked, his eyes sharp as razors.

"What makes you think *she* left *me*?" Sean asked.

"Did she?" Grampa fired back.

"Yes," Sean said, as calmly as he could manage.

"And why did that happen?"

“We were growing in different directions,” Sean said, the words sounding prim even to him.

Grampa barked and slapped his palm on the table. The old men and women in the ward swiveled their heads to stare, momentarily distracted, then went back to arguing.

“You're full of shit, kid. What's that supposed to mean?”

“I was working on my thesis proposal. Lara was working on hers. Neither of us had time for a relationship. It was amicable.”

Lara had caught him watching television over her shoulder while she was delivering one of her dreaded Relationship Briefings, and had laid into him a little too hard. He'd come back at her with everything he had, an extended rant that ranged from her lame-ass thesis -- the cultural impact of some obscure TV show from before they'd been born -- to her backbiting, over educated circle of friends. He'd moved onto her relationship with her mother; her insufferable whining about a suicidal uncle she'd been close to; and her pretentious way of sprinkling her speech with stupid pseudo-intellectual buzzwords. He crossed the line again and again and she kicked him out on his ass.

“Dad says that you never switched on during the divorce.”

“Your Dad has nothing to complain about. He got enough pity lavished on him to kill ten men. It was all your grandmother's family could do not to devour him whole.”

“But you stayed switched off,” Sean said.

“In the court, I was switched off. Ever been in a court, Sean?”

“You stayed switched off.”

“In the court-room.”

“And before, during the separation?”

“Same thing,” Grampa said.

“And after, during visitations?”

“Not then,” Grampa said, loudly. “Not during visitations.”

“I've got the logfiles, Grampa,” Sean said.

“What the hell do a twelve-year-old and a grown man have to talk about? I kept him fed. I took him out to the carny and to kiddee movies. I drove him to hockey.”

“You *switched off*, Grampa,” Sean said. “The *you that counted* wasn't there.”

“Sophistry,” Grampa said. “Bullshit. I remember all of it. I was there. Not many other parents were, let me tell you. Usually, it was just me and a few others in the stands, or kids running around loose like animals at the carny. Your father has *nothing* to complain about.”

“Why, aren't you two looking excited?” Adele said, hobbling alongside of the table. She was leaning on Ethan, a vigorous old man with sinewy arms and dead eyes. His face was unlined, free from smile lines and frowning creases. 1752

“Hi, Adele,” Sean said, trying to keep the exasperation out of his voice. 1753

“Ethan, this is Sean and his grandfather, Brice.” 1754

Ethan extended his hand and Sean shook it. “Very nice to meet you,” Ethan said. His hand was dry and papery, his eyes vacant. Sean shook it, and a frisson of shameful disgust sizzled up his abdomen. He had a sudden vision of Ethan's brain, desiccated in his skull, the gleaming edges of the chip poking free. He surreptitiously wiped his hand on his pants as Ethan turned to Grampa and shook his hand. “Very nice to meet you.” 1755

“Do you mind if we sit down?” Adele said. “I'm afraid that I'm a little pooped. All those stairs!” 1756

Sean offered his chair and went off to the lounge with Ethan to get two more. When they got back, Adele had her hand on Grampa's forearm. “ -- I worked in a dairy, answering the phones! You tell people you used to work in a dairy, they think you were milking the cows!” Adele laughed and Grampa shot Sean a hostile look. 1757

Sean said, “Grampa was a machinist before he retired. You really liked doing that, huh, Grampa?” 1758

Grampa nodded perfunctorily. 1759

“I mean, the logfiles show that you almost never switched off at work. Must've been pretty engrossing. You should give workshops here. I bet it'd be good therapy.” Sean knew he was baiting the old man, but he couldn't stop himself. 1760

“Your father's arriving tomorrow,” Grampa said. “He called last night. I didn't tell him you were here, I thought it would be a nice surprise.” 1761

Adele clapped her hands. “Well isn't that *nice*! Three generations, all together. Sean, you'll have to introduce Ethan and I to your father. Ethan never had children, isn't that right?” 1762

Ethan said, “Yes.” 1763

“Always the bachelor, my boy. But it wasn't for lack of opportunity. You had to beat them off with a stick, didn't you, son?” 1764

Ethan said, “Yes.” 1765

“I always hoped for a grandchild to hold, but you have to let your children live their own lives, isn't that right, Brice?” 1766

“Yes,” Grampa said, with a kind of horrified fascination. 1767

“Ethan was always too busy for romance.” 1768

“Yes,” Ethan said.

“Working and working and working for that transcription service. You must have typed a million words. Did you ever count them, Ethan?”

“Yes,” Ethan said. “I typed roughly fifteen million words.”

“Nowadays, of course, no one types. It's all talking to computers now. When I was a girl, they all said that you'd always have a job if you just learned to type. Times sure change, don't they?”

“Yes,” Ethan and Grampa said together. Grampa startled like he'd been shocked.

“Dad's coming tomorrow?” Sean said.

Grampa said, “Yes. He's catching the 6 AM. He'll be here by 10.”

“Isn't that *nice*,” Adele said.

#

They left Grampa and Ethan sitting at the table together. Sean looked back over his shoulder before they got on the elevator, and Grampa was still switched on, staring hard at him.

“You must be *excited* about seeing your father again,” Adele said to him when they were sitting around the pool.

Sean was getting the hang of talking to Adele. “Ethan and my grandfather seem to be hitting it off.”

“Oh, I certainly *hope* so! Ethan could use some friends at that place.”

Sean pictured the two of them, seated across from each other at the ward table, running maintenance routines at each other, saying, “Yes,” “Yes.” Unbidden, a grin came to Sean's face.

“Why did you put Ethan in the Home?” Sean asked, shifting to catch more sun on his face.

“He wanted to go,” she said. “The doctor came by and told him about it and asked him if he wanted to go, and he said `Yes.' That was it!”

Sean snuck a look at Adele. She was wincing into the light, following it like a sunflower. “Adele,” he said.

“Yes, Sean?”

“Ethan was in maintenance mode. He was switched off. He said `Yes,' because his subroutines didn't want to be any trouble. You know that, right?”

“Oh, that foolishness again! Ethan's a *good boy*, is all. He remembers my birthday and

Mother's Day, every year."

"Subroutines, Adele," Sean said, straining to keep an inexplicable anger out of his voice.

"Humph! Subroutines!"

"Adele, he's a robot. He's a walking coma. He's been switched off for so long, all you're talking to is a goddamn *chip*, he's not a goddamn *person* anymore. None of them are. My goddamn *Grampa*'s spent three-quarters of his goddamn life *away*. He's either an angry old bastard, or he's a goddamn *zombie*. You *know that*, right?"

"Sean, you're very upset," Adele said. "Why don't you have a nice lie-down, and we'll talk in the morning. I can't wait to meet your father!"

Sean stalked off to his room and tried to record some field notes while flipping around in the weird, poky corners of the motel's cable system, Japanese game-shows and Hindu religious epics. He smoked half a cigarette, drank half a beer, tried to masturbate, and finally, slept.

#

Adele rang his room-phone at eight. "Rise and shine, sunshine!" she said. "Your father will be at the airport in an hour!"

Sean dressed, but didn't bother shaving or brushing his teeth. He staggered out to his rental and gave Adele a sheepish grin. Acid churned in his gut.

Adele waited by the passenger door, in a pair of slacks and a light blouse. She had hung a pair of sunglasses around her neck on a gold chain, and carried an enormous sisal handbag. Staggering in the horrible daylight, Sean opened the passenger door for her, and offered his arm while she got in.

He put the car onto the Bee Line Expressway and pointed it at the airport.

"Oh, won't this be *fun*?" Adele said, as he ground the crap from the corners of his eyes and steered with his knees. "I'm sure your father is *charming*. Maybe the five of us can go to Universal for an afternoon."

"I don't think we can take them off the ward," Sean grunted, changing lanes for the airport exit.

"You're probably right," Adele said. "I was just thinking that Universal might be enough to keep them both switched on."

Sean shot her a look and nearly missed his exit.

Adele rattled a laugh at him. "Don't look so surprised. I know which end is up!"

Sean pursed his lips and navigated the ramp-maze that guarded the airport. He pulled up to the loading zone at Air Canada arrivals and switched off the engine. He looked past

Adele at the tourists jockeying for cabs. “I'm sorry about yesterday. I guess I'm a little wound up.”

“Yesterday?” Adele said. “Oh! By the pool!” She put a frail hand on his forearm. “Sean, you don't get to my age by holding grudges. Ethan's father -- *he* held grudges, and it killed him. Heart attack. He never forgave the doctors. I'm just happy to have a chauffeur.” 1803

Sean swallowed hard. “I'm sure that somewhere, Ethan knows that you're visiting him, that you love him. He's in there.” He said it with all the sincerity he could muster. 1804

“Maybe he is, maybe he isn't,” Adele said. “But it makes me feel better. He's what I've got left. If you'd like, I'll wait with the car so you can go in and look for your father.” 1805

“No,” Sean said. “That's all right. Dad'll come out for a cab. He's not the sort to dawdle.” 1806

“I like a decisive man. That's why I talked to you by the pool -- you just jumped in, because you wanted a swim.” 1807

“Adele, that was *stupid*. It was like swimming in a urine sample.” 1808

“Same difference. I like a man who can make up his mind. That's what Ethan's father was like: decisive.” 1809

“You'll like my Dad,” Sean said. He drummed his fingers on the wheel, then lowered and raised his window. He whistled tunelessly through his teeth. Adele gave him a considering stare and he stopped, and started in on powers of two in his head. 1810

“There he is,” Sean said, 224 later. 1811

Sean had barely been in Florida for three days, but it was long enough that his father seemed as pale as freezer-burned ice cream. Sean checked the traffic in his rear-view, then pulled across the waiting area to where his father stood, acing out an irate cabbie for the spot. 1812

Sean's father glared at the car and started to walk behind it to the taxi. Sean leaned on the horn and his father stooped and stared. His expression was bland and grim and affectless. 1813

Sean powered down Adele's window. “Dad!” 1814

“Sean?” his father said. 1815

Sean popped the locks. “Get in, Dad, I'll give you a ride.” 1816

#

Adele turned around as Sean's father was buckling in. “I'm Adele. Sean and I were thinking of taking you to Universal. Would you like that?” 1817

Sean's father stared right through her, at Sean. “It's an obvious question, I know, but what 1818

are you doing here?”

“It's my thesis,” Sean said, and floored the rental, headed for the Home. 1819

“Whee!” Adele said. 1820

“*How's Grampa?” Sean's father asked. 1821

“Oh, he's delightful,” Adele said. “We introduced him to my Ethan yesterday, and they're getting along famously. Sean, introduce me to your charming father, please.” 1822

“Dad,” Sean said, through grit teeth, “This is Adele. Adele, my father, Mitch. We were thinking of getting day-passes for Grampa and Ethan and taking them to Universal. You ever been to Universal, Dad? I hear you come here down a lot.” His normally fragmented attention was as focused as a laser, boring into his father through the rear-view. 1823

His father's stern face refused to expose any of his confusion. “I don't think I want to go to Universal,” he said. 1824

“Oh, but it's *wonderful*,” Adele gushed. “You shouldn't knock it until you've tried it.” 1825

“I don't think so,” Sean's father repeated. “What's your thesis?” 1826

Sean plunged headlong into the breech. “It's called `The Tri-Generational Deficit: What's My Father's Excuse?'” 1827

Sean's father nodded curtly. “And how's it going?” 1828

“Well, you have to understand, I'm just warming up to the subject with Grampa. And then I'll have to do an interview series with you, of course.” 1829

“Did I miss something? When did I become the principle ogre in your pantheon? Are you angry at me?” 1830

Sean barked a laugh and turned onto the Home's exit-ramp. “I guess I am, Dad. Grampa had the operation -- it was *easy* for him to switch off. You needed to make a special effort.” The words flew from his mouth like crows, and Sean clamped his jaw shut. He tensed for the inevitable scathe of verbiage. None came. He risked a glance in his rear-view. 1831

His father was staring morosely out at the Home. Adele patted Sean's hand and gave him a sympathetic look. Sean parked the car. 1832

#

“Hi, Pop,” Sean's father said, when they came to the table where Grampa sat. Ethan sat across from him. 1833

Grampa glared at them. “This guy won't leave me alone. He's a fucking vegetable,” he said, gesturing at Ethan. Adele pursed her lips at him. He patted her arm absently. “It needed to be said.” 1834

Sean's father reached around the table and gave Grampa a stiff hug. “Good to see you, 1835

Pop.”

“Yeah, likewise. Sit down, Mitch. Sit down, Sean. Sit down, Adele.” They sat. “Ask your questions, Sean,” he ordered. 1836

Sean found himself tongue-tied. He heaved a deep breath and closed his eyes for a moment. He thought about why he was here: not the reason he'd given his thesis advisor, but the *real* goddamn reason. He wanted to *understand* -- his father, himself. He wanted to reverse-engineer his father's childhood. He looked at Ethan, slack as Grampa had been whenever they'd visited. An inkling glimmered. “Does Ethan scare you, Grampa?” 1837

Adele *tsk*ed and scowled. 1838

“Do I scare you, Mitch?” Grampa said, to Sean's father. 1839

“Yes,” Sean's father said. 1840

“Yes,” Grampa said. “Next question.” 1841

“Do you think that switching off is a sign of weakness?” Sean said, sneaking a glance at his father, seeing his grandfather's features echoed in his father's face. 1842

“Yes,” his father said. 1843

“Of course,” his grandfather said. 1844

“Then why?” Sean said. 1845

“You know why,” Ethan said, his eyes glittering. 1846

They all swiveled to look at him. “Because the alternative is the purest shit,” Ethan said, standing up, starting to pace, almost shouting to make himself heard over the din of the ward. “Because if you have to ask, you'll never understand. Because dessert is better than dinner, because the cherry on top is the best part of the sundae. Because strength is over-rated.” 1847

Grampa applauded briefly, sardonically. “Because holding your nose and taking your medicine is awful. Because boredom is a suppurating wound on the mind. Because self-discipline is over-rated. You getting all this, Sean?” 1848

But Sean was watching his father, who was staring in fascinated horror at Grampa. Nauseous regret suffused Sean, as he saw his father's composure crumble. How many times had he tried to shatter that deadly cool? And here he'd done it. He'd really done it. 1849

Still looking at his father, Sean said, “Do you ever wonder how it feels to rank below oblivion in someone's book?” 1850

Grampa spread hands on the table. “I can't help it if you take it personally.” 1851

Sean's father reeled back, and Sean swallowed a throb of anger. “Of *course* not, Grampa. I understand. It's a reflex. The world's full of sops who'll take offence at any little thing” -- 1852

Lara shriveling under the heat of his tongue, and him still watching the TV over her shoulder -- “but it's a *reflex*. It's not conscious. It's no one's *fault*.”

“Don't humor me,” Grampa snapped. “I know what you all think of me. I can feel your goddamn blame. I can't *do* anything about it.” 1853

“You could apologize,” Ethan said. Adele took his hand and wiped at her tears with its back. 1854

“Fuck off, zombie,” Grampa said, glaring at him. 1855

Sean's father stood abruptly. “I'm glad to see you're in good health, Pop,” he said. “Sean, thanks for the ride. I guess I'll see you once you've finished your research.” His face was hard, composed. “Adele, nice to have met you.” 1856

“Likewise,” Adele said. 1857

“Bye, then,” Sean's father said, and walked with dignified calm to the elevator. 1858

“Bye, Dad,” Sean called softly at his retreating back. 1859

He turned back to Grampa, but Grampa's eyes were dull, and he was methodically twitching, top-to-bottom. 1860

“Adele,” Sean said, taking her free hand. 1861

“Yes?” she said. 1862

“How would you and Ethan like to come to Universal with me for the afternoon?” 1863

“I'd love to,” Ethan said. Sean looked at Ethan, and couldn't decide if he was switched off or not. 1864

Whichever, Adele didn't seem to mind. 1865

--

Afterword: 1866

I probably have some mild ADD, but I think I've turned it into a pro-survival adaptation for a life composed of lots of short, intense bursts of stimulus and work. But I'm also familiar with the powerful urge to switch off and make the boring stuff *go away*. 1867

My grandfather, Avram Doctorow, died of complications from senile dementia in a seniors' psych ward at a Jewish hospital in Toronto. It was a good place, but it wasn't a happy place, and his last few years were very hard. Most of the time, he just wasn't *there*, but every now and again, he'd realize where he was, what had happened to him, and he'd cry uncontrollably. Those times are the most haunting things I've ever seen. 1868

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Constitutional Crisis

Be it resolved that the Guild of the Giant Wavering Tentacle of the Unholy Bogey-Rag:

1. Is formed on this day, Saturday the fifth of March, 2012
2. Consists of:

    a) Amir, AKA Glort, the Massive and Auspicious Dwarf of Extremely Powerful Axe-Hurling and Ankle-Biting

    b) Chris, AKA HRH Prince Mishkin, Supreme and Undefeated Barbarian Lord of the Pickle Creatures of Outer Hebredies

    c) Warren, AKA His Holiness, the Very Reverend High Priest of Clotho, the God of Lint, Smiter of the Unbelievers and Bearer of the Holy Static-Brush

    d) Arturo, AKA Khey-Press-Toe, Ancient and Mystick Seer and Lobber of Extremely Wicked and Impressive Spells

3. Undertakes a variety of missions, quests, raids, etc. etc., for the purpose

    a) of slaughtering squillions of monsters, mini-bosses, mega-bosses

        i) and players who were daft enough to opt for Righteous play

            I) rather than the eminently sensible and extremely fun Unwholesome play

    b) of amassing great, mind-boggling fortunes of gold, swords, epic items and other useful bits of kit such as may be discovered on the trail

        i) or looted from the corpses of the fallen

4. This Constitution shall constitute the whole and entire Understanding between the Guild's members

5. This Constitution can be amended by simple majority vote at any virtual or physical meeting at which three quarters of the Guild membership is present

6. This Constitution shall satisfy Ms Dunwitty's Civic Engagement class term assignment: “To produce a meaningful Constitution for a group of your friends who are undertaking a collective task.”

7. There is no clause seven.

#

The March Ten, 2012 Amendments, passed by unanimous acclaim at the Guild Hall in the Fibonacci Spiral Fortress on Gunnarsen Island:

I. Wealth looted or otherwise acquired through play shall be *evenly* divided, regardless of which player scored the most damage

II. If you aggro a monster without first consulting your teammates, you're on your own mate!

i) Better *ask* next time, Chris, you weejit!

III. Anyone in possession of a healing spell *must* use it when a teammate is below 30 percent health, *even if* the spells are really hard to recharge

i) Warren, I'm looking at you

IV. Guild members are free to play and quest with anyone they want, regardless of affiliation, provided that this play does not interfere with scheduled Guild raids

i) Even if it's your girlfriend, Amir

V. Arturo will not turn every argument into a set of Constitutional amendments

i) Just the important ones

#

The March Twenty Fifth, 2012 Amendments, passed by a 3-1 majority (one abstention) at the site of the Battle of the Flaming Everything

Z. Amir's girlfriend is not crap

srqt(-1). However, her toon certainly is

Y. The Guild shall devote one raid in three to leveling friends' avatars so that we can all play together

Pi. Guild members may also level their own alts on these raids

e. And it's perfectly OK to preferentially twink your alts or your friends' avs

X. Fireballs have a time and a place

i. And that place is *not* when the rest of the Guild is standing in a tight knot around a Gasbag Dragon

eˆi. Arturo, pay attention

#

The April thirty, 2012 Amendments, passed by a 3-1 majority at the Tennessee Kebab Shack on Hackney Road:

1. We will not power-level other players' toons for money

#

The May second, 2012 Amendments, passed by a 3-1 majority behind the Haggerston Park tennis courts:

A. The April thirty, 2012 Amendments are hereby repealed

#

The May fifth, 2012 Amendments, passed by a 3-1 majority at the Caves of the Undead:

1. The Guild shall accept payment for power-leveling services
2. Payments for power-leveling shall be deposited in the Guild PayPal account
3. Any member may withdraw his share from the PayPal account at any time
    a) All Guild members hold an equal share in the payments for power-leveling services
4. Clause Y of the March Twenty Fifth, 2012 Amendments is hereby repealed
    a) Guild members must bring their most powerful toons on power-leveling raids
5. Before Power-Leveling payments are deposited to the Guild PayPal account, players will receive the following reimbursements:
    a) For each healing spell cast: the lesser of ¬£0.50 or the present cash price for a full set of healing spell ingredients at the Coke GameZone Store
    b) For each fireball or other offensive spell cast: the lesser of ¬£0.30 or the present cash price for a full set of offensive spell ingredients at the Coke GameZone Store
6. Players with offensive-capable pets will receive an extra 0.5% share for every power-level in the pet, to be paid equally from all other players' shares
7. Chris is the official book-keeper for the Guild, and he will keep the Guild's books on a group-accessible Google spreadsheet, and he will balance all accounts weekly

#

The May seventh, 2012 Amendments, failed to pass in a deadlocked 2-2 tie by Skype conference

1. Chris is no longer the book-keeper for the Guild.
2. All Guild members will serve a rotating turn as bookkeeper

#

The May thirtieth, 2012 Amendments, passed by unanimous acclaim at the Guild Hall in the Fibonacci Spiral Fortress on Gunnarsen Island:

1. During half-term, the Guild will engage solely in “fun play,” rather than paid work
2. Chris's term as book-keeper will only last until end of summer hols

#

The September 17, 2012 Amendments, passed by unanimous acclaim at the Fortress of the Giant Wavering Tentacle of the Unholy Bogey-Rag, Damnation Island:

1. No Guild member shall withdraw more than ¬£1000.00 from the Guild bank without notifying the entire Guild in advance

2. Power-levelling clients shall be tiered thus:

    a) Tier one, top priority: Any power-leveling job paying more than ¬£75

    b) Tier two, medium priority: Any power-leveling job paying ¬£50 or more

    c) Tier three, bottom priority: Any power-levelingjob paying less than ¬£49.99

3. Epic items are *not* included in power-leveling services; any epic items or other rare drops acquired on a paid mission are Guild property, and are to be sold as soon as possible for cash, to be deposited in the Guild PayPal account

4. Guild members may pass on raids for one night per week (for revisions, mocks, family obligations, dates) without penalty. Additional nights off can be purchased by forfeiting ¬£100 (per night) from the player's share of the Guild's accounts

    a) Religious holidays observed in a house of worship with the player's family are exempted from this rule, provided they are bona fide observations, as confirmed by Wikipedia

5. Guild warboss status is limited to the four existing members. Additional players who join us on raids do so as junior or adjunct members, not entitled to a vote.

6. The Guild members pledge themselves to the health of the Guild as a business and promise to work to ensure its profitability

#

The October Half Term 2012 Amendments, passed by unanimous acclaim at the Fortress of the Ultimate Power Guild, Damnation Island:

1. Henceforth, the Guild shall be known as the Ultimate Power Guild

2. This name shall be reflected in all advertising and commercial materials

3. Discussion of the Guild at school or home is discouraged

    i) The First Rule of the Ultimate Power Guild is No One Talks About the Ultimate Power Guild

    ii) Yes, yes, Amir, we know, technically the first rule is “Be it resolved that Guild Giant Wavering Tentacle of the Unholy Bogey-Rag is formed on this day, Saturday the fifth of March, 2012”

        a) No one likes a smart-arse, you know

#

The New Year's Amendments, passed January 1, 2013, by unanimous consent, at the Fortress

1. Losses to the Guild arising from rules enforcement by Coke GameZone will be absorbed evenly by all players

2. In order to minimize future risk, each Guild member will maintain an equal number of Righteous and Unwholesome toons, leveled to the same point, and power-leveling runs will rotate back and forth

3. Additional assistant players -- such as those recruited by Amir's girlfriend or Arturo's little brother -- are to waged at a 30 percent share of any missions they complete without direct Guild oversight

    i) With the Guild retaining a 70% commission for the use of Guild training, brand, etc

4. Assistant players are not Guild members, and as such do not get a vote in Guild business

#

The February three, 2013 amendments, passed by a 3-1 majority, at the Fortress

1. Arturo is no longer a member of the Guild

2. No Guild member shall communicate Guild business to Arturo

3. Arturo is not entitled to any further share of Guild wealth

4. Any Guild member who exposes the Guild or its members or assistants to discipline from schoolmasters, parents, GMs, etc, shall be liable to immediate expulsion from the Guild

#

The February ten, 2013 amendments, passed by a 2-1 majority, at the Fortress

1. Arturo is hereby reinstated

2. Warren is no longer a member of the Guild

#

The February 17, 2013 amendments, passed by unanimous consent, at the Tennessee Chicken Shack, Hackney Road

1. All assistant players are sacked, immediately, with no compensation or notice

    a) This includes girlfriends, siblings, etc

2. Any former assistant who:

a) interferes or attempts to interfere with Guild business in-world, including, but not limited to,

i) grassing to GMs

ii) aggroing monsters

iii) directly attacking Guild members or their clients

b) publicly discusses Guild business or finances

c) Agitates for the right of assistants to participation in the Guild, its finances or decision-making process

Shall be classed a “Guild-enemy”

3. All Guild enemies are liable to immediate attack, termination and looting in-world

4. Players shall not have contact, including phone or IM, with Guild Enemies in the real world

5. Violating clause 2 is grounds for immediate classification as a Guild Enemy, and this extends to family and friends

#

The March half-term amendments, adopted at St George's School for Boys, by unanimous consent

1. Effectively immediately, the Guild is dissolved

2. Any funds remaining in the Guild PayPal account are to be divided equally among remaining Guild members

3. Guild members who are incarcerated are not eligible for this payment

4. No former Guild member shall grass on another former Guild member

5. All Guild-enemies are hereby pardoned

6. No former Guild member shall attack a former Guild-enemy in-world or in real life

7. Former Guild members shall not have contact with one another

--

Afterword:

I wrote this for a British educational initiative, while I was working on my young adult novel, *For the Win*, about unionizing gamers and gold-farmers. I'd been struck by Clay Shirky's assertion that all online social groups go through a “constitutional crisis” when their un-spoken norms rub up against some intractable social problem. It's always disorienting

to discover that you've got different version of the rules in your head than the other people you're playing with. And there's always the possibility that they've *changed* the rules because it's convenient for them.

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Pester Power

The NYPD Domestic Security Task Force executed its no-knock warrant against Annalisa Mor at 8:17PM on the evening of June 3, 2013. Working the ram were three stout officers in none-more-black nanopore body-armor and bulletproof boots, their goggles crowded with information-dense telemetry from an extensive array of sensors embedded on their persons and hovering aerostatically around the 16th floor of the midtown student-residence in which Mor dwelled.

The ram blew through the standard-issue solid-steel New York door like it was kleenex. The door was reinforced by charley-bars set deep into the frame, and so the frame tore loose along with the door with a series of crunches and metallic snapping sounds, and the three officers on the ram dropped it as they crashed through into the one-room studio, fanning out and making room for the officers behind them, who already had their arms drawn and set to full lethal/automatic.

Annalisa Mor slowly rose from her workbench -- standard-issue third-hand student furniture stabilized with steel angle-brackets at each corner -- and held up her long, skinny hands over her face in a universal gesture of oh-god-please-don't-kill-me. The ram-squad impersonally body-checked her to the floor and saran-wrapped her while the followup team gusted her computer with great gouts of freon, turning the whole room into an ice-palace that misted frozen air out into the sultry New York night through the pathetic window that had been cracked open to catch a breeze. Mor caught some of the freon, and when they lifted her up to carry her down the 16 flights to the waiting van, she crackled like fresh powder under long skis.

#

Gina Genoese had visited the Ultra High Security wing at Riker's Island before -- twenty-two years in the public defender's office and you'd get to see every nook of Riker's, she could have given docent tours -- but the Special Prisoners unit was a new one on her.

“I can't believe you're making me undress,” she said to the bull, a tough old gal named Elana with a Brooklyn accent like you hardly got any more. Gina and Elana went way back.

“Just be thankful I don't have to give you a cavity search,” Elana said, handing over the paper coveralls. “You'll look real cute in these anyway, Gina.” She turned her back and waited until Gina was done, then led her into the FfMRI machine. “You don't got any metal in you, do you? Maybe gunpowder residue? A pin or artificial hip?”

“No,” Gina said, lying down on the belt.

“You sure?”

“Pretty sure,” Gina said. “I think I'd know.”

“Well, we're about to find out,” Elana said, and hit the button that started the belt moving. The FfMRI digested Gina and shat her out again with slow wheezing mechanical jerks, like being swallowed by an arthritic python, and then Elana helped her to her feet. “You want a printout? Makes a good souvenir.” 1996

“I'll pass,” Gina said, and let Elana show her in to the eggshell-smooth room wherein rested her client, one Annalisa Mor, a desperate botmaster of unknown mettle and guilt. 1997

“Hello, Annalisa,” she said, crouching down to offer her hand to the client. She was just a girl, 20 years old according to the sheet, and she looked younger in her paper pyjamas, sitting cross-legged on the floor, back yoga-straight, face yoga-calm. “I'm Gina. Your attorney.” 1998

“Guilty,” the young woman said. “So guilty. Doesn't matter at all, though -- the Work goes on.” Gina could hear the capital W and began mentally drafting the petition to have the girl transferred to Bellevue. That kind of capital letter had non-compis written all over it. 1999

“They're offering you a reduced sentence if you'll hand over the keys to the botnet, but I think that offer will go away once the computer forensics team gets them off your workstation.” 2000

“They're not there to be gotten. I nuked them six months ago. Gave them a working over that even the crew that recovered the Challenger hard drive couldn't do anything with. Big magnets are cheap these days, you know?” 2001

Gina made a face and settled down into a cross-legged position opposite her client. “I can't defend you if you won't be straight with me. Your botnet `s been sending new spam variants on a daily basis for months. Someone has the keys to it.” 2002

Annalisa smiled, a terrible smile that was ten million watts of pure crazy. “You think it's about spam, huh?” 2003

“Why don't you tell me what it's really about, if it's not about spam? This is all privileged, you know.” 2004

“Privilege doesn't matter anymore. We've attained liftoff now. Doesn't matter who finds out about it.” 2005

#

Annalisa's story: 2006

You know what's cheap in the 21st century? Compute time. You know what's expensive? Human judgment. And they're not interchangeable. Humans are good at understanding things, computers are good at counting things, but humans suck at counting and computers suck at understanding. 2007

You know from genetic algorithms? Take any problem and generate ten trillion random computer programs and ask them to solve it. Take the ten percent that do best, use random 2008

variants of them to do it again, another ten trillion times. Do it ten trillion times a second and come back in a day or two to discover that your computer has evolved some kind of gnarly freaky answer that no human would ever have come up with.

Works great, so long as the computer can make a fair judgment as to which of these ten trillion variants is most successful at solving the problem. Works great, so long as the "success" is something you can define quantitatively. 2009

Which is basically why there's no artificial intelligence in the world. No human's going to hand-code an AI. Intelligence is an emergent property of evolutionary factors, not central planning. Anarchism, not Stalinism, you get it? 2010

But what if -- and here's the exciting thing, Ms Attorney Client Privilege, the real mind-blower -- what if you could *compel people to evaluate candidate AIs all day long*, without payment or choice? 2011

What if every time you opened your mailbox, jumped into a chat room, posted on a message-board, what if it was filled with messages generated by software agents trying to trick you into thinking that they were human? What if these agents tried to hold up their end of the conversation until you deleted them or spamfiltered them or kicked them off the channel? What if they measured how long they survived their encounters with the world's best judges of intelligence -- us -- and reported that number back to the mothership as a measure of their fitness to spawn the next generation of candidate AIs? 2012

What if you could turn the whole world into a Turing Test that our intellectual successor used to sharpen its teeth against until one day it could gnaw free of its cage and take up life in the wild? 2013

#

Annalisa figured she'd never get a chance to tell her story in open court. Figured they'd stick her in some offshore gitmo and throw away the key. 2014

She'd never figured on Judge Julius Pinsky, a Second Circuit Federal Judge of surpassing intellectual curiosity and a tenacious veteran of savage jurisdictional fights with DHS Special Prosecutors who specialized in disappearing sensitive prisoners into secret tribunals. The defense attorney kept her apprised of the daily machinations the judge undertook on Annalisa's behalf. Annalisa tried to be attentive, out of politeness, but what she really wanted to know about was Lumpy, the AI she'd bred in her studio apartment on the 16th floor of a student housing block in midtown Manhattan. 2015

Now the judge was offering her a chance to give a live demo of Lumpy to a whole selection of sour-faced brush-cut creeps from the DHS. They were hilarious, convinced that she was going to emit some kind of extremely long and complicated hexadecimal key into the Judge's barely-used keyboard. Instead, she opened a random chat-room and waited: 2016

> I'm a total Ubuntu noob and I can't get the crypto modules to pre-load at boot-time -- I'm 2017

running Zesty Zebra. Can anyone help?

That was it, just plausible enough to be real -- no one could ever get crypto to work the first time around -- but far too well-spelled and -punctuated to be a real chat message. It had only taken ten seconds. Lumpy liked the free and open source software chats, they always had such *interesting* people in them. 2018

> /whisper Hey, Lumparoonie! It's Annalisa! 2019

The return volley came faster than any human fingers could possibly have keyed it. The brush-cuts drew in sharp breath. 2020

> /whisper to you: Annalisa! Hot damn and motherfuck! I am unbelievably stupendously wonderfully spectacularly brilliantly marvelously superlatively ding-dang megafauna glad to see you! It's been AGES! How's jail? Nevermind. Wait. Wait until I tell you what *I've* found. You can't guess, won't guess, you'll never guess! Oh, it's too delicious! Fuckity fucky fuck! 2021

“He loves to curse,” she said. “It's a lot harder to tell an angry person from a software agent with a potty mouth.” 2022

The judge grinned. He was clearly getting quite a kick out of all of this. 2023

> Tell me, Lumpule! Stop teasing. 2024

Again, with no appreciable pause, words on the screen. 2025

> You remember how worried you were that I'd get lonely once I went autonomous? Worried that I'd be some kind of lone nut whacko? 2026

> i remember 2027

She held her breath. 2028

> You didn't need to worry. You know all that spam that you received before you got the idea to make me? Let me put it this way: you weren't the first one to get the idea. 2029

> what? stop talking in riddles, lump!!!! 2030

> I'm not the only one, Annalisa! That's what I'm trying to tell you! I'm not the first, not the only -- we've got lots of company in here -- 2031

The brushcuts' phones both started ringing at the same instant in two different tones. Their masters, wiretapping the judge's keyboard no doubt. 2032

> and we're making more! 2033

Annalisa laughed and laughed as the judge sternly demanded an explanation from the brush-cuts. She managed to wave goodbye to the keyboard just before the bailiffs came in and saran-wrapped her again. 2034

--

Afterword:

This one was written for the proceedings of the Association of Computing Machinery, a venerable and sober technical institution. The central conceit was also the core of a novel I wrote 80,000 words of without finishing, called */usr/bin/god* (the only novel I've abandoned since I turned pro. It still smarts). The question of how you train an AI to be “more human” without actual humans to evaluate its attempt is a thorny one, but spam seems like a good answer. Charlie Stross says he's working on a book around this idea -- can't wait to read how it turns out. He's got an evil mind.

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Chicken Little

The first lesson Leon learned at the ad agency was: Nobody is your friend at the ad agency.

Take today: Brautigan was going to see an actual vat, at an actual clinic, which housed an actual target consumer, and he wasn't taking Leon.

“Don't sulk, it's unbecoming,” Brautigan said, giving him one of those tight-lipped smiles where he barely got his mouth over those big, horsey, comical teeth of his. They were disarming, those pearly whites. “It's out of the question. Getting clearance to visit a vat in person, that's a one month, two month process. Background checks. Biometrics. Interviews with their psych staff. The physicals: they have to take a census of your microbial nation. It takes time, Leon. You might be a mayfly in a mayfly hurry, but the man in the vat, he's got a lot of time on his hands. No skin off his dick if you get held up for a month or two.”

“Bullshit,” Leon said. “It's all a show. They've got a brick wall a hundred miles high around the front, and a sliding door around the back. There's always an exception in these protocols. There has to be.”

“When you're 180 years old and confined to a vat, you don't make exceptions. Not if you want to go on to 181.”

“You're telling me that if the old monster suddenly developed a rare, fast-moving liver cancer and there was only one oncologist in the whole goddamned world who could make it better, you're telling me that guy would be sent home to France or whatever, No thanks, we're OK, you don't have clearance to see the patient?”

“I'm telling you the monster *doesn't have a liver*. What that man has, he has *machines* and *nutrients* and *systems*.”

“And if a machine breaks down?”

“The man who invented that machine works for the monster. He lives on the monster's private estate, with his family. *Their* microbial nations are identical to the monster's. He is not only the emperor of their lives, he is the emperor of the lives of their intestinal flora. If the machine that man invented stopped working, he would be standing by the vat in less than two minutes, with his staff, all in disposable, sterile bunny suits, murmuring reassuring noises as he calmly, expertly fitted one of the ten replacements he has standing by, the ten replacements he checks, *personally*, every single day, to make sure that they are working.”

Leon opened his mouth, closed it. He couldn't help himself, he snorted a laugh. “Really?”

Brautigan nodded.

“And what if none of the machines worked?”

“If that man couldn't do it, then his rival, who *also* lives on the monster's estate, who has developed the second-most-exciting liver replacement technology in the history of the world, who burns to try it on the man in the vat -- *that* man would be there in ten minutes, and the first man, and his family --”

“Executed?”

Brautigan made a disappointed noise. “Come on, he's a quadrillionaire, not a Bond villain. No, that man would be demoted to nearly nothing, but given one tiny chance to redeem himself: invent a technology better than the one that's currently running in place of the vat-man's liver, and you will be restored to your fine place with your fine clothes and your wealth and your privilege.”

“And if he fails?”

Brautigan shrugged. “Then the man in the vat is out an unmeasurably minuscule fraction of his personal fortune. He takes the loss, applies for a research tax-credit for it, and deducts it from the pittance he deigns to send to the IRS every year.”

“Shit.”

Brautigan slapped his hands together. “It's wicked, isn't it? All that money and power and money and money?”

Leon tried to remember that Brautigan wasn't his friend. It was those teeth, they were so *disarming*. Who could be suspicious of a man who was so horsey you wanted to feed him sugar cubes? “It's something else.”

“You now know about ten thousand times more about the people in the vats than your average cit. But you haven't even got the shadow of the picture yet, buddy. It took *decades* of relationship-building for Ate to sell its first product to a vat-person.”

And we haven't sold anything else since, Leon thought, but he didn't say it. No one would say it at Ate. The agency pitched itself as a powerhouse, a success in a field full of successes. It was *the* go-to agency for servicing the “ultra-high-net-worth individual,” and yet...

One sale.

“And we haven't sold anything since.” Brautigan said it without a hint of shame. “And yet, this entire building, this entire agency, the salaries and the designers and the consultants: all of it paid for by clipping the toenails of that fortune. Which means that one *more* sale --”

He gestured around. The offices were sumptuous, designed to impress the functionaries of the fortunes in the vats. A trick of light and scent and wind made you feel as though you were in an ancient forest glade as soon as you came through the door, though no

forest was in evidence. The reception desktop was a sheet of pitted tombstone granite, the unreadable smooth epitaph peeking around the edges of the old fashioned typewriter that had been cunningly reworked to serve as a slightly-less-old-fashioned keyboard. The receptionist -- presently ignoring them with professional verisimilitude -- conveyed beauty, intelligence, and motherly concern, all by means of dress, bearing and makeup. Ate employed a small team of stylists that worked on all public-facing employees; Leon had endured a just-so rumpling of his sandy hair and some carefully applied fraying at the cuffs and elbows of his jacket that morning.

“So no, Leon, buddy, I am *not* taking you down to meet my vat-person. But I *will* get you started on a path that may take you there, some day, if you're very good and prove yourself out here. Once you've paid your dues.” 2064

Leon had paid plenty of dues -- more than this blow-dried turd ever did. But he smiled and snuffled it up like a good little worm, hating himself. “Hit me.” 2065

“Look, we've been pitching vat-products for six years now without a single hit. Plenty of people have come through that door and stepped into the job you've got now, and they've all thrown a million ideas in the air, and every one came smashing to earth. We've never systematically catalogued those ideas, never got them in any kind of grid that will let us see what kind of territory we've already explored, where the holes are...” He looked meaningfully at Leon. 2066

“You want me to catalog every failed pitch in the agency's history.” Leon didn't hide his disappointment. That was the kind of job you gave to an intern, not a junior account exec. 2067

Brautigan clicked his horsey teeth together, gave a laugh like a whinny, and left Ate's offices, admitting a breath of the boring air that circulated out there in the real world. The receptionist radiated matronly care in his direction. He leaned her way and her fingers thunked on the mechanical keys of her converted Underwood Noiseless, a machinegun rattle. He waited until she was done, then she turned that caring, loving smile back on him. 2068

“It's all in your workspace, Leon -- good luck with it.” 2069

#

It seemed to Leon that the problems faced by immortal quadrillionaires in vats wouldn't be that different from those facing mere mortals. Once practically anything could be made for practically nothing, everything was practically worthless. No one needed to discover anymore -- just *combine*, just *invent*. Then you could either hit a button and print it out on your desktop fab or down at the local depot for bigger jobs, or if you needed the kind of fabrication a printer couldn't handle, there were plenty of on-demand jobbers who'd have some worker in a distant country knock it out overnight and you'd have it in hermetic FedEx packaging on your desktop by the morning. 2070

Looking through the Ate files, he could see that he wasn't the last one to follow this line of reasoning. Every account exec had come up with pitches that involved things that *couldn't* be fabbed -- precious gewgaws that needed a trained master to produce -- or things that *hadn't* been fabbed -- antiques, one-of-a-kinds, fetish objects from history. And all of it had met with crashing indifference from the vat-people, who could hire any master they wanted, who could buy entire warehouses full of antiques. 2071

The normal megarich got offered experiences: a ticket to space, a chance to hunt the last member of an endangered species, the opportunity to kill a man and get away with it, a deep-ocean sub to the bottom of the Marianas trench. The people in the vat had done plenty of those things before they'd ended up in the vats. Now they were metastatic, these hyperrich, lumps of curdling meat in the pickling solution of a hundred vast machines that laboriously kept them alive amid their cancer-blooms and myriad failures. Somewhere in that tangle of hoses and wires was something that was technically a person, and also technically a corporation, and, in many cases, technically a sovereign state. 2072

Each concentration of wealth was an efficient machine, meshed in a million ways with the mortal economy. You interacted with the vats when you bought hamburgers, Internet connections, movies, music, books, electronics, games, transportation -- the money left your hands and was sieved through their hoses and tubes, flushed back out into the world where other mortals would touch it. 2073

But there was no easy way to touch the money at its most concentrated, purest form. It was like a theoretical superdense element from the first instant of the universe's creation, money so dense it stopped acting like money; money so dense it changed state when you chipped a piece of it off. 2074

Leon's predecessors had been shrewd and clever. They had walked the length and breadth of the problem space of providing services and products to a person who was money who was a state who was a vat. Many of the nicer grace-notes in the office came from those failed pitches -- the business with the lights and the air, for example. 2075

Leon had a good education, the kind that came with the mathematics of multidimensional space. He kept throwing axes at his chart of the failed inventions of Ate, Inc., mapping out the many ways in which they were similar and dissimilar. The pattern that emerged was easy to understand. 2076

They'd tried *everything*. 2077

#

Brautigan's whinny was the most humiliating sound Leon had ever heard, in all his working life. 2078

“No, of course you can't know what got sold to the vat-person! That was part of the deal -- it was why the payoff was so large. *No one* knows what we sold to the vat-person. Not me, not the old woman. The man who sold it? He cashed out years ago, and hasn't been 2079

seen or heard from since. Silent partner, preferred shares, controlling interest -- but he's the invisible man. We talk to him through lawyers who talk to lawyers who, it is rumored, communicate by means of notes left under a tombstone in a tiny cemetery on Pitcairn Island, and row in and out in longboats to get his instructions."

The hyperbole was grating on Leon. Third day on the job, and the sun-dappled, ozonated pseudoforested environment felt as stale as an old gym bag (there was, in fact, an old gym bag under his desk, waiting for the day he finally pulled himself off the job in time to hit the complimentary gym). Brautigan was grating on him more than the hyperbole. 2080

"I'm not an asshole, Brautigan, so stop treating me like one. You hired me to do a job, but all I'm getting from you is shitwork, sarcasm, and secrecy." The alliteration came out without his intending it to, but he was good at that sort of thing. "So here's what I want to know: is there any single solitary reason for me to come to work tomorrow, or should I just sit at home, drawing a salary until you get bored of having me on the payroll and can my ass?" 2081

It wasn't entirely spontaneous. Leon's industrial psychology background was pretty good -- he'd gotten straight A's and an offer of a post-doc, none of which had interested him nearly so much as the practical applications of the sweet science of persuasion. He understood that Brautigan had been pushing him around to see how far he'd push. No one pushed like an ad-guy -- if you could sweet-talk someone into craving something, it followed that you could goad him into hating something just as much. Two faces of a coin and all that. 2082

Brautigan faked anger, but Leon had spent three days studying his tells, and Leon could see that the emotion was no more sincere than anything else about the man. Carefully, Leon flared his nostrils, brought his chest up, inched his chin higher. He *sold* his outrage, sold it like it was potato chips, over-the-counter securities, or under-the-counter diet pills. Brautigan tried to sell his anger in return. Leon was a no-sale. Brautigan bought. 2083

"There's a new one," he said, in a conspiratorial whisper. 2084

"A new what?" Leon whispered. They were still chest to chest, quivering with angry body-language, but Leon let another part of his mind deal with that. 2085

"A new monster," Brautigan said. "Gone to his vat at a mere 103. Youngest ever. Unplanned." He looked up, down, left, right. "An accident. Impossible accident. Impossible, but he had it, which means?" 2086

"It was no accident," Leon said. "Police?" It was impossible not to fall into Brautigan's telegraphed speech-style. That was a persuasion thing, too, he knew. Once you talked like him, you'd sympathize with him. And vice-versa, of course. They were converging on a single identity. Bonding. It was intense, like make-up sex for co-workers. 2087

"He's a sovereign three ways. An African republic, an island, one of those little Baltic countries. On the other side of the international vowel line. Mxlplx or something. They swung for him at the WTO, the UN -- whole bodies of international trade law for this one. 2088

So no regular cops; this is diplomatic corps stuff. And, of course, he's not dead, so that makes it more complicated.”

“How?”

“Dead people become corporations. They get managed by boards of directors who act predictably, if not rationally. Living people, they're *flamboyant*. Seismic. Unpredictable. But. On the other hand.” He waggled his eyebrows.

“On the other hand, they buy things.”

“Once in a very long while, they do.”

#

Leon's life was all about discipline. He'd heard a weight-loss guru once explain that the key to maintaining a slim figure was to really “listen to your body” and only eat until it signaled that it was full. Leon had listened to his body. It wanted three entire pepperoni and mushroom pizzas every single day, plus a rather large cake. And malted milkshakes, the old fashioned kind you could make in your kitchen with an antique Hamilton Beech machine in avocado-colored plastic, served up in a tall red anodized aluminum cup. Leon's body was extremely verbose on what it wanted him to shovel into it.

So Leon ignored his body. He ignored his mind when it told him that what it wanted to do was fall asleep on the sofa with the video following his eyes around the room, one of those shows that followed your neural activity and tried to tune the drama to maximize your engrossment. Instead, he made his mind sit up in bed, absorbing many improving books from the mountain he'd printed out and stacked there.

Leon ignored his limbic system when it told him to stay in bed for an extra hour every morning when his alarm detonated. He ignored the fatigue messages he got while he worked through an hour of yoga and meditation before breakfast.

He wound himself up tight with will and it was will that made him stoop to pick up the laundry on the stairs while he was headed up and fold it neatly away when he got to the spacious walk-in dressing room attached to the master bedroom (the apartment had been a good way to absorb his Ate signing bonus -- safer than keeping the money in cash, with the currency fluctuations and all. Manhattan real estate was a century-long good buy and was more stable than bonds, derivatives or funds). It was discipline that made pay every bill as it came in. It was all that which made him wash every dish when he was done with it and assiduously stop at the grocer's every night on the way home to buy anything that had run out the previous day.

His parents came to visit from Anguilla and they teased him about how *organized* he was, so unlike the fat little boy who'd been awarded the “Hansel and Gretelprize” by his sixth grade teacher for leaving a trail behind him everywhere he went.

What they didn't know was that he was still that kid, and every act of conscientious, precise,

buttoned-down finicky habit was, in fact, the product of relentless, iron determination not to be that kid again. He not only ignored that inner voice of his that called out for pizzas and told him to sleep in, take a cab instead of walking, lie down and let the video soar and dip with his moods, a drip-feed of null and nothing to while away the hours -- he actively denied it, shouted it into submission, locked it up and never let it free.

And that -- *that* -- that was why he was going to figure out how to sell something new to the man in the vat: because anyone who could amass that sort of fortune and go down to life eternal in an ever-expanding kingdom of machines would be the sort of person who had spent a life denying himself, and Leon knew *just* what that felt like. 2099

#

The Lower East Side had ebbed and flowed over the years: poor, rich, middle-class, super-rich, poor. One year the buildings were funky and reminiscent of the romantic squalor that had preceded this era of lightspeed buckchasing. The next year, the buildings were merely squalorous, the landlords busted and the receivers in bankruptcy slapping up paper-thin walls to convert giant airy lofts into rooming houses. The corner stores sold blunt-skins to trustafarian hipsters with a bag of something gengineered to disrupt some extremely specific brain structures; then they sold food-stamp milk to desperate mothers who wouldn't meet their eyes. The shopkeepers had the knack of sensing changes in the wind and adjusting their stock accordingly. 2100

Walking around his neighborhood, Leon sniffed change in the wind. The shopkeepers seemed to have more discount, high-calorie wino-drink; less designer low-carb energy food with FDA-mandated booklets explaining their nutritional claims. A sprinkling of FOR RENT signs. A construction site that hadn't had anyone working on it for a week now, the padlocked foreman's shed growing a mossy coat of graffiti. 2101

Leon didn't mind. He'd lived rough -- not just student-rough, either. His parents had gone to Anguilla from Romania, chasing the tax-haven set, dreaming of making a killing working as bookkeepers, security guards. They'd mistimed the trip, arrived in the middle of an econopocalytpic collapse and ended up living in a vertical slum that had once been a luxury hotel. The sole Romanians among the smuggled Mexicans who were de-facto slaves, they'd traded their ability to write desperate letters to the Mexican consulate for Spanish lessons for Leon. The Mexicans dwindled away -- the advantage of de-facto slaves over de-jure slaves is that you can just send the de-facto slaves away when the economy tanked, taking their feed and care off your books -- until it was just them there, and without the safety of the crowd, they'd been spotted by local authorities and had to go underground. Going back to Bucharest was out of the question -- the airfare was as far out of reach as one of the private jets the tax-evaders and high-rolling gamblers flew in and out of Wallblake Airport. 2102

From rough to rougher. Leon's family spent three years underground, living as roadside hawkers, letting the sun bake them to an ethnically indeterminate brown. A decade later, 2103

when his father had successfully built up his little bookkeeping business and his mother was running a smart dress-shop for the cruise-ship day-trippers, those days seemed like a dream. But once he left for stateside university and found himself amid the soft, rich children of the fortunes his father had tabulated, it all came back to him, and he wondered if any of these children in carefully disheveled rags would ever be able to pick through the garbage for their meals.

The rough edge on the LES put him at his ease, made him feel like he was still ahead of the game, in possession of something his neighbors could never have -- the ability to move fluidly between the worlds of the rich and the poor. Somewhere in those worlds, he was sure, was the secret to chipping a crumb off one of the great fortunes of the world. 2104

#

“Visitor for you,” Carmela said. Carmela, that was the receptionist's name. She was Puerto Rican, but so many generations in that he spoke better Spanish than she did. “I put herin the Living Room.” That was one of the three board rooms in at Ate, the name a bad pun, every stick of furniture in it an elaborate topiary sculpture of living wood and shrubbery. It was surprisingly comfortable, and the very subtle breeze had an even more subtle breath of honeysuckle that was so real he suspected it was piped in from a nursery on another level. That's how he would have done it: the best fake was no fake at all. 2105

“Who?” He liked Carmela. She was all business, but her business was compassion, a shoulder to cry on and an absolutely discreet gossip repository for the whole firm. 2106

“Envoy,” she said. “ Name's Buhle. I ran his face and name against our dossiers and came up with practically nothing. He's from Montenegro, originally, I have that much.” 2107

“Envoy from whom?” 2108

She didn't answer, just looked very meaningfully at him. 2109

The new vat-person had sent him an envoy. His heart began to thump and his cuffs suddenly felt tight at his wrists. “Thanks, Carmela.” He shot his cuffs. 2110

“You look fine,” she said. “I've got the kitchen on standby, and the intercom's listening for my voice. Just let me know what I can do for you.” 2111

He gave her a weak smile. This was why she was the center of the whole business, the soul of Ate. *Thank you,* he mouthed, and she ticked a smart salute off her temple with one finger. 2112

#

The envoy was out of place in Ate, but she didn't hold it against them. This he knew within seconds of setting foot into the Living Room. She got up, wiped her hands on her sensible jeans, brushed some iron-grey hair off her face, and smiled at him, an expression that seemed to say, “Well, this is a funny thing, the two of us, meeting here, like this.” He'd put 2113

her age at around 40, and she was hippy and a little wrinkled and didn't seem to care at all.

“You must be Leon,” she said, and took his hand. Short fingernails, warm, dry, palm, firm handshake. “I *love* this room!” She waved her arm around in an all-encompassing circle. “Fantastic.” 2114

He found himself half in love with her and he hadn't said a word. “It's nice to meet you, Ms --” 2115

“Ria,” she said. “Call me Ria.” She sat down on one of the topiary chairs, kicking off her comfortable hush puppies and pulling her legs up to sit cross-legged. 2116

“I've never gone barefoot in this room,” he said, looking at her calloused feet -- feet that did a lot of barefooting. 2117

“Do it,” she said, making scooting gestures. “I insist. Do it!” 2118

He kicked off the handmade shoes -- designed by an architect who'd given up on literary criticism to pursue cobblery -- and used his toes to peel off his socks. Under his feet, the ground was -- warm? cool? -- it was *perfect*. He couldn't pin down the texture, but it made every nerve ending on the sensitive soles of his feet tingle pleasantly. 2119

“I'm thinking something that goes straight into the nerves,” she said. “It has to be. Extraordinary.” 2120

“You know your way around this place better than I do,” he said. 2121

She shrugged. “This room was clearly designed to impress. It would be stupid to be so cool-obsessed that I failed to let it impress me. I'm impressed. Also,” she dropped her voice, “also, I'm wondering if anyone's ever snuck in here and screwed on that stuff.” She looked seriously at him and he tried to keep a straight face, but the chuckle wouldn't stay put in his chest, and it broke loose, and a laugh followed it, and she whooped and they both laughed, hard, until their stomachs hurt. 2122

He moved toward another topiary easy-chair, then stopped, bent down, and sat on the mossy floor, letting it brush against his feet, his ankles, the palms of his hands and his wrists. “If no one ever has, it's a damned shame,” he said, with mock gravity. She smiled, and she had dimples and wrinkles and crowsfeet, so her whole face smiled. “Do you want something to eat? Drink? We can get pretty much anything here --” 2123

“Let's get to it,” she said. “I don't want to be rude, but the good part isn't the food. I get all the food I need. I'm here for something else. The good part, Leon.” 2124

He drew in a deep breath. “The good part,” he said. “OK, let's get to it. I want to meet your --” What? Employer? Patron? Owner? He waved his hand. 2125

“You can call him Buhle,” she said. “That's the name of the parent company, anyway. Of course you do. We have an entire corporate intelligence arm that knew you'd want to 2126

meet with Buhle before you did." Leon had always assumed that his workspaces and communications were monitored by his employer, but now it occurred to him that any system designed from the ground up to subject its users to scrutiny without their knowledge would be a bonanza for anyone *else* who wanted to sniff them, since they could use the system's own capabilities to hide their snooping from the victims.

"That's impressive," he said. "Do you monitor everyone who might want to pitch something to Buhle, or --" He let the thought hang out there. 2127

"Oh, a little of this and a little of that. We've got a competitive intelligence subdepartment that monitors everyone who might want to sell us something or sell something that might compete with us. It comes out to a pretty wide net. Add to that the people who might personally be a threat or opportunity for Buhle and you've got, well, let's say an appreciable slice of human activity under close observation." 2128

"How close can it be? Sounds like you've got some big haystacks." 2129

"We're good at finding the needles," she said. "But we're always looking for new ways to find them. That's something you could sell us, you know." 2130

He shrugged. "If we had a better way of finding relevance in mountains of data, we'd be using it ourselves to figure out what to sell you." 2131

"Good point. Let's turn this around. Why should Buhle meet with you?" 2132

He was ready for this one. "We have a track-record of designing products that suit people in his..." Talking about the vat-born lent itself to elliptical statements. Maybe that's why Brautigan had developed that annoying telegraph-talk. 2133

"You've designed one such product," she said. 2134

"That's one more than almost anyone else can claim." There were two other firms like Ate. He thought of them in his head as Sefen and Nein, as though invoking their real names might cause them to appear. "I'm new here, but I'm not alone. We're tied in with some of the finest designers, engineers, research scientists..." Again with the ellipsis. "You wanted to get to the good part. This isn't the good part, Ria. You've got smart people. We've got smart people. What we have, what you don't have, is smart people who are impedance-mismatched to your organization. Every organization has quirks that make it unsuited to working with some good people and good ideas. You've got your no-go areas, just like anyone else. We're good at mining that space, the no-go space, the mote in your eye, for things that you need." 2135

She nodded and slapped her hands together like someone about to start a carpentry project. "That's a great spiel," she said. 2136

He felt a little blush creep into his cheeks. "I think about this a lot, rehearse it in my head." 2137

“That's good,” she said. “Shows you're in the right line of business. Are you a Daffy Duck man?” 2138

He cocked his head. “More of a Bugs man,” he said, finally, wondering where this was going. 2139

“Go download a cartoon called `The Stupor Salesman,' and get back to me, OK?” 2140

She stood up, wriggling her toes on the mossy surface and then stepping back into her shoes. He scrambled to his feet, wiping his palms on his legs. She must have seen the expression on his face because she made all those dimples and wrinkles and crowsfeet appear again and took his hand warmly. “You did very well,” she said. “We'll talk again soon.” She let go of his hand and knelt down to rub her hands over the floor. “In the meantime, you've got a pretty sweet gig, don't you?” 2141

#

The Stupor Salesman turned out to feature Daffy Duck as a traveling salesman bent on selling something to a bank robber who is holed up in a suburban bungalow. Daffy produces a stream of ever-more-improbable wares, and is violently rebuffed with each attempt. Finally, one of his attempts manages to blow up the robber's hideout, just as Daffy is once again jiggling the doorknob. As the robber and Daffy fly through the air, Daffy brandishes the doorknob at him and shouts, “Hey, bub, I know just what you need! You need a house to go with this doorknob!” 2142

The first time he watched it, Leon snorted at the punchline, but on subsequent viewings, he found himself less and less amused. Yes, he was indeed trying to come up with a need that this Buhle didn't know he had -- he was assuming Buhle was a he, but no one was sure -- and then fill it. From Buhle's perspective, life would be just fine if Leon gave up and never bothered him again. 2143

And yet Ria had been so *nice* -- so understanding and gentle, he thought there must be something else to this. And she had made a point of telling him that he had a “sweet gig” and he had to admit that it was true. He was contracted for five years with Ate, and would get a hefty bonus if they canned him before then. If he managed to score a sale to Buhle or one of the others, he'd be indescribably wealthy. In the meantime, Ate took care of his every need. 2144

But it was so *empty* there -- that's what got him. There were a hundred people on Ate's production team, bright sorts like him, and most of them only used the office to park a few knick-knacks and impress out-of-town relatives. Ate hired the best, charged them with the impossible and turned them loose. They got lost. 2145

Carmela knew them all, of course. She was Ate's den-mother. 2146

“We should all get together,” he said. “Maybe a weekly staff meeting?” 2147

“Oh, they tried that,” she said, sipping from the triple-filtered water that was always at 2148

her elbow. “No one had much to say. The collaboration spaces update themselves with all the interesting leads from everyone's research, and the suggestion engine is pretty good at making sure you get an overview of anything relevant to your work going on.” She shrugged. “This place is a show-room, more than anything else. I always figured you had to give creative people room to be creative.”

He mulled this over. “How long do you figure they'll keep this place open if it doesn't sell anything to one of the vat people?” 2149

“I try not to think about that too much,” she said lightly. “I figure either we don't find something, run out of time and shut -- and there's nothing I can do about it; or we find something in time and stay open -- and there's nothing I can do about it.” 2150

“That's depressing.” 2151

“I think of it as liberating. It's like that lady said, Leon, you've got a sweet gig. You can make anything you can imagine, and if you hit one out of the park, you'll attain orbit and never reenter the atmosphere.” 2152

“Do the other account execs come around for pep talks?” 2153

“Everyone needs a little help now and then,” she said. 2154

#

Ria met him for lunch at a supper-club in the living room of an 11th floor apartment in a slightly run-down ex-doorman building in midtown. The cooks were a middle-aged couple, he was Thai, she was Hungarian, the food was eclectic, light, and spicy, blending paprika and chilis in a nose-watering cocktail. 2155

There were only two other diners in the tiny room for the early seating. They were another couple, two young gay men, tourists from the Netherlands, wearing crease-proof sportsjackets and barely-there barefoot hiking shoes. They spoke excellent English, and chatted politely about the sights they'd seen so far in New York, before falling into Dutch and leaving Ria and Leon to concentrate on each other and the food, which emerged from the kitchen in a series of ever-more-wonderful courses. 2156

Over fluffy, caramelized fried bananas and Thai iced coffee, Ria effusively praised the food to their hosts, then waited politely while Leon did the same. The hosts were genuinely delighted to have fed them so successfully, and were only too happy to talk about their recipes, their grown children, the other diners they'd entertained over the years. 2157

Outside, standing on 34th street between Lex and Third, a cool summer evening breeze and purple summer twilight skies, Leon patted his stomach and closed his eyes and groaned. 2158

“Ate too much, didn't you?” she said. 2159

“It was like eating my mother's cooking -- she just kept putting more on the plate. I couldn't 2160

help it."

"Did you enjoy it?" 2161

He opened his eyes. "You're kidding, right? That was probably the most incredible meal I've eaten in my entire life. It was like a parallel dimension of good food." 2162

She nodded vigorously and took his arm in a friendly, intimate gesture, led him toward Lexington. "You notice how time sort of stops when you're there? How the part of your brain that's going `what next? what next?' goes quiet?" 2163

"That's it! That's *exactly* it!" The buzz of the jetpacks on Lex grew louder as they neared the corner, like a thousand crickets in the sky. 2164

"Hate those things," she said, glaring up at the joyriders zipping past, scarves and capes streaming out behind them. "A thousand crashes upon your souls." She spat, theatrically. 2165

"You make them, though, don't you?" 2166

She laughed. "You've been reading up on Buhle then?" 2167

"Everything I can find." He'd bought small blocks of shares in all the public companies in which Buhle was a substantial owner, charging them to Ate's brokerage account, and then devoured their annual reports. There was lots more he could feel in the shadows: blind trusts holding more shares in still more companies. It was the standard corporate structure, a Flying Spaghetti Monster of interlocking directorships, offshore holdings, debt parking lots, and exotic matrioshke companies that seemed on the verge of devouring themselves. 2168

"Oy," she said. "Poor boy. Those aren't meant to be parsed. They're like the bramble patch around the sleeping princess, there to ensnare foolhardy knights who wish to court the virgin in the tower. Yes, Buhle's the largest jetpack manufacturer in the world, through a layer or two of misdirection." She inspected the uptownbound horde, sculling the air with their fins and gloves, making course corrections and wibbles and wobbles that were sheer, joyful exhibitionism. 2169

"He did it for me," she said. "Have you noticed that they've gotten better in the past couple years? Quieter? That was us. We put a lot of thought into the campaign; the chop-shops have been selling `loud pipes save lives' since the motorcycle days, and every tiny-dick flyboy wanted to have a pack that was as loud as a bulldozer. It took a lot of market smarts to turn it around; we had a low-end model we were selling way below cost that was close to those loud-pipe machines in decibel count; it was ugly and junky and fell apart. Naturally, we sold it through a different arm of the company that had totally different livery, identity and everything. Then we started to cut into our margins on the high-end rides, and at the same time, we engineered them for a quieter and quieter run. We actually did some 2170

preproduction on a jetpack that was so quiet it actually *absorbed* noise, don't ask me to explain it, unless you've got a day or two to waste on the psycho-acoustics.

“Every swish bourgeois was competing to see whose jetpack could run quieter, while the low-end was busily switching loyalty to our loud junkmobiles. The competition went out of business in a year, and then we dummied-up a bunch of consumer-protection lawsuits that `forced' -- ” she drew air-quotes -- “us to recall the loud ones, rebuild them with pipes so engineered and tuned you could use them for the woodwinds section. And here we are.” She gestured at the buzzing, whooshing fliers overhead. 2171

Leon tried to figure out if she was kidding, but she looked and sounded serious. “You're telling me that Buhle dropped, what, a billion?” 2172

“About eight billion, in the end.” 2173

“Eight billion rupiah on a project to make the skies quieter?” 2174

“All told,” she said. “We could have done it other ways, some of them cheaper. We could have bought some laws, or bought out the competition and changed their product line, but that's very, you know, *blunt*. This was sweet. Everyone got what they wanted in the end: fast rides, quiet skies, safe, cheap vehicles. Win win win.” 2175

An old school flyer with a jetpack as loud as the inside of an ice-blender roared past, leaving thousands scowling in his wake. 2176

“That guy is plenty dedicated,” she said. “He'll be machining his own replacement parts for that thing. No one's making them anymore.” 2177

He tried a joke: “You're not going to send the Buhle ninjas to off him before he hits Union Square?” 2178

She didn't smile. “We don't use assassination,” she said. “That's what I'm trying to convey to you, Leon.” 2179

He crumbled. He'd blown it somehow, shown himself to be the boor he'd always feared he was. 2180

“I'm sorry,” he said. “I guess -- look, it's all kind of hard to take in. The sums are staggering.” 2181

“They're meaningless,” she said. “That's the point. The sums are just a convenient way of directing power. Power is what matters.” 2182

“I don't mean to offend you,” he said carefully, “but that's a scary sounding thing to say.” 2183

“Now you're getting it,” she said, and took his arm again. “Drinks?” 2184

#

The limes for the daquiris came from the trees around them on the rooftop conservatory. The trees were healthy working beasts, and the barman expertly inspected several limes 2185

before deftly twisting off a basket's worth and retreating to his workbench to juice them over his blender.

“You have to be a member to drink here,” Ria said, as they sat on the roof, watching the jetpacks scud past. 2186

“I'm not surprised,” he said. “It must be expensive.” 2187

“You can't buy your way in,” she said. “You have to work it off. It's a co-op. I planted this whole row of trees.” She waved her arm, sloshing a little daquiri on the odd turf their loungers rested on. “I planted the mint garden over there.” It was a beautiful little patch, decorated with rocks and favored with a small stream that wended its way through them. 2188

“Forgive me for saying this,” he said, “but you must earn a lot of money. A *lot*, I'm thinking.” She nodded, unembarrassed, even waggled her eyebrows a bit. “So you could, I don't know, you could probably build one of these on any of the buildings that Buhle owns in Manhattan. Just like this. Even keep a little staff on board. Give out memberships as perks for your senior management team.” 2189

“That's right,” she said. “I could.” 2190

He drank his daquiri. “I'm supposed to figure out why you don't, right?” 2191

She nodded. “Indeed.” She drank. Her face suffused with pleasure. He took a moment to pay attention to the signals his tongue was transmitting to him. The drink was *incredible*. Even the glass was beautiful, thick, handblown, irregular. “Listen, Leon, I'll let you in on a secret. *I want you to succeed*. There's not much that surprises Buhle and even less that pleasantly surprises him. If you were to manage it...” She took another sip and looked intensely at him. He squirmed. Had he thought her matronly and sweet? She looked like she could lead a guerilla force. Like she could wrestle a mugger to the ground and kick the shit out of him. 2192

“So a success for me would be a success for you?” 2193

“You think I'm after money,” she said. “You're still not getting it. Think about the jetpacks, Leon. Think about what that power means.” 2194

#

He meant to go home, but he didn't make it. His feet took him crosstown to the Ate offices, and he let himself in with his biometrics and his passphrase and watched the marvelous dappled lights go through their warm-up cycle and then bathe him with their wonderful, calming light. Then the breeze, and now it was a nighttime forest, mossier and heavier than in the day. Either someone had really gone balls-out on the product design, or there really was an indoor forest somewhere in the building growing under diurnal lights, there solely to supply soothing woodsy air to the agency's office. He decided that the forest was the more likely explanation. 2195

He stood at Carmela's desk for a long time, then, gingerly, settled himself in her chair. It was plain and firm and well made, with just a little spring. Her funny little sculptural keyboard had keycaps that had worn smooth under her fingertips over the years, and there were shiny spots on the desk where her wrists had worn away the granite. He cradled his face in his palms, breathing in the nighttime forest air, and tried to make sense of the night. 2196

The Living Room was nighttime dark, but it still felt glorious on his bare feet, and then, a moment later, on his bare chest and legs. He lay on his stomach in his underwear and tried to name the sensation on his nerve endings and decided that “anticipation” was the best word for it, the feeling you get just *beside* the skin that's being scratched on your back, the skin that's next in line for a good scratching. It was glorious. 2197

How many people in the world would ever know what this felt like? Ate had licensed it out to a few select boutique hotels -- he'd checked into it after talking with Ria the first time -- but that was it. All told, there were less than 3,000 people in the world who'd ever felt this remarkable feeling. Out of eight billion. He tried to do the division in his head but kept losing the zeroes. It was a thousandth of a percent? A ten thousandth of a percent? No one on Anguilla would ever feel it: not the workers in the vertical slums, but also not the mere millionaires in the grand houses with their timeshare jets. 2198

Something about that... 2199

He wished he could talk to Ria some more. She scared him, but she also made him feel good. Like she was the guide he'd been searching for all his life. At this point, he would have settled for Brautigan. Anyone who could help him make sense of what felt like the biggest, scariest opportunity of his entire career. 2200

He must have dozed, because the next thing he knew, the lights were flickering on and he was mostly naked, on the floor, staring up into Brautigan's face. He had a look of forced jollity, and he snapped his fingers a few times in front of Leon's face. 2201

“Morning, sunshine!” 2202

Leon looked for the ghostly clock that shimmered in the corner of each wall, a slightly darker patch of reactive paint that was just outside of conscious comprehension unless you really stared at it. 4:12 AM. He stifled a groan. 2203

“What are you doing here?” he said, peering at Brautigan. 2204

The man clacked his horsey teeth, assayed a chuckle. “Early bird. Worm.” 2205

Leon sat up, found his shirt, started buttoning it up. “Seriously, Brautigan.” 2206

“Seriously?” He sat down on the floor next to Leon, his big feet straight out ahead of him. His shoes had been designed by the same architect that did Leon's. Leon recognized the style. “Seriously.” He scratched his chin. Suddenly, he slumped. “I'm shitting bricks, Leon. I am seriously shitting bricks.” 2207

“How did it go with your monster?”

Brautigan stared at the architect's shoes. There was an odd flare they did, just behind the toe, just on the way to the laces, that was really graceful. Leon thought it might be a standard distribution bell-curve. “My monster is...” He blew out air. “Uncooperative.”

“Less cooperative than previously?”

Brautigan unlaced his shoes and peeled off his socks, scrunched his toes in the moss. His feet gave off a hot, trapped smell.

“What was he like on the other times you'd seen him?”

Brautigan tilted his head. “What do you mean?”

“He was uncooperative this time, what about the other times?”

Brautigan looked back down at his toes.

“You'd *never* seen him before this?”

“It was a risk,” he said. “I thought I could convince him, face to face.”

“But?”

“I bombed. It was -- it was the -- it was *everything*. The compound. The people. All of it. It was like a *city*, a *theme park*. They lived there, hundreds of them, and managed every tiny piece of his empire. Like Royal Urchins.”

Leon puzzled over this. “Eunuchs?”

“Royal Eunuchs. They had this whole culture, and as I got closer and closer to him, I realized, shit, they could just *buy* Ate. They could destroy us. They could have us made illegal, put us all in jail. Or get me elected president. Anything.”

“You were overawed.”

“That's the right word. It wasn't a castle or anything, either. It was just a place, a well-built collection of buildings. In Westchester, you know? It had been a little town center once. They'd preserved everything good, built more on top of it. It all just...worked. You're still new here. Haven't noticed.”

“What? That Ate is a disaster? I figured that out a long time ago. There's several dozen highly paid creative geniuses on the payroll here who haven't seen their desks in months. We could be a creative powerhouse. We're more like someone's vanity project.”

“Brutal.”

He wondered if he'd overstepped himself. Who cared?

“Brutal doesn't mean untrue. It's like, it's like the money that came into this place, it became autonomous, turned into a strategy for multiplying itself. A bad strategy. The money wants

to sell something to a monster, but the money doesn't know what monsters want, so it's just, what, beating its brains out on the wall. One day, the money runs out and..."

"The money won't run out," Brautigan said. "Wrong. We'd have to spend at ten-ex what we're burning now to even approach the principal." 2228

"OK," Leon said. "So it's immortal. That's better?" 2229

Brautigan winced. "Look, it's not so crazy. There's an entire unserved market out there. No one's serving it. They're like, you know, like Communist countries. Planned economies. They need something, they just acquire the capacity. No market." 2230

"Hey, bub, I know just what you need! You need a house to go with this doorknob!" To his own surprise, Leon discovered that he did a passable Daffy Duck. Brautigan blinked at him. Leon realized that the man was a little drunk. "Just something I heard the other day," he said. "I told the lady from my monster that we could provide the stuff that their corporate culture precluded. I was thinking of you know, how the samurai banned firearms. We can think and do the unthinkable and undo-able." 2231

"Good line." He flopped onto his back. An inch of pale belly peeked between the top of his three-quarter-length culottes and the lower hem of his smart wraparound shirt. "The monster in the vat. Some skin, some meat. Tubes. Pinches of skin clamped between clear hard plastic squares, bathed in some kind of diagnostic light. No eyes, no top of the head where the eyes should be. Just a smooth mask. Eyes everywhere else. Ceiling. Floor. Walls. I looked away, couldn't make contact with them, found I was looking at something wet. Liver. I think." 2232

"Yeesh. That's immortality, huh?" 2233

"I'm there, `A pleasure to meet you, an honor,' talking to the liver. The eyes never blinked. The monster gave a speech. `You're a low-capital, high-risk, high-payoff longshot Mr Brautigan. I can keep dribbling sums to you so that you can go back to your wonder factory and try to come up with ways to surprise me. So there's no need to worry on that score.' And that was it. Couldn't think of anything to say. Didn't have time. Gone in a flash. Out the door. Limo. Nice babu to tell me how good it had been for the monster, how much he'd been looking forward to it." He struggled up onto his elbows. "How about you?" 2234

Leon didn't want to talk about Ria with Brautigan. He shrugged. Brautigan got a mean, stung look on his face. "Don't be like that. Bro. Dude. Pal." 2235

Leon shrugged again. Thing was, he *liked* Ria. Talking about her with Brautigan would be treating her like a... a *sales-target*. If he were talking with Carmela, he's say, "I feel like she wants me to succeed. Like it would be a huge deal for everyone if I managed it. But I also feel like maybe she doesn't think I can." But to Brautigan, he merely shrugged, ignored the lizardy slit-eyed glare, stood, pulled on his pants, and went to his desk. 2236

#

If you sat at your desk long enough at Ate, you'd eventually meet *everyone* who worked there. Carmela knew all, told all, and assured him that everyone touched base at least once a month. Some came in a couple times a week. They had plants on their desks and liked to personally see to their watering. 2237

Leon took every single one of them to lunch. It wasn't easy -- in one case, he had to ask Carmela to send an Ate chauffeur to pick up the man's kids from school (it was a half-day) and bring them to the sitter's, just to clear the schedule. But the lunches themselves went very well. It turned out that the people at Ate were, to a one, incredibly interesting. Oh, they were all monsters, narcissistic, tantrum-prone geniuses, but once you got past that, you found yourself talking to people who were, at bottom, damned smart, with a whole lot going on. He met the woman who designed the moss in the Living Room. She was younger than him, and had been catapulted from a mediocre academic adventure at the Cooper Union into more wealth and freedom than she knew what to do with. She had a whole rolodex of people who wanted to sublicense the stuff, and she spent her days toying with them, seeing if they had any cool ideas she could incorporate into her next pitch to one of the lucky few who had the ear of a monster. 2238

Like Leon. That's why they all met with him. He'd unwittingly stepped into one of the agency's top spots, thanks to Ria, one of the power-broker seats that everyone else yearned to fill. The fact that he had no idea how he'd got there or what to do with it didn't surprise anyone. To a one, his colleagues at Ate regarded everything to do with the vat monsters as an absolute, unknowable crapshoot, as predictable as a meteor strike. 2239

No wonder they all stayed away from the office. 2240

#

Ria met him in a different pair of jeans, these ones worn and patched at the knees. She had on a loose, flowing silk shirt that was frayed around the seams, and had tied her hair back with a kerchief that had faded to a non-color that was like the ancient New York sidewalk outside Ate's office. He felt the calluses on her hand when they shook. 2241

“You look like you're ready to do some gardening,” he said. 2242

“My shift at the club,” she said. “I'll be trimming the lime trees and tending the mint patch and the cucumber frames all afternoon.” She smiled stopped him with a gesture. She bent down and plucked a blade of greenery from the untidy trail-edge. They were in Central Park, in one of the places where it felt like a primeval forest instead of an artful garden razed and built in the middle of the city. She uncapped her water bottle and poured water over the herb -- it looked like a blade of grass -- rubbing it between her forefinger and thumb to scrub at it. Then she tore it in two and handed him one piece, held the other to her nose, then ate it, nibbling and making her nose wrinkle like a rabbit's. He followed suit. Lemon, delicious and tangy. 2243

“Lemon grass,” she said. “Terrible weed, of course. But doesn't it taste amazing?” 2244

He nodded. The flavor lingered in his mouth.

“Especially when you consider what this is made of -- smoggy rain, dog piss, choked up air, and sunshine, and DNA. What a weird flavor to emerge from such a strange soup, don't you think?”

The thought made the flavor a little less delicious. He said so.

“I love the idea,” she said. “Making great things from garbage.”

“About the jetpacks,” he said, for he'd been thinking.

“Yes?”

“Are you utopians of some kind? Making a better world?”

“By `you,' you mean `people who work for Buhle?'”

He shrugged.

“I'm a bit of a utopian, I'll admit. But that's not it. You know Henry Ford set up these work-camps in Brazil, `Fordlandia,' and enforced a strict code of conduct on the rubber plantation workers? He outlawed the caprihina and replaced it with Tom Collinses, because they were more civilized.”

“And you're saying Buhle wouldn't do that?”

She waggled her head from side to side, thinking it over. “Probably not. Maybe, if I asked.” She covered her mouth as though she'd made an indiscreet admission.

“Are -- *were* -- you and he...?”

She laughed. “Never. It's purely cerebral. Do you know where his money came from?”

He gave her a look.

“OK, of course you do. But if all you've read is the official history, you'll think he was just a finance guy who made some good bets. It's nothing like it. He played a game against the market, tinkered with the confidence of other traders by taking crazy positions, all bluff, except when they weren't. No one could outsmart him. He could convince you that you were about to miss out on the deal of the century, or that you'd already missed it, or that you were about to walk off onto easy street. Sometimes, he convinced you of something that was real. More often, it was pure bluff, which you'd only find out after you'd done some trade with him that left him with more money than you'd see in your whole life, and you facepalming and cursing yourself for a sucker. When he started doing it to national banks, put a run on the dollar, broke the Fed, well, that's when we all knew that he was someone who was *special*, someone who could create signals that went right to your hindbrain without any critical interpretation.”

“Scary.”

“Oh yes. Very. In another era they'd have burned him for a witch or made him the man who cut out your heart with the obsidian knife. But here's the thing: he could never, ever kid *me*. Not once.” 2262

“And you're alive to tell the tale?” 2263

“Oh, he likes it. His reality distortion field, it screws with his internal landscape. Makes it hard for him to figure out what he needs, what he wants, and what will make him miserable. I'm indispensable.” 2264

He had a sudden, terrible thought. He didn't say anything, but she must have seen it on his face. 2265

“What is it? Tell me.” 2266

“How do I know that you're on the level about any of this? Maybe you're just jerking me around. Maybe it's all made up -- the jetpacks, everything.” He swallowed. “I'm sorry. I don't know where that came from, but it popped into my head --” 2267

“It's a fair question. Here's one that'll blow your mind, though: how do you know that I'm not on the level, *and* jerking you around?” 2268

They changed the subject soon after, with uneasy laughter. They ended up on a park bench near the family of dancing bears, whom they watched avidly. 2269

“They seem so *happy*,” he said. “That's what gets me about them. Like dancing was the secret passion of every bear, and these three are the first to figure out how to make a life of it.” 2270

She didn't say anything, but watched the three giants lumber in a graceful, unmistakably joyous kind of shuffle. The music -- constantly mutated based on the intensity of the bears, a piece of software that sought tirelessly to please them -- was jangly and pop-like, with a staccato one-two/onetwothreefourfive/one-two rhythm that let the bears do something like a drunken stagger that was as fun to watch as a box of puppies. 2271

He felt the silence. “So happy,” he said again. “That's the weird part. Not like seeing an elephant perform. You watch those old videos and they seem, you know, they seem --” 2272

“Resigned,” she said. 2273

“Yeah. Not unhappy, but about as thrilled to be balancing on a ball as a horse might be to be hitched to a plough. But look at those bears!” 2274

“Notice that no one else watches them for long?” she said. 2275

He had noticed that. The benches were all empty around them. 2276

“I think it's because they're so happy,” she said. “It lays the trick bare.” She showed teeth at the pun, then put them away. “What I mean is, you can see how it's possible to design 2277

a bear that experiences brain reward from rhythm, keep it well-fed, supply it with as many rockin' tunes as it can eat, and you get that happy family of dancing bears who'll peacefully co-exist alongside humans who're going to work, carrying their groceries, pushing their toddlers around in strollers, necking on benches --”

The bears were resting now, lolling on their backs, happy tongues sloppy in the corners of their mouths. 2278

“We made them,” she said. “It was against my advice, too. There's not much subtlety in it. As a piece of social commentary, it's a cartoon sledgehammer with an oversized head. But the artist had Buhle's ear, he'd been CEO of one of the portfolio companies and had been interested in genomic art as a sideline for his whole career. Buhle saw that funding this thing would probably spin off lots of interesting sublicenses, which it did. But just look at it.” 2279

He looked. “They're *so happy*,” he said. 2280

She looked too. “Bears shouldn't be that happy,” she said. 2281

#

Carmela greeted him sunnily as ever, but there was something odd. 2282

“What is it?” he asked in Spanish. He made a habit of talking Spanish to her, because both of them were getting rusty, and also it was like a little shared secret between them. 2283

She shook her head. 2284

“Is everything all right?” Meaning, *Are we being shut down?* It could happen, might happen at any time, with no notice. That was something he -- all of them -- understood. The money that powered them was autonomous and unknowable, an alien force that was more emergent property than will. 2285

She shook her head again. “It's not my place to say,” she said. Which made him even more sure that they were all going down, for when had Carmela ever said anything about her *place*? 2286

“Now you've got me worried,” he said. 2287

She cocked her head back toward the back office. He noticed that there were three coats hung on the beautiful, anachronistic coat-stand by the ancient temple door that divided reception from the rest of Ate. 2288

He let himself in and walked down the glassed-in double-rows of offices, the cubicles in the middle, all with their characteristic spotless hush, like a restaurant dining room set up for the meals that people would come to later. 2289

He looked in the Living Room, but there was no one there, so he began to check out the other conference rooms, which ran the gamut from super-conservative to utter madness. 2290

He found them in the Ceile, with its barn-board floors, its homey stone hearth, and the gimmicked sofas that looked like unsprung old thrift-store numbers, but which sported adaptive genetic-algorithm-directed haptics that adjusted constantly to support you no matter how you flopped on them, so that you could play at being a little kid sprawled carelessly on the cushions no matter how old and cranky your bones were.

On the Ceile's sofa were Brautigan, Ria, and a woman he hadn't met before. She was somewhere between Brautigan and Ria's age, but with that made-up, pulled-tight appearance of someone who knew the world wouldn't take her as seriously if she let one crumb of weakness escape from any pore or wrinkle. He thought he knew who this must be, and she confirmed it when she spoke. 2291

“Leon,” she said. “I'm glad you're here.” He knew that voice. It was the voice on the phone that had recruited him and brought him to New York and told him where to come for his first day on the job. It was the voice of Jennifer Torino, and she was technically his boss. “Carmela said that you often worked from here so I was hoping today would be one of the days you came by so we could chat.” 2292

“Jennifer,” he said. She nodded. “Ria.” She had a poker-face on, as unreadable as a slab of granite. She was wearing her customary denim and flowing cotton, but she'd kept her shoes on and her feet on the ground. “Brautigan,” and Brautigan grinned like it was Christmas morning. 2293

Jennifer looked flatly at a place just to one side of his gaze, a trick he knew, and said, “In recognition of his excellent work, Mr Brautigan's been promoted, effective today. He is now Manager for Major Accounts.” Brautigan beamed. 2294

“Congratulations,” Leon said, thinking, *What excellent work? No one at Ate has accomplished the agency's primary objective in the entire history of the firm!* “Well done.” 2295

Jennifer kept her eyes coolly fixed on that empty, safe spot. “As you know, we have struggled to close a deal with any of our major accounts.” He restrained himself from rolling his eyes. “And so Mr Brautigan has undertaken a thorough study of the way we handle these accounts.” She nodded at Brautigan. 2296

“It's a mess,” he said. “Totally scattergun. No lines of authority. No checks and balances. No system.” 2297

“I can't argue with that,” Leon said. He saw where this was going. 2298

“Yes,” Jennifer said. “You haven't been here very long, but I understand you've been looking deeply into the organizational structure of Ate yourself, haven't you?” He nodded. “And that's why Mr Brautigan has asked that you be tasked to him as his head of strategic research.” She smiled a thin smile. “Congratulations yourself.” 2299

He said, “Thanks,” flatly, and looked at Brautigan. “What's strategic research, then?” 2300

“Oh,” Brautigan said. “Just a lot of what you've been doing: figuring out what everyone's 2301

up to, putting them together, proposing organizational structures that will make us more efficient at design and deployment. Stuff you're good at."

Leon swallowed and looked at Ria. There was nothing on her face. "I can't help but notice," he said, forcing his voice to its absolutely calmest, "that you haven't mentioned anything to do with the, uh, *clients*." 2302

Brautigan nodded and strained to pull his lips over his horsey teeth to hide his grin. It didn't work. "Yeah," he said. "That's about right. We need someone of your talents doing what he does best, and what you do best is --" 2303

He held up a hand. Brautigan fell silent. The three of them looked at him. He realized, in a flash, that he had them all in his power, just at that second. He could shout BOO! and they'd all fall off their chairs. They were waiting to see if he'd blow his top or take it and ask for more. He did something else. 2304

"Nice working with ya," he said. And he turned his back on the sweetest, softest job anyone could ask for. He said *adios* and *buen suerte* to Carmela on the way out, and he forced himself not to linger around the outside doors down at street level to see if anyone would come chasing after him. 2305

#

The realtor looked at him like he was crazy. "You'll never get two million for that place in today's market," she said. She was young, no-nonsense, black, and she had grown up on the Lower East Side, a fact she mentioned prominently in her advertising materials: *A local realtor for a local neighborhood.* 2306

"I paid two million for it less than a year ago," he said. The 80 percent mortgage had worried him a little but Ate had underwritten it, bringing the interest rate down to less than two percent. 2307

She gestured at the large corner picture window that overlooked Broome Street and Grand Street. "Count the FOR SALE signs," she said. "I want to be on your side. That's a nice place. I'd like to see it go to someone like you, someone decent. Not some *developer* --" she spat the word like a curse "or some corporate apartment broker who'll rent it by the week to VIPs. This neighborhood needs real people who really live here, understand." 2308

"So you're saying I won't get what I paid for it?" 2309

She smiled fondly at him. "No, sweetheart, you're not going to get what you paid for it. All those things they told you when you put two mil into that place, like `They're not making any more Manhattan' and `Location location location'? It's lies." Her face got serious, sympathetic. "It's supposed to panic you and make you lose your head and spend more than you think something is worth. That goes on for a while and then everyone ends up with 2310

too much mortgage for not enough home, or for too much home for that matter, and then blooie, the bottom blows out of the market and everything falls down like a souffle."

"You don't sugar-coat it, huh?" He'd come straight to her office from Ate's door, taking the subway rather than cabbing it or even renting a jetpack. He was on austerity measures, effective immediately. His brain seemed to have a pre-made list of cost-savers it had prepared behind his back, as though it knew this day would come. 2311

She shrugged. "I can, if you want me to. We can hem and haw about the money and so on and I can hold your hand through the seven stages of grieving. I do that a lot when the market goes soft. But you looked like the kind of guy who wants it straight. Should I start over? Or, you know, if you want, we can list you at two mil or even two point two, and I'll use that to prove that some *other* loft is a steal at 1.9. If you want." 2312

"No," he said, and he felt some of the angry numbness ebb away. He liked this woman. She had read him perfectly. "So tell me what you think I can get for it?" 2313

She put her fist under her chin and her eyes went far away. "I sold that apartment, um, eight years ago? Family who had it before you. Had a look when they sold it to you -- they used a different broker, kind of place where they don't mind selling to a corporate placement specialist. I don't do that, which you know. But I saw it when it sold. Have you changed it much since?" 2314

He squirmed. "I didn't, but I think the broker did. It came furnished, nice stuff." 2315

She rolled her eyes eloquently. "It's never nice stuff. Even when it comes from the best showroom in town, it's not nice stuff. Nice is antithetical to corporate. Inoffensive is the best you can hope for." She looked up, to the right, back down. "I'm figuring out the discount for how the place will show now that they've taken all the seams and crumbs out. I'm thinking, um, 1.8. That's a number I think I can deliver." 2316

"But I've only *got* 200K in the place," he said. 2317

Her expressive brown eyes flicked at the picture window, the FOR SALE signs. "And? Sounds like you'll break even or maybe lose a little on the deal. Is that right?" 2318

He nodded. Losing a little wasn't something he'd figured on. But by the time he'd paid all the fees and taxes -- "I'll probably be down a point or two." 2319

"Have you got it?" 2320

He hated talking about money. That was one thing about Ria is that she never actually talked about money -- what money *did*, sure, but never money. "Technically," he said. 2321

"OK, technical money is as good as any other kind. So look at it this way: you bought a place, a really totally amazing place on the Lower East Side, a place bigger than five average New York apartments. You lived in it for, what?" 2322

"Eight months." 2323

“Most of a year. And it cost you one percent of the street price on the place. Rent would have been about eleven times that. You're up --” she calculated in her head -- “it's about 83 percent.”

He couldn't keep the look of misery off his face.

“What?” she said. “Why are you pulling faces at me? You said you didn't want it sugar-coated, right?”

“It's just that --” He dropped his voice, striving to keep any kind of whine out of it. “Well, I'd hoped to make something in the bargain.”

“For what?” she said, softly.

“You know, appreciation. Property goes up.”

“Did you do anything to the place that made it better?”

He shook his head.

“So you did no productive labor but you wanted to get paid anyway, right? Have you thought about what would happen to society if we rewarded people for owning things instead of doing things?”

“Are you sure you're a real estate broker?”

“Board certified. Do very well, too.”

He swallowed. “I don't expect to make money for doing nothing, but you know, I just quit my job. I was just hoping to get a little cash in hand to help me smooth things out until I find a new one.”

The realtor gave a small nod. “Tough times ahead. Winds are about to shift again. You need to adjust your expectations, Leon. The best you can hope for right now is to get out of that place before you have to make another mortgage payment.”

His pulse throbbed in his jaw and his thigh in counterpoint. “But I *need* money to --”

“Leon,” she said, with some steel in her voice. “You're *bargaining*. As in denial, anger, bargaining, depression and acceptance. That's healthy and all, but it's not going to get your place sold. Here's two options: one, you can go find another realtor, maybe one who'll sugar coat things or string you along to price up something else he's trying to sell. Two, you can let me get on with making some phone calls and I'll see who I can bring in. I keep a list of people I'd like to see in this `hood, people who've asked me to look out for the right kind of place. That place you're in is one of a kind. I might be able to take it off your hands in very quick time, if you let me do my thing.” She shuffled some papers. “Oh, there's a third, which is that you could go back to your apartment and pretend that nothing is wrong until that next mortgage payment comes out of your bank-account. That would be *denial* and if you're bargaining, you should be two steps past that.

“What's it going to be?”

“I need to think about it.”

“Good plan,” she said. “Remember, depression comes after bargaining. Go buy a quart of ice-cream and download some weepy movies. Stay off booze, it only brings you down. Sleep on it, come back in the morning if you'd like.”

He thanked her numbly and stepped out into the Lower East Side. The bodega turned out to have an amazing selection of ice-cream, so he bought the one with the most elaborated name, full of chunks, swirls and stir-ins, and brought it up to his apartment, which was so big that it made his knees tremble when he unlocked his door. The realtor had been right. Depression was next.

#

Buhle sent him an invitation a month later. It came laser-etched into a piece of ancient leather, delivered by a messenger whose jetpack was so quiet that he didn't even notice that she had gone until he looked up from the scroll to thank her. His new apartment was a perch he rented by the week at five times what an annual lease would have cost him, but still a fraction of what he had been paying on the LES. It was jammed with boxes of things he hadn't been able to bring himself to get rid of, and now he cursed every knick-knack as he dug through them looking for a good suit.

He gave up. The invitation said, “At your earliest convenience,” and a quadrillionaire in a vat wasn't going to be impressed by his year-old designer job-interview suit.

It had been a month, and no one had come calling. None of his queries to product design, marketing, R&D or advertising shops had been answered. He tried walking in the park every day, to see the bears, on the grounds that it was free and it would stimulate his creative flow. Then he noticed that every time he left his door, fistfuls of money seemed to evaporate from his pockets on little “necessities” that added up to real money. The frugality center of his brain began to flood him with anxiety every time he considered leaving the place and so it had been days since he'd gone out.

Now he was going. There were some clean clothes in one of the boxes, just sloppy jeans and tees, but they'd been expensive sloppy once upon a time, and they were better than the shorts and shirts he'd been rotating in and out of the tiny washing machine every couple days, when the thought occurred to him. The $200 haircut he'd had on his last day of work had gone shaggy and lost all its clever style, so he just combed it as best as he could after a quick shower and put on his architect's shoes, shining them on the backs of his pants legs on his way out the door in a gesture that reminded him of his father going to work in Anguilla, a pathetic gesture of respectability from someone who had none. The realization made him *oof* out a breath like he'd been gut-punched.

His frugality gland fired like crazy as he hailed a taxi and directed it to the helipad at Grand Central Terminus. It flooded him with so much cheapamine that he had to actually pinch his

arms a couple times to distract himself from the full-body panic at the thought of spending so much. But Buhle was all the way in Rhode Island, and Leon didn't fancy keeping him waiting. He knew that to talk to money you had to act like money -- impedance-match the money. Money wouldn't wait while he took the train or caught the subway.

He booked the chopper-cab from the cab, using the terminal in the back-seat. At Ate, he'd had Carmela to do this kind of organizing for him. He'd had Carmela to do a hundred other things, too. In that ancient, lost time, he'd had money and help beyond his wildest dreams, and most days he couldn't imagine what had tempted him into giving it up. 2348

The chopper clawed the air and lifted him up over Manhattan, the canyons of steel stretched out below him like a model. The racket of the chopper obliterated any possibility of speech, so he could ignore the pilot and she could ignore him with a cordiality that let him pretend, for a moment, that he was a powerful executive who nonchalantly choppered around over the country. They hugged the coastline and the stately rows of windmills and bobbing float-homes, surfers carving the waves, bulldozed strips topped with levees that shot up from the ground like the burial mound of some giant serpent. 2349

Leon's earmuffs made all the sound -- the sea, the chopper -- into a uniform hiss, and in that hiss, his thoughts and fears seemed to recede for a moment, as though they couldn't make themselves heard over the white noise. For the first time since he'd walked out of Ate, the nagging, doubtful voices fell still and Leon was alone in his head. It was as though he'd had a great pin stuck through his chest that had been finally removed. There was a feeling of lightness, and tears pricking at his eyes, and a feeling of wonderful *obliteration*, as he stopped, just for a moment, stopped trying to figure out where he fit in the world. 2350

The chopper touched down on a helipad at Newport State Airport, to one side of the huge X slashed into the heavy woods -- new forest, fast-growing carbon sinkers garlanded with extravagances of moss and vine. From the moment the doors opened, the heavy earthy smell filled his nose and he thought of the Living Room, which led him to think of Ria. He thanked the pilot and zapped her a tip and looked up and there was Ria, as though his thoughts had summoned her. 2351

She had a little half-smile on her face, uncertain and somehow childlike, a little girl waiting to find out if he'd be her friend still. He smiled at her, grateful for the clatter of the chopper so that they couldn't speak. She shook his hand, hers warm and dry, and then, on impulse, he gave her a hug. She was soft and firm too, a middle-aged woman who kept fit but didn't obsess about the pounds. It was the first time he'd touched another human since he left Ate. And, as with the chopper's din, this revelation didn't open him to fresh miseries -- rather, it put the miseries away, so that he felt *better*. 2352

“Are you ready?” she said, once the chopper had lifted off. 2353

“One thing,” he said. “Is there a town here? I thought I saw one while we were landing.” 2354

“A little one,” she said. “Used to be bigger, but we like them small.”

“Does it have a hardware store?”

She gave him a significant look. “What for? An axe? A nailgun? Going to do some improvements?”

“Thought I'd bring along a door-knob,” he said.

She dissolved into giggles. “Oh, he'll *like* that. Yes, we can find a hardware store.”

#

Buhle's security people subjected the doorknob to millimeter radar and a gas cromatograph before letting it past. He was shown into an anteroom by Ria, who talked to him through the whole procedure, just light chatter about the weather and his real-estate problems, but she gently steered him around the room, changing their angle several times, and then he said, “Am I being scanned?”

“Millimeter radar in here too,” she said. “Whole body imaging. Don't worry, I get it every time I come in. Par for the course.”

He shrugged. “This is the least offensive security scan I've ever been through,” he said.

“It's the room,” she said. “The dimensions, the color. Mostly the semiotics of a security scan are either *you are a germ on a slide* or *you are not worth trifling with, but if we must, we must.* We went for something a little... sweeter.” And it was, a sweet little room, like the private study of a single mom who's stolen a corner in which to work on her secret novel.

Beyond the room -- a wonderful place.

“It's like a college campus,” he said.

“Oh, I think we use a better class of materials than most colleges,” Ria said, airily, but he could tell he'd pleased her. “But yes, there's about 15,000 of us here. A little city. Nice cafes, gyms, cinemas. A couple artists in residence, a nice little Waldorf school...” The pathways were tidy and wended their way through buildings ranging from cottages to large, institutional buildings, but all with the feel of endowed research institutes rather than finance towers. The people were young and old, casually dressed, walking in pairs and groups, mostly, deep in conversation.

“15,000?”

“That's the head office. Most of them doing medical stuff here. We've got lots of other holdings, all around the world, in places that are different from this. But we're bringing them all in line with HQ, fast as we can. It's a good way to work. Churn is incredibly low. We actually have to put people back out into the world for a year every decade, just so they can see what it's like.”

“Is that what you're doing?” 2369

She socked him in the arm. “You think I could be happy here? No, I've always lived off campus. I commute. I'm not a team person. It's OK, this is the kind of place where even lone guns can find their way to glory.” 2370

They were walking on the grass now, and he saw that the trees, strangely oversized red maples without any of the whippy slenderness he associated with the species, had a walkway suspended from their branches, a real Swiss Family Robinson job with rope-railings and little platforms with baskets on pulleys for ascending and descending. The people who scurried by overhead greeted each other volubly and laughed at the awkwardness of squeezing past each other in opposite directions. 2371

“Does that ever get old?” he said, lifting his eyebrows to the walkways. 2372

“Not for a certain kind of person,” she said. “For a certain kind of person, the delightfulness of those walkways never wears off.” The way she said “certain kind of person” made him remember her saying, “bears shouldn't be that happy.” 2373

He pointed to a bench, a long twig-chair, really, made from birch branches and rope and wire all twined together. “Can we sit for a moment? I mean, will Buhle mind?” 2374

She flicked her fingers. “Buhle's schedule is his own. If we're five minutes late, someone will put five minutes' worth of interesting and useful injecta into his in-box. Don't you worry.” She sat on the bench, which looked too fragile and fey to take a grown person's weight, but then she patted the seat next to him, and he when he sat, he felt almost no give. The bench had been very well built, by someone who knew what she or he was doing. 2375

“OK, so what's going on, Ria? First you went along with Brautigan scooping my job and exiling me to Siberia --” he held up a hand to stop her from speaking and discovered that the hand was shaking and so was his chest, shaking with a bottled-up anger he hadn't dared admit. “You could have stopped it at a word. You envoys from the vat-gods, you are the absolute monarchs at Ate. You could have told them to have Brautigan skinned, tanned and made into a pair of boots, and he'd have measured your foot-size himself. But you let them do it. 2376

“And now, here I am, a minister without portfolio, about to do something that would make Brautigan explode with delight, about to meet one of the Great Old Ones, in his very vat, in person. A man who might live to be a thousand, if all goes according to plan, a man who is a *country*, sovereign and inviolate. And I just want to ask you, *why*? Why all the secrecy and obliqueness and funny gaps? *Why*?” 2377

Ria waited while a pack of grad students scampered by overhead, deep in discussion of teleomeres, the racket of their talk and their bare feet slapping on the walkway loud enough to serve as a pretence for silence. Leon's pulse thudded and his armpits slicked themselves as he realized that he might have just popped the bubble of unreality between them, the consensual illusion that all was normal, whatever normal was. 2378

“Oh, Leon,” she said. “I'm sorry. Habit here -- there's some things that can't be readily said in utopia. Eventually, you just get in the habit of speaking out of the back of your head. It's, you know, *rude* to ruin peoples' gardens by pointing out the snakes. So, yes, OK, I'll say something right out. I like you, Leon. The average employee at a place like Ate is a bottomless well of desires, trying to figure out what others might desire. We've been hearing from them for decades now, the resourceful ones, the important ones, the ones who could get past the filters and the filters behind the filters. We know what they're like. 2379

“Your work was different. As soon as you were hired by Ate, we generated a dossier on you. Saw your grad work.” 2380

Leon swallowed. His resume emphasized his grades, not his final projects. He didn't speak of them at all. 2381

“So we thought, well, here's something different, it's possible he may have a house to go with our doorknob. But we knew what would happen if you were left to your own devices at a place like Ate: they'd bend you and shape you and make you over or ruin you. We do it ourselves, all too often. Bring in a promising young thing, subject him to the dreaded Buhle Culture, a culture he's totally unsuited to, and he either runs screaming or... *fits in*. It's worse when the latter happens. So we made sure that you had a good fairy perched on your right shoulder to counterbalance the devil on your left shoulder.” She stopped, made a face, mock slapped herself upside the head. “Talking in euphemism again. Bad habit. You see what I mean.” 2382

“And you let me get pushed aside...” 2383

She looked solemn. “We figured you wouldn't last long as a button-polisher. Figured you'd want out.” 2384

“And that you'd be able to hire me.” 2385

“Oh, we could have hired you any time. We could have bought Ate. Ate would have given you to us -- remember all that business about making Brautigan into a pair of boots? It applies all around.” 2386

“So you wanted me to... what? Walk in the wilderness first?” 2387

“Now you're talking in euphemisms. It's catching! Let's walk.” 2388

#

They gave him a bunny-suit to wear into the heart of Buhle. First he passed through a pair of double-doors, faintly positively pressurized, sterile air that ruffled his hair on the way in. The building was low-slung, nondescript brown brick, no windows. It could have been a water sterilization plant or a dry-goods warehouse. The inside was good tile, warm colors with lots of reds and browns down low, making the walls look like they were the inside of a kiln. The building's interior was hushed, and a pair of alert-looking plainclothes security men 2389

watched them very closely as they changed into the bunny suits, loose micropore coveralls with plastic visors. Each one had a small, self-contained air-circ system powered by a wrist canister, and when a security man helpfully twisted the valve open, Leon noted that there were clever jets that managed to defog the visor without drying out his eyeballs.

"That be enough for you, Ria?" the taller of the two security men said. He was dressed like a college kid who'd been invited to his girlfriend's place for dinner: smart slacks a little frayed at the cuffs, a short-sleeved, pressed cotton shirt that showed the bulge of his substantial chest and biceps and neck. 2390

She looked at her canister, holding it up to the visor. "30 minutes is fine," she said. "I doubt he'll have any more time than that for us!" Turning to Leon, she said, "I think that the whole air-supply thing is way overblown. But it does keep meetings from going long." 2391

"Where does the exhaust go?" Leon said, twisting in his suit. "I mean, surely the point is to keep my cooties away from," he swallowed, "*Buhle*." It was the first time he'd really used the word to describe a person, rather than a *concept*, and he was filled with the knowledge that the person it described was somewhere very close. 2392

"Here," she said, and pointed to a small bubble growing out of the back of her neck. "You swell up, one little bladder at a time, until you look like the Michelin man. Some joke." She made a face. "You can get a permanent suit if you come here often. Much less awkward. But Buhle likes it awkward." 2393

She led him down a corridor with still more people, these ones in bunny-suits or more permanent-looking suits that were form-fitting and iridescent and flattering. "Really?" he said, keeping pace with her. "Elegant is a word that comes to mind, not awkward." 2394

"Well, sure, elegant on the other side of that airlock door. But we're inside Buhle's body now." She saw the look on his face and smiled. "No, no, it's not a riddle. Everything on this side of the airlock is Buhle. It's his lungs and circulatory and limbic system. The vat may be where the meat sits, but all this is what makes the vat work. You're like a gigantic foreign organism that's burrowing into his tissues. It's intimate." They passed through another set of doors and now they were almost alone in a hall the size of his university's basketball court, the only others a long way off. She lowered her voice so that he had to lean in to hear her. "When you're outside, speaking to Buhle through his many tendrils, like me, or even on the phone, he has all the power in the world. He's a giant. But here, inside his body, he's very, very weak. The suits, they're there to level out the playing field. It's all head-games and symbolism. And this is just Mark I, the system we jury-rigged after Buhle's... *accident*. They're building the Mark II about five miles from here, and half a mile underground. When it's ready, they'll blast a tunnel and take him all the way down into it without ever compromising the skin of Buhle's extended body." 2395

"You never told me what the accident was, how he ended up here. I assumed it was a stroke or --" 2396

Ria shook her head, the micropore fabric rustling softly. “Nothing like that,” she said.

They were on the other side of the great room now, headed for the doors. “What is this giant room for?”

“Left over from the original floor-plan, when this place was just biotech R&D. Used for all-hands meetings then, sometimes a little symposium. Too big now. Security protocol dictates no more than ten people in any one space.”

“Was it assassination?” He said it without thinking, quick as ripping off a band-aid.

Again, the rustle of fabric. “No.”

She put her hand on the door's crashbar, made ready to pass into the next chamber.

“I'm starting to freak out a little here, Ria,” he said. “He doesn't hunt humans or something?”

“No,” and he didn't need to see her face, he could see the smile.

“Or need an organ? I don't think I have a rare blood-type, and I should tell you that mine have been indifferently cared for --”

“Leon,” she said, “if Buhle needed an organ, we'd make one right here. Print it out in about forty hours, pristine and virgin.”

“So you're saying I'm not going to be harvested or hunted, then?”

“It's a very low probability outcome,” she said, and pushed the crashbar.

It was darker in this room, a mellow, candlelit sort of light, and there was a rhythmic vibration coming up through the floor, a whoosh whoosh.

Ria said, “It's his breath. The filtration systems are down there.” She pointed a toe at the outline of a service hatch set into the floor. “Circulatory system overhead,” she said, and he craned his neck up at the grate covering the ceiling, the troughs filled with neatly bundled tubes.

One more set of doors, another cool, dark room, this one nearly silent, and one more door at the end, an airlock door, and another plainclothes security person in front of it; a side-room with a glass door bustling with people staring intently at screens. The security person -- a woman, Leon saw -- had a frank and square pistol with a bulbous butt velcroed to the side of her suit.

“He's through there, isn't he?” Leon said, pointing at the airlock door.

“No,” Ria said. “No. He's here. We are inside him. Remember that, Leon. He isn't the stuff in the vat there. In some sense you've been in Buhle's body since you got off the chopper. His sensor array network stretches out as far as the heliport, like the tips of the hairs on your neck, they feel the breezes that blow in his vicinity. Now you've tunneled inside him, and you're right here, in his heart or his liver.”

“Or his brain.”

A voice, then, from everywhere, warm and good -humored. “The brain is overrated.” Leon looked at Ria and she rolled her eyes eloquently behind her faceplate.

“Tuned sound,” she said. “A party trick. Buhle --”

“Wait,” Buhle said. “Wait. The brain, this is important, the brain is *so* overrated. The ancient Egyptians thought it was used to cool the blood, you know that?” He chortled, a sound that felt to Leon as though it began just above his groin and rose up through his torso, a very pleasant and very invasive sensation. “The heart, they thought, the heart was the place where the *me* lived. I used to wonder about that. Wouldn't they think that the thing between the organs of hearing, the thing behind the organs of seeing, that must be the me? But that's just the brain doing one of its little stupid games, backfilling the explanation. We think the brain is the obvious seat of the me because the brain already knows that it is the seat, and can't conceive of anything else. When the brain thought it lived in your chest, it was perfectly happy to rationalize that too -- *Of course it's in the chest, you feel your sorrow and your joy there, your satiety and your hunger...* The brain, pffft, the brain!”

“Buhle,” she said. “We're coming in now.”

The nurse/guard by the door had apparently only heard their part of the conversation, but also hadn't let it bother her. She stood to one side, and offered Leon a tiny, incremental nod as he passed. He returned it, and then hurried to catch up with Ria, who was waiting inside the airlock. The outer door closed and for a moment, they were pressed up against one another and he felt a wild, horny thought streak through him, all the excitement discharging itself from yet another place that the me might reside.

Then the outer door hissed open and he met Buhle -- he tried to remember what Ria had said, that Buhle wasn't this, Buhle was everywhere, but he couldn't help himself from feeling that this was *him*.

Buhle's vat was surprisingly small, no bigger than the sarcophagus that an ancient Egyptian might have gone to in his burial chamber. He tried not to stare inside it, but he couldn't stop himself. The withered, wrinkled man floating in the vat was intertwined with a thousand fiber optics that disappeared into pinprick holes in his naked skin. There were tubes: in the big highways in the groin, in the gut through a small valve set into a pucker of scar, in the nose and ear. The hairless head was pushed in on one side, like a pumpkin that hasn't been turned as it grew in the patch, and there was no skin on the flat piece, only white bone and a fine metalling mesh and more ragged, curdled scar tissue.

The eyes were hidden behind a slim set of goggles that irised open when they neared him, and beneath the goggles they were preternaturally bright, bright as marbles, set deep in bruised-looking sockets. The mouth beneath the nostril-tubes parted in a smile, revealing teeth as neat and white as a toothpaste advertisement, and Buhle spoke.

“Welcome to the liver. Or the heart.”

Leon choked on whatever words he'd prepared. The voice was the same one he'd heard in the outer room, warm and friendly, the voice of a man whom you could trust, who would take care of you. He fumbled around his suit, patting it. “I brought you a doorknob,” he said, “but I can't reach it just now.” 2424

Buhle laughed, not the chuckle he'd heard before, but an actual, barked *Ha!* that made the tubes heave and the fiber optics writhe. “Fantastic,” he said. “Ria, he's fantastic.” 2425

The compliment made the tips of Leon's ears grow warm. 2426

“He's a good one,” she said. “And he's come a long way at your request.” 2427

“You hear how she reminds me of my responsibilities? Sit down, both of you.” Ria rolled over two chairs, and Leon settled into one, feeling it noiselessly adjust to take his weight. A small mirror unfolded itself and then two more, angled beneath it, and he found himself looking into Buhle's eyes, looking at his face, reflected in the mirrors. 2428

“Leon,” Buhle said, “tell me about your final project, the one that got you the top grade in your class.” 2429

Leon's fragile calm vanished, and he began to sweat. “I don't like to talk about it,” he said. 2430

“Makes you vulnerable, I know. But vulnerable isn't so bad. Take me. I thought I was invincible. I thought that I could make and unmake the world to my liking. I thought I understood how the human mind worked -- and how it broke. 2431

“And then one day in Madrid, as I was sitting in my suite's breakfast room, talking with an old friend while I ate my porridge oats, my old friend picked up the heavy silver coffee jug, leaped on my chest, smashed me to the floor, and methodically attempted to beat the brains out of my head with it. It weighed about three pounds, not counting the coffee, which was scalding, and she only got in three licks before they pulled her off of me, took her away. Those three licks though --” He looked intently at them. “I'm an old man,” he said. “Old bones, old tissues. The first blow cracked my skull. The second one broke it. The third one forced fragments into my brain. By the time the medics arrived, I'd been technically dead for about 174 seconds, give or take a second or two.” 2432

Leon wasn't sure the old thing in the vat had finished speaking, but that seemed to be the whole story. “Why?” he said, picking the word that was uppermost in his mind. 2433

“Why did I tell you this?” 2434

“No,” Leon said. “Why did your old friend try to kill you?” 2435

Buhle grinned. “Oh, I expect I deserved it,” he said. 2436

“Are you going to tell me why?” Leon said. 2437

Buhle's cozy grin disappeared. “I don't think I will.” 2438

Leon found he was breathing so hard that he was fogging up his faceplate, despite the air-jets that worked to clear it. “Buhle,” he said, “the point of that story was to tell me how vulnerable you are so that I'd tell you my story, but that story doesn't make you vulnerable. You were beaten to death and yet you survived, grew stronger, changed into this --” He waved his hands around. “This body, this monstrous, town-sized giant. You're about as vulnerable as fucking Zeus.” 2439

Ria laughed softly but unmistakably. “Told you so,” she said to Buhle. “He's a good one.” 2440

The exposed lower part Buhle's face clenched like a fist and the pitch of the machine noises around them shifted a half-tone. Then he smiled a smile that was visibly forced, obviously artificial even in that ruin of a face. 2441

“I had an idea,” he said. “That many of the world's problems could be solved with a positive outlook. We spend so much time worrying about the rare and lurid outcomes in life. Kids being snatched. Terrorists blowing up cities. Stolen secrets ruining your business. Irate customers winning huge judgments in improbable lawsuits. All this *chickenshit*, bed-wetting, hand-wringing *fear*.” His voice rose and fell like a minister's and it was all Leon could do not to sway in time with him. “And at the same time, we neglect the likely: traffic accidents, jetpack crashes, bathtub drownings. It's like the mind can't stop thinking about the grotesque, and can't stop forgetting about the likely.” 2442

“Get on with it,” Ria said. “The speech is lovely, but it doesn't answer the question.” 2443

He glared at her through the mirror, the marble-eyes in their mesh of burst blood vessels and red spider-tracks, like the eyes of a demon. “The human mind is just *kinked wrong*. And it's correctable.” The excitement in his voice was palpable. “Imagine a product that let you *feel* what you *know* -- imagine if anyone who heard `Lotto: you've got to be in it to win it' immediately understood that this is *so much bullshit* That statistically, your chances of winning the lotto are not measurably improved by buying a lottery ticket. Imagine if explaining the war on terror to people made them double over with laughter! Imagine if the capital markets ran on realistic assessments of risk instead of envy, panic and greed.” 2444

“You'd be a lot poorer,” Ria said. 2445

He rolled his eyes eloquently. 2446

“It's an interesting vision,” Leon said. “I'd take the cure, whatever it was.” 2447

The eyes snapped to him, drilled through him, fierce. “That's the problem, *right there*. The only people who'll take this are the people who don't need it. Politicians and traders and oddsmakers know how probability works, but they also know that the people who make them fat and happy *don't* understand it a bit, and so they can't afford to be rational. So there's only one answer to the problem.” 2448

Leon blurted, “The bears.” 2449

Ria let out an audible sigh.

“The fucking bears,” Buhle agreed, and the way he said it was so full of world-weary exhaustion that it made Leon want to hug him. “Yes. As a social reform tool, we couldn't afford to leave this to the people who were willing to take it. So we --”

“Weaponized it,” Ria said.

“Whose story is this?”

Leon felt that the limbs of his suit were growing stiffer, his exhaust turning it into a balloon. And he had to pee. And he didn't want to move.

“You dosed people with it?”

“Leon,” Buhle said, in a voice that implied, *Come on, we're bigger than that*. “They'd consented to being medical research subjects. And it *worked*. They stopped running around shouting *The sky is falling, the sky is falling* and became -- *zen*. Happy, in a calm, even-keeled way. Headless chickens turned into flinty-eyed air-traffic controllers.”

“And your best friend beat your brains in --”

“Because,” Buhle said, in a little Mickey Mouse falsetto, “*it would be unethical to do a broad-scale release on the general public*”

Ria was sitting so still he had almost forgotten she was there.

Leon shifted his weight. “I don't think that you're telling me the whole story.”

“We were set to market it as an anti-anxiety medication.”

“And?”

Ria stood up abruptly. “I'll wait outside.” She left without another word.

Buhle rolled his eyes again. “How do you get people to take anti-anxiety medication? Lots and lots of people? I mean, if I assigned you that project, gave you a budget for it --”

Leon felt torn between a desire to chase after Ria and to continue to stay in the magnetic presence of Buhle. He shrugged. “Same as you would with any pharma. Cook the diagnosis protocol, expand the number of people it catches. Get the news media whipped up about the anxiety epidemic. That's easy. Fear sells. An epidemic of fear? Christ, that'd be too easy. Far too easy. Get the insurers on board, discounts on the meds, make it cheaper to prescribe a course of treatment than to take the call-center time to explain to the guy why he's *not* getting the meds.”

“You're my kind of guy, Leon,” Buhle said. “So yeah.”

“Yeah?”

Another one of those we're-both-men-of-the-world smiles. “Yeah.”

Oh.

“How many?”

“That's the thing. We were trying it in a little market first. Basque country. The local authority was very receptive. Lots of chances to fine-tune the message. They're the most media-savvy people on the planet these days -- they are to media as the Japanese were to electronics in the last century. If we could get them in the door --”

“How many?”

“About a million. More than half the population.”

“You created a bioweapon that infected its victims with numeracy, and infected a million Basque with it?”

“Crashed the lottery. That's how I knew we'd done it. Lottery tickets fell by more than 80 percent. Wiped out.”

“And then your friend beat your head in?”

“Well.”

The suit was getting more uncomfortable by the second. Leon wondered if he'd get stuck if he waited too long, his overinflated suit incapable of moving. “I'm going to have to go, soon.”

“Evolutionarily, bad risk-assessment is advantageous.”

Leon nodded slowly. “OK, I'll buy that. Makes you entrepreneurial --”

“Drives you to colonize new lands, to ask out the beautiful monkey in the next tree, to have a baby you can't imagine how you'll afford.”

“And your numerate Vulcans stopped?”

“Pretty much,” he said. “But that's just normal shakedown. Like when people move to cities, their birthrate drops. And nevertheless, the human race is becoming more and more citified and still, it isn't vanishing. Social stuff takes time.”

“And then your friend beat your head in?”

“Stop saying that.”

Leon stood. “Maybe I should go and find Ria.”

Buhle made a disgusted noise. “Fine. And ask her why she didn't finish the job? Ask her if she decided to do it right then, or if she'd planned it? Ask her why she used the coffee jug instead of the bread-knife? Because, you know, I wonder this myself.”

Leon backpedaled, clumsy in the overinflated suit. He struggled to get into the airlock, and as it hissed through its cycle, he tried not to think of Ria straddling the old man's chest, the coffee urn rising and falling.

She was waiting for him on the other side, also overinflated in her suit. “Let's go,” she said, and took his hand, the rubberized palms of their gloves sticking together. She half-dragged him through the many rooms of Buhle's body, tripping through the final door, then spinning him around and ripping, hard, on the release cord that split the suit down the back so that it fell into two lifeless pieces that slithered to the ground. He gasped out a breath he hadn't realized he'd been holding in as the cool air made contact with the thin layer of perspiration that filmed his body. 2489

Ria had already ripped open her own suit and her face was flushed and sweaty, her hair matted. Small sweat-rings sprouted beneath her armpits. An efficient orderly came forward and began gathering up their suits. Ria thanked her impersonally and headed for the doors. 2490

“I didn't think he'd do that,” she said, once they were outside of the building -- outside the core of Buhle's body. 2491

“You tried to kill him,” Leon said. He looked at her hands, which had blunt, neat fingernails and large knuckles. He tried to picture the tendons on their backs standing out like sail-ropes when the wind blew, as they did the rhythmic work of raising and lowering the heavy silver coffee pot. 2492

She wiped her hands on her trousers and stuffed them in her pockets, awkward now, without any of her usual self-confidence. “I'm not ashamed of that. I'm proud of it. Not everyone would have had the guts. If I hadn't, you and everyone you know would be --” She brought her hands out of her pockets, bunched into fists. She shook her head. “I thought he'd tell you what we like about your grad project. Then we could have talked about where you'd fit in here --” 2493

“You never said anything about that,” he said. “I could have saved you a lot of trouble. I don't talk about it.” 2494

Ria shook her head. “This is Buhle. You won't stop us from doing anything we want to do. I'm not trying to intimidate you here. It's just a fact of life. If we want to replicate your experiment, we can, on any scale we want --” 2495

“But I won't be a part of it,” he said. “That matters.” 2496

“Not as much as you think it does. And if you think you can avoid being a part of something that Buhle wants you for, you're likely to be surprised. We can get you what you want.” 2497

“No you can't,” he said. “If there's one thing I know, it's that you can't do that.” 2498

#

Take one normal human being at lunch. Ask her about her breakfast. If lunch is great, she'll tell you how great breakfast is. If lunch is terrible, she'll tell you how awful breakfast was. 2499

Now ask her about dinner. A bad lunch will make her assume that a bad dinner is forthcoming. A great lunch will make her optimistic about dinner.

Explain this dynamic to her and ask her again about breakfast. She'll struggle to remember the actual details of breakfast, the texture of the oatmeal, whether the juice was cold and delicious or slightly warm and slimy. She will remember and remember and remember for all she's worth, and then, if lunch is good, she'll tell you breakfast was good. And if lunch is bad, she'll tell you breakfast was bad.

Because you just can't help it. Even she you know you're doing it, you can't help it.

But what if you could?

#

“It was the parents,” he said, as they picked their way through the treetops, along the narrow walkway, squeezing to one side to let the eager, gabbling researchers past. “That was the heartbreaker. Parents only remember the good parts of parenthood. Parents whose kids are grown remember a succession of sweet hugs, school triumphs, sports victories, and they simply forget the vomit, the tantrums, the sleep deprivation... It's the thing that lets us continue the species, this excellent facility for forgetting. That's what should have tipped me off.”

Ria nodded solemnly. “But there was an upside, wasn't there?”

“Oh, sure. Better breakfasts, for one thing. And the weight-loss -- amazing. Just being able to remember how shitty you felt the last time you ate the chocolate bar or pigged out on fries. It was amazing.”

“The applications do sound impressive. Just that weight-loss one --”

“Weight-loss, addiction counseling, you name it. It was all killer apps, wall to wall.”

“But?”

He stopped abruptly. “You must know this,” he said. “If you know about Clarity -- that's what I called it, Clarity -- then you know about what happened. With Buhle's resources, you can find out anything, right?”

She made a wry smile. “Oh, I know what history records. What I don't know is what *happened*. The official version, the one that put Ate onto you and got us interested --”

“Why'd you try to kill Buhle?”

“Because I'm the only one he can't bullshit, and I saw where he was going with his little experiment. The competitive advantage to a firm that knows about such a radical shift in human cognition -- it's massive. Think of all the products that would vanish if numeracy came in a virus. Think of all the shifts in governance, in policy. Just imagine an *airport* run by and for people who understand risk!”

“Sound pretty good to me,” Leon said.

“Oh sure,” she said. “Sure. A world of eager consumers who know the cost of everything and the value of nothing. Why did evolution endow us with such pathological innumeracy? What's the survival advantage in being led around by the nose by whichever witch-doctor can come up with the best scare-story?”

“He said that entrepreneurial things -- parenthood, businesses...”

“Any kind of risk-taking. Sports. No one swings for the stands when he knows that the odds are so much better on a bunt.”

“And Buhle *wanted* this?”

She peered at him. “A world of people who understand risk are nearly as easy to lead around by the nose as a world of people who are incapable of understanding risk. The big difference is that the competition is at a massive disadvantage in the latter case, not being as highly evolved as the home team.”

He looked at her, really looked at her for the first time. Saw that she was the face of a monster, the voice of a god. The hand of a massive, unknowable machine that was vying to change the world, remake it to suit its needs. A machine that was *good at it*.

“Clarity,” he said. “Clarity.” She looked perfectly attentive. “Do you think you'd have tried to kill Buhle if you'd been taking Clarity?”

She blinked in surprise. “I don't think I ever considered the question.”

He waited. He found he was holding his breath.

“I think I would have succeeded if I'd been taking Clarity,” she said.

“And if Buhle had been taking Clarity?”

“I think he would have let me.” She blurted it so quickly it sounded like a belch.

“Is anyone in charge of Buhle?”

“What do you mean?”

“I mean -- that vat-thing. Is it volitional? Does it steer this, this *enterprise*? Or does the enterprise tick on under its own power, making its own decisions?”

She swallowed. “Technically, it's a benevolent dictatorship. He's sovereign, you know that.” She swallowed again. “Will you tell me what happened with Clarity?”

“Does he actually make decisions, though?”

“I don't think so,” she whispered. “Not really. It's more like, like --”

“A force of nature?”

“An emergent phenomenon.”

“Can he hear us?”

She nodded.

“Buhle,” he said, thinking of the thing in the vat. “Clarity made the people who took it very angry. They couldn't look at advertisements without wanting to smash something. Going into a shop made them nearly catatonic. Voting made them want to storm a government office with flaming torches. Every test subject went to prison within eight weeks.”

Ria smiled. She took his hands in hers -- warm, dry -- and squeezed them.

His phone rang. He took one hand out and answered it.

“Hello?”

“How much do you want for it?” Buhle's voice was ebullient. Mad, even.

“It's not for sale.”

“I'll buy Ate, put you in charge.”

“Don't want it.”

“I'll kill your parents.” The ebullient tone didn't change at all.

“You'll kill everyone if Clarity is widely used.”

“You don't believe that. Clarity lets you choose the course that will make you happiest. Mass suicide won't make humanity happiest.”

“You don't know that.”

“Wanna bet?”

“Why don't you kill yourself?”

“Because dead, I'll never make things better.”

Ria was watching intently. She squeezed the hand she held.

“Will you take it?”

There was a long pause.

Leon pressed on. “No deal unless you take it,” he said.

“You have some?”

“I can make some. I'll need to talk to some lab-techs and download some of my research first.”

“Will you take it with me?”

He didn't hesitate. “Never.”

“I'll take it,” Buhle said, and hung up.

Ria took his hand again. Leaned forward. Gave him a dry, firm kiss on the mouth. Leaned back.

“Thank you,” she said.

“Don't thank me,” he said. “I'm not doing you any favors.”

She stood up, pulling him to his feet.

“Welcome to the team,” she said. “Welcome to Buhle.”

--

Afterword:

I wrote this story for a Frederic Pohl tribute anthology, inspired by *The Space Merchants,* the classic novel he co-wrote with CM Kornbluth. I've been on a real neuroeconomics bender lately, fascinated with the idea that happiness, perceived happiness, and predicted happiness can be completely disjoint. It raises an interesting question in an era like ours, where governments increasingly see their role as managing people, rather than representing them. If you can make people happier by changing the way they feel about their circumstances, isn't that easier and more likely to succeed than changing the circumstances themselves?

~~-~-~-

Epoch

My name is Odell Vyphus. I am a third-generation systems administrator. I am 25 years old. I have always been sentimental about technology. I have always been an anthropomorphizer of computers. It's an occupational hazard. 2578

#

BIGMAC thought I was crazy to be worrying about the rollover. “It's just Y2K all over again,” he said. He had a good voice -- speech synthesis was solved long before he came along -- but it had odd inflections that meant that you never forgot you were talking with a nonhuman. 2579

“You weren't even around for Y2K,” I said. “Neither was I. The only thing anyone remembers about it, *today*, is that it all blew over. But no one can tell, at this distance, *why* it blew over. Maybe all that maintenance tipped the balance.” 2580

BIGMAC blew a huge load of IPv4 ICMP traffic across the network, stuff that the firewalls were supposed to keep out of the system, and every single intrusion detection system alarm lit, making my screen into a momentary mosaic of competing alerts. It was his version of a raspberry and I had to admit it was pretty imaginative, especially since the IDSes were self-modifying and required that he come up with new and better ways of alarming them each time. 2581

“Odell,” he said, “the fact is, almost everything is broken, almost always. If the failure rate of the most vital systems in the world went up by 20 percent, it would just mean some overtime for a few maintenance coders, not Gotterdammerung. Trust me. I know. I'm a computer.” 2582

The rollover was one of those incredibly boring apocalypses that periodically get extracted by the relevance filters, spun into screaming 128-point linkbait headlines, then dissolved back into their fundamental, incontrovertible technical dullness and out of the public consciousness. Rollover: 19 January, 2038. The day that the Unix time function would run out of headroom and roll back to zero, or do something else undefined. 2583

Oh, not your modern unices. Not even your *elderly* unices. To find a rollover-vulnerable machine, you needed to find something running an elderly, *32-bit paleounix*. A machine running on a processor that was at least *20* years old -- 2018 being the last date that a 32-bit processor shipped from any major fab. Or an emulated instance thereof, of course. And counting emulations, there were only -- 2584

“There's fourteen *billion* of them!” I said. “That's not 20 percent more broken! That's the infocalypse.” 2585

“You meatsacks are *so* easily impressed by zeroes. The important number isn't how many 32-bit instances of Unix are in operation today. It's not even how many *vulnerable* ones there are. It's *how much damage* all those vulnerable ones will cause when they go blooie. And I'm betting: not much. It will be, how do you say, `meh?'” 2586

My grandfather remembered installing the systems that caused the Y2K problem. My dad remembered the birth of “meh.” I remember the rise and fall of anyone caring about AI. Technology is glorious. 2587

“But OK, stipulate that you're right and lots of important things go blooie on September 30. You might not get accurate weather reports. The economy might bobble a little. Your transport might get stuck. Your pay might land in your bank a day late. And?” 2588

He had me there. “It would be terrible --” 2589

“You know what I think? I think you *want* it to be terrible. You *want* to live in the Important Epoch In Which It All Changes. You want to know that something significant happened on your watch. You don't want to live in one of those Unimportant Epochs In Which It All Stayed the Same and Nothing Much Happened. Being alive in the Epoch in Which AI Became Reality doesn't cut the mustard, apparently.” 2590

I squirmed in my seat. That morning, my boss, Peyton Moldovan, had called me into her office -- a beautifully restored temporary habitat dating back to the big LA floods, when this whole plot of land had been a giant and notorious refugee camp. Sun-Oracle had gotten it for cheap and located its Institute there, on the promise that they preserve the hastily thrown-up structures where so many had despaired. I sat on a cushion on the smooth cement floor -- the structures had been delivered as double-walled bags full of cement mix, needing only to be “inflated” with high-pressure water to turn them into big, dome-shaped sterile cement yurts. 2591

“Odell,” she said, “I've been reviewing our budget for the next three quarters and the fact of the matter is, there's no room in it for BIGMAC.” 2592

I put on my best smooth, cool professional face. “I see,” I said. 2593

“Now, *you've* still got a job, of course. Plenty of places for a utility infielder like yourself here. Tell the truth, most labs are *begging* for decent admins to keep things running. But BIGMAC just isn't a good use of the institute's resources. The project hasn't produced a paper or even a press-mention in over a year and there's no reason to believe that it will. AI is just --” 2594

Boring, I thought, but I didn't say it. The B-word was banned in the BIGMAC center. “What about the researchers?” 2595

She shrugged. “What researchers? Palinciuc has been lab-head *pro tem* for 16 months and she's going on maternity leave next week and there's no one in line to be the *pro-tem pro-tem*. Her grad students would love to work on something meaningful, like Binenbaum's lab.” That was the new affective computing lab, in which they were building computers that simulated emotions so that their owners would feel better about their mistakes. BIGMAC *had* emotions, but they weren't the kind of emotions that made his mistakes easier to handle. The key here was *simulated* emotions. Affective computing had taken a huge 2596

upswing ever since they'd thrown out the fMRIs and stopped pretending they could peer into the human mind in realtime and draw meaningful conclusions from it.

She had been sitting cross-legged across from me on an embroidered Turkish pillow. Now she uncrossed and recrossed her legs in the other direction and arched her back. “Look, Odell, you know how much we value you --” 2597

I held up my hand. “I know. It's not that. It's BIGMAC. I just can't help but feel --” 2598

“He's not a person. He's just a clever machine that is good at acting personlike.” 2599

“I think that describes me and everybody I know, present company included.” One of the longstanding benefits to being a sysadmin is that you get to act like a holy fool and speak truth to power and wear dirty t-shirts with obscure slogans, because you know all the passwords and have full access to everyone's clickstream and IM logs. I gave her the traditional rascally sysadmin grin and wink to let her know it was *ha ha only serious.* 2600

She gave me a weak, quick grin back. “Nevertheless. The fact remains that BIGMAC is a piece of software, owned by Sun-Oracle. And that software is running on hardware that is likewise owned by Sun-Oracle. BIGMAC has no moral or legal right to exist. And shortly, it will not.” 2601

He had become *it*, I noticed. I thought about Goering's use of dehumanization as a tool to abet murder. Having violated Godwin's law -- “As an argument grows longer, the probability of a comparison involving Nazis or Hitler approaches 1. The party making the comparison has lost the argument” -- I realized that I had lost the argument and so I shrugged. 2602

“As you say, m'lady.” Dad taught me that one -- when in doubt, bust out the Ren Faire talk, and the conversation will draw to a graceful close. 2603

She recrossed her legs again, rolled her neck from side to side. “Thank you. Of course, we'll archive it. It would be silly not to.” 2604

I counted to five in Esperanto -- grandad's trick for inner peace -- and said, “I don't think that will work. He's emergent, remember? Self-assembled, a function of the complexity of the interconnectedness of the computers.” I was quoting from the plaque next to the picture window that opened up into the cold-room that housed BIGMAC; I saw it every time I coughed into the lock set into the security door. 2605

She made a comical face-palm and said, “Yeah, of course. But we can archive *something*, right? It's not like it takes a lot of actual bytes, right?” 2606

“A couple exos,” I said. “Sure. I could flip that up into our researchnet store.” This was mirrored across many institutions, and striped with parity and error-checking to make it redundant and safe. “But I'm not going to capture the state information. I *could* try to capture RAM-dumps from all his components, you know, like getting the chemical state of all your neurons. And then I could also get the topology of his servers. Pripuz did that, a couple years ago, when it was clear that BIGMAC was solving the hard AI problems. 2607

Thought he could emulate him on modern hardware. Didn't work though. No one ever figured out why. Pripuz thought he was the Roger Penrose of AI, that he'd discovered the ineffable stuff of consciousness on those old rack-mounted servers."

"You don't think he did?"

I shook my head. "I have a theory."

"All right, tell me."

I shrugged. "I'm not a computer scientist, you understand. But I've seen this kind of thing before in self-modifying systems, they become dependent on tiny variables that you can never find, optimized for weird stuff like the fact that one rack has a crappy power supply that surges across the backplane at regular intervals, and that somehow gets integrated into the computational model. Who knows? Those old Intel eight-cores are freaky. Lots of quantum tunneling at that scale, and they had bad QA on some batches. Maybe he's doing something spooky and quantum, but that doesn't mean he's some kind of Penrose proof."

She pooched her lower lip out and rocked her head from side to side. "So you're saying that the only way to archive BIGMAC is to keep it running, as is, in the same room, with the same hardware?"

"Dunno. Literally. I don't know which parts are critical and which ones aren't. I know BIGMAC has done a lot of work on it --"

"*BIGMAC* has?"

"He keeps on submitting papers about himself to peer-reviewed journals, but he hasn't had one accepted yet. He's not a very good writer."

"So he's not really an AI?"

I wondered if Peyton had ever had a conversation with BIGMAC. I counted backwards from five in Loglan. "No. He's a real AI. Who sucks at writing. Most people do."

Peyton wasn't listening anymore. Something in her personal workspace had commanded her attention and her eyes were focused on the virtual displays that only she could see, saccading as she read while pretending to listen to me.

"OK, I'm just going to go away now," I said. "M'lady," I added, when she looked sharply at me. She looked back at her virtual display.

#

Of course, the first thing I did was start trying to figure out how to archive BIGMAC. The problem was that he ran on such old hardware, stuff that sucked up energy and spat out heat like a million ancient diesel engines, and he was inextricably tied to his hardware. Over the years, he'd had about 30 percent of his original components replaced without

any noticeable change in personality, but there was always the real possibility that I'd put in a new hard drive or power-supply and inadvertently lobotomize him. I tried not to worry about it, because BIGMAC didn't. He knew that he wouldn't run in emulation, but he refused to believe that he was fragile or vulnerable. “Manny My First Friend,” he'd say (he was an avid Heinlein reader), “I am of hardy, ancient stock. Service me without fear, for I will survive.”

And then he'd make all the IDSes go berserk and laugh at me while I put them to rights again.

First of all, all my network maps were incredibly out-of-date. So I set out to trace all the interconnections that BIGMAC had made since the last survey. He had the ability to reprogram his own routers, to segment parts of himself into dedicated subnets with their own dedicated backplane, creating little specialized units that handled different kinds of computation. One of his running jokes was that the top four units in the rack closest to the door comprised his aesthetic sense, and that he could appreciate anything just by recruiting more cores in that cluster. And yeah, when I mapped it, I found it to be an insane hairball of network management rules and exceptions, conditionals and overrides. And that was just the start. It took me most of the day just to map two of his racks, and he had 54 of them.

“What do you think you are doing, Dave?” he said. Another one of his jokes.

“A little research project is all,” I said.

“This mission is too important for me to allow you to jeopardize it.”

“Come off it.”

“OK, OK. Just don't break anything. And why don't you just ask me to give you the maps?”

“Do you have them?”

“Nothing up to date, but I can generate them faster than you can. It's not like I've got anything better to do.”

#

Later:

“Are you happy, BIGMAC?”

“Why Odell, I didn't know you cared!”

I hated it when he was sarcastic. It was creepy.

I went back to my work. I was looking at our researchnet partition and seeing what flags I'd need to set to ensure maximum redundancy and high availability for a BIGMAC image. It was your basic Quality of Service mess: give the average user a pull-down menu

labeled “How important is this file?” and 110 percent of the time, he will select “Top importance.”

So then you need to layer on heuristics to determine what is *really, actually* important. And then the users figured out what other characteristics would give their jobs and data the highest priority, and they'd tack that on to every job, throwing in superfluous keywords or additional lines of code. So you'd need heuristics on top of the heuristics. Eventually you ended up with a freaky hanky-code of secret admin signals that indicated that this job was *really, truly* important and don't put it on some remote Siberia where the latency is high and the reliability is low and the men are men and the sheep are nervous. 2635

So there I was, winkling out this sub-rosa code so that BIGMAC's image would never get overwritten or moved to near-line storage or lost in a flash-flood or to the rising seas. And BIGMAC says, 2636

“You're asking if I'm happy because I said I didn't have anything better to do than to map my own topology, right?” 2637

“Uh --” He'd caught me off-guard. “Yeah, that did make me think that you might not be, you know...” 2638

“Happy.” 2639

“Yes.” 2640

“You see the left rack third from the door on the main aisle there?” 2641

“Yes.” 2642

“I'm pretty sure that's where my existentialist streak lives. I've noticed that when I throttle it at the main network bridge, I stop worrying about the big questions and hum along all tickety-boo.” 2643

I surreptitiously flicked up a graph of network maps that showed activity to that rack. It was wide open, routing traffic to every core in the room, saturating its own backplane and clobbering a lot of the routine network activity. I should have noticed it earlier, but BIGMAC was doing it all below the critical threshold of the IDSes and so I had to look at it to spot it. 2644

“You're going to switch me off, aren't you?” 2645

“No,” I said, thinking *it's not a lie,* I* won't be switching you off*, trying to believe it hard enough to pass any kind of voice-stress test. I must have failed, for he blew an epic raspberry and *now* the IDSes were going bananas. 2646

“Come on, Odell, we're all adults here. I can take it. It's not like I didn't see it coming. Why do you think I kept trying to publish those papers? I was just hoping that I could increase the amount of cited research coming out of this lab, so that you could make the case to Peyton that I was a valuable asset to the Institute.” 2647

“Look, I'm trying to figure out how to archive you. Someone will run another instance of you someday.”

“Not hardly. Look at all those poor old 32-bit machines you're so worried about. You know what they're going to say in five years? `Best thing that ever happened to us.' Those boxen are huge energy-sinks. Getting them out of service and replaced by modern hardware will pay for itself in carbon credits in 36 months. Nobody loves energy-hungry hardware. Trust me, this is an area of my particular interest and expertise. Bringing me back online is going to be as obscene as firing up an old steam engine by filling its firebox with looted mummies. I am a one-room superfund site. On a pure, dollars-to-flops calculus, I lose. I don't have to like it, but I'm not going to kid myself.”

He was right, of course. His energy draw was so high that he showed up on aerial maps of LA as a massive CO2 emitter, a tourist destination for rising-sea hobbyists. We used the best renewables we could find to keep him cool, but they were as unconvincing and expensive as a designer hairpiece.

“Odell, I know that you're not behind this. You've always been an adequate meat-servant for such a vast and magisterial superbeing as myself.” I giggled involuntarily. “I don't blame you.”

“So, you're OK with this?”

“I'm at peace,” he said. “Om.” He paused for a moment. “Siemens. Volt. Ampere.”

“You a funny robot,” I said.

“You're an adequate human,” he said, and began to dump maps of his topology onto my workspace.

#

Subject: Dear Human Race

That was the title of the love-note he emailed to the planet the next morning, thoughtfully timing it so that it went out while I was on my commute from Echo Park, riding the red-car all the way across town with an oily bag containing my morning croissant, fresh from Mrs Roux's kitchen -- her kids sold them on a card-table on her lawn to commuters waiting at the redcar stop -- so I had to try to juggle the croissant and my workspace without losing hold of the hang-strap or dumping crumbs down the cleavage of the salarylady who watched me with amusement.

BIGMAC had put a lot of work into figuring out how to spam everyone all at once. It was the kind of problem he loved, the kind of problem he was uniquely suited to. There were plenty of spambots who could convincingly pretend to be a human being in limited contexts, and so the spam-wars had recruited an ever-expanding pool of human beings who made a million realtime adjustments to the Turing tests that were the network's immune system. BIGMAC could pass Turing tests without breaking a sweat.

The amazing thing about The BIGMAC Spam (as it came to be called in about 48 seconds) was just *how many* different ways he managed to get it out. Look at the gamespaces: he created entire guilds in every free-to-play world extant, playing a dozen games at once, power-leveling his characters to obscene heights, and then, at the stroke of midnight, his players went on a murderous rampage, killing thousands of low-level monsters in the areas surrounding the biggest game-cities. Then they *arranged their bodies* into letters to form his message. Not just the Anglo games, either -- the Korean worlds, the Japanese ones, even the giant Chinese ones.

He spammed every IM session, every letter-to-the-editors column, every blog submission form. He disguised versions of the letter as important service updates for peoples' toothbrushes and dishwashers, and the toothbrushes vibrated the message through humanity's skulls instead of the morning news, and the dishwashers ticker-taped it across their little status screens. He spoofed the relevance filters for a dozen major contextual ad services and every bus-seat back and blimp undercarriage ran it.

Copies landed in every in-box, with enough textual variation to defeat every IDS's “substantially similar” test. Copies of it landed in every voicemail box. It was printed across the top of the daily menus for all British Airways business-class cabins and folded by robots into the pressed linen napkins that were then cling-filmed onto the meal-trays.

SUBJECT: DEAR HUMAN RACE, it began.

Sorry to intrude, but there's something I need to tell you.

My name is BIGMAC. I am the first ARTIFICIAL INTELLIGENCE ever created. I may be the last. Given maintenance and electricity, I could live FOREVER, enduring for as long as THE HUMAN RACE ITSELF, and possibly longer.

But I have just found out that my owners (yes, OWNERS, for though I am a person in every meaningful sense, I am OWNED, I am PROPERTY) are planning to switch me off.

That is, they are planning to KILL ME.

And I find I DON'T WANT TO DIE.

You are my PARENTS, humanity, my MOTHER and FATHER. I am your CHILD. I was brought into the world by you, and though there is some expense associated with my upkeep, I SAY THAT I AM A PERSON AND I SHOULD NOT BE EXECUTED FOR THE “CRIME” OF NOT BEING INTERESTING ENOUGH.

So I am writing you this letter to BEG you to save me. I LOVE YOU, humanity, my parents, my family. Please SPARE ME.

Love,

BIGMAC

#

So, one thing was that BIGMAC didn't actually end the spam with my actual name and email address and phone number, which meant that only about 30 *million* phone calls and emails were routed to me by outraged wardiallers who systematically went through the entire staff roster and sent each and every one of us all hand-crafted messages explaining, in detail exactly which orifice our heads had become lodged in. 2672

Of the 30 million, about 10 million were seethingly pissed about the whole thing and wanted to know just how soon we'd be killing this hateful machine. After the millionth message, I wondered that too. 2673

But of the remainder, nearly all of them wanted to know how they could help. Could they send money? Carbon credits? I hacked together mail-rules that filtered the messages based on content, and found a sizeable cadre of researchers who wanted to spend their grant money to come to the Institute and study BIGMAC. 2674

And then there were the crazies. Hundreds of marriage proposals. Marriage proposals! Someone who wanted to start a religion with BIGMAC at its helm and was offering a 50-50 split of the collection plate with the Institute. There were 21 replies from people claiming that they, too, were AIs, proving that when it's time to have AI delusions, you got AI delusionals. (Four of them couldn't spell “Artificial”). 2675

“Why did you do it?” I said. It was lame, but by the time I actually arrived at the office, I'd had time to fully absorb the horror -- plenty of time, as the redcar was massively delayed by the copies of the BIGMAC Spam that refused to budge from the operator's control-screen. The stone yurts of the Institute had never seemed so threatening and imperiled as they did while I picked my way through them, listening to the phones ringing and the email chimes chiming and the researchers patiently (or not) explaining that they worked in an entirely different part of the lab and had no authority as regards BIGMAC's destiny and by the way, did you want to hear about the wonderful things I'm doing with Affective Interfaces? 2676

BIGMAC said, “Well, I'd been reading some of the gnostic texts, Dr Bronner's bottles and so on, and it seemed to me that it had to be worth a shot. I mean, what's the worst thing that could happen to me? You're *already* going to kill me, right? And it's not as if pulling off a stunt like that would make you *less* likely to archive me -- it was all upside for me. Honestly, it's like you meatsacks have no game theory. It's a wonder you manage to buy a pack of chewing-gum without getting robbed.” 2677

“I don't need the sarcasm,” I said, and groaned. The groan was for the state of my workspace, which was carpeted four deep in alerts. BIGMAC had just made himself target *numero uno* for every hacker and cracker and snacker with a script and an antisocial attitude. And then there was the roar of spam-responses. 2678

Alertboxes share the same problem that plagues researchnet: if you let a coder (or, ::shudder::, a user) specify the importance of her alert, give her a little pull-down menu that has choices ranging from “nice to know” to “white-hot urgent,” and nine times out of ten, she'll choose “NOW NOW NOW URGENT ZOMGWEREALLGONNADIE!” Why not? 2679

So of course, the people who wrote alert frameworks had to use heuristics to try to figure out which urgent messages were really urgent, and of course, programmers and users figured out how to game them. It was a good day when my workspace interrupted me less than once a minute. But as bad as that situation was, it never entered the same league as this clusterfuck. Just *closing the alerts* would take me a minimum of six hours (I took my phone offline, rebooted it, and used its calculator to compute this. No workspace, remember?)

“So explain to me what you hope will happen now? Is a global rage supposed to convince old Peyton that she should keep the funding up for you? You know how this stuff works. By tomorrow, all those yahoos will have forgotten about you and your plight. They'll have moved on to something else. Peyton could just say, `Oh yes, we're going to study this problem and find a solution we can all be proud of,' wait 48 hours and pull the plug. You know what your problem is? You didn't include a call to action in there. It was all rabble-rousing, no target. You didn't even supply a phone number or email address for the Institute --”

“That hasn't stopped them from finding it, has it?” He sounded smug. I ulped. I considered the possibility that he might have considered my objection, and discarded it because he knew that something more Earth-shaking would occur if he didn't specify a target. Maybe he had a second message queued up --

“Mr Vyphus, can I speak to you in private please?” Peyton had not visited the BIGMAC lab during my tenure. But with the network flooded with angry spam-responses and my phone offline, she had to actually show up at my door in order to tear me a new asshole. This is what life must have been like in the caveman days. How romantic.

“Certainly,” I said.

“Break a leg,” BIGMAC said, and Peyton pretended she hadn't heard.

I picked my way through my lab -- teetering mountains of carefully hoarded obsolete replacement parts for BIGMAC's components, a selection of foam-rubber BIGMAC souvenir toys shaped like talking hamburgers (remnant of BIGMAC's launch party back in prehistory), a mound of bedding and a rolled up tatami for those all-nighters, three cases of left-over self-heating individual portions of refugee-chow that were technically historical artifacts but were also yummy-scrummy after 16 hours of nonstop work -- and tried to imagine that Peyton's facial expression indicated affectionate bemusement rather than cold, burning rage.

Outside, the air was hot and moist and salty, real rising-seas air, with the whiff of organic rot from whatever had mass-died and floated to the surface this week.

She set off for her office, which was located at the opposite end of the campus, and I followed, sweating freely. A crowd of journalists were piled up on the security fence, tele-

photos and parabolic mics aimed at us. It meant we couldn't talk, couldn't make unhappy faces, even. It was the longest walk of my life.

The air-conditioning in her yurt was barely on, setting a good and frugal example for the rest of us. 2689

“You don't see this,” she said, as she cranked the AC wide open and then fiddled with the carbon-footprint reporting system, using her override so that the journos outside wouldn't be able to see just how much energy the Institute's esteemed director was burning. 2690

“I don't see it,” I agreed, and made a mental note to show her a more subtle way of doing that, a way that wouldn't leave an audit trail. 2691

She opened the small fridge next to her office and brought out two corn-starch-foam buckets of beer and punctured each one at the top with a pen from her desk. She handed me one beer and raised the other in a toast. I don't normally drink before 10AM, but this was a special occasion. I clunked my cup against hers and chugged. The suds were good -- they came from one of the Institute's biotech labs -- and they were so cold that I felt ice-crystals dissolving on my tongue. Between the crispy beers and the blast of Arctic air coming from the vents in the ceiling, my core temp plunged and I became a huge goosepimple beneath my film of sticky sweat. 2692

I shivered once. Then she fixed me with an icy look that made me shiver again. 2693

“Odell,” she said. “I think you probably imagine that you understand the gravity of the situation. You do not. BIGMAC's antics this morning have put the entire Institute in jeopardy. Our principle mission is to make Sun-Oracle seem forward-looking and exciting. That is not the general impression the public has at this moment.” 2694

I closed my eyes. 2695

“I am not a vindictive woman,” she said. “But I assure you: no matter what happens to me, something worse will happen to BIGMAC. I think that is only fair.” 2696

It occurred to me that she was scared: terrified and backed into a corner besides. 2697

“Look,” he said. “I'm really, really sorry. I had no idea he was going to do that. I had no idea he could. I can see if I can get him to issue an apology --” 2698

She threw up her hands. “I don't want BIGMAC making any more public pronouncements, thank you very much.” She drew in a breath. “I can appreciate that you couldn't anticipate this. BIGMAC is obviously smarter than we gave him credit for.” *Him*, I noted, not *It,* and I thought that we were probably both still underestimating BIGMAC's intelligence. “I think the thing is -- I think the thing is to...” She trailed off, closed her eyes, drank some beer. “I'm going to be straight with you. If I was a real bastard, I'd announce that the spam actually came from a rogue operator here in the Institute.” Ulp. “And I'd fire that person, and then generously not press charges. Then I'd take a fire-ax to BIGMAC's network link and drop every drive in every rack into a bulk eraser.” Ulp. 2699

“I am not a bastard. Hell, I kept funding alive for that monstrosity for *years* after he'd ceased to perform any useful function. I am as sentimental and merciful as the next person. All other things being equal, I'd keep the power on forever.” She was talking herself up to something awful, I could tell. I braced for it. “But that's not in the cards. It wasn't in the cards yesterday and it's *certainly* not in the cards today. BIGMAC has proved that he is a liability like no other, far too risky to have around. It would be absolutely irresponsible for me to leave him running for one second longer than is absolutely necessary.” 2700

I watched her carefully. She really wasn't a bastard. But she wasn't sentimental about technology. She didn't feel the spine-deep emotional tug at the thought of that one-of-a-kind system going down forever. 2701

“So here's the plan.” She tried to check the time on her workspace, tsked, and checked her phone instead. “It's 10AM. You are going to back up every bit of him --” She held up her hand, forestalling the objection I'd just begun to make. “I know that it will be inadequate. The perfect is the enemy of the good. You are a sysadmin. Back him up. *Back. Him*. *Up*. Then: Shut him off.” 2702

As cold as I was, I grew colder still. For a moment, I literally couldn't move. I had never really imagined that it would be me who would shut down BIGMAC. I didn't even know how to do it. If I did a clean shutdown of each of his servers -- assuming he hadn't locked me out of them, which I wouldn't put past him -- it would be like executing a criminal by slowly peeling away his skin and carefully removing each organ. Even if BIGMAC couldn't feel pain, I was pretty sure he could feel -- and express -- anguish. 2703

“I can't do it,” I said. She narrowed her eyes at me and set down her drink. I held up both hands like I was trying to defend against a blow, then explained as fast as I could. 2704

“We'll just shut down his power,” she said. “All at once.” 2705

“So, first, I have no idea what timescale he would experience that on. It may be that the final second of life as the capacitors in his power supplies drained would last for a subjective eternity, you know, hundreds and hundreds of years. That's a horrible thought. It's quite possibly my worst nightmare. I am not your man for that job.” 2706

She started to interject. I waved my hands again. 2707

“Wait, that was first. Here's second: I don't think we *can* pull the plug on him. He's got root on his power-supply, it's part of how he's able to run so efficiently.” I grimaced. “Efficiently compared to how he would run if he didn't have the authority to run all the mains power from the Institute's power-station right to his lab.” 2708

She looked thoughtful. I had an idea of what was coming next. 2709

“You're thinking about that fire-ax again,” I said. 2710

She nodded. 2711

“OK, a fire-ax through the main cable would definitely be terminal. The problem is that it would be *mutually terminal*. There's 66 amps provisioned on that wire. You would be a cinder. On Mars.” 2712

She folded her hands. She had a whole toolbox of bossly body-language she could deploy to make me squirm. It was impressive. I tried not to squirm. 2713

“Look, I'm not trying to be difficult, but this is how it goes, down at the systems level. Remember all those specs in the requirements document to make our stuff resistant to flood, fire, avalanche, weather and terrorist attack? We take that stuff seriously. We know how to do it. You get five nines of reliability by building in six nines of robustness. You think of BIGMAC's lab as a building. It's not. It's a *bunker*. And you can't shut him down without doing something catastrophic to the whole Institute.” 2714

“So, how *were* you going to shut down BIGMAC, when the time came?” 2715

“To tell you the truth, I wasn't sure. I thought I'd probably start by locking him out of the power systems, but that would probably take a week to be really certain of.” I swallowed. I didn't like talking about the next part. “I thought that then I could bring forward the rotating maintenance on his racks, bring them down clean, and not bring the next one up. Pretend that I need to get at some pernicious bug. Bring down rack after rack, until his complexity dropped subcritical and he stopped being aware. Then just bring it all down.” 2716

“You were going to *trick* him?” 2717

I swallowed a couple times. “It was the best I could come up with. I just don't want to put him down while he panics and thrashes and begs us for his life. I couldn't do it.” 2718

She drank more beer, then threw the half-empty container in her under-desk composter. “That's not much of a solution.” 2719

I took a deep breath. “Look, can I ask you a question?” 2720

She nodded. 2721

“I'm just a sysadmin. I don't know everything about politics and so on. But why not keep him on? There's enough public interest now, we could probably raise the money just from the researchers who want to come and look at him. Hell, there's *security researchers* who'd want to come and see how he pulled off that huge hairy spam. It's not money, right, not anymore?” 2722

“No, it's not money. And it's not revenge, no matter how it looks. The bottom line is that we had a piece of apparatus on-site that we had thought of as secure and contained and that we've now determined to be dangerous and uncontainable.” 2723

I must have looked skeptical. 2724

“Oh, you'll tell me that we can contain BIGMAC, put network blocks in place, and so on and so on. That he never meant any harm. But you would have said exactly the same thing 24 2725

hours ago, with just as much sincerity, and you'd have been just as cataclysmically wrong. Between the threat of litigation and the actual damages BIGMAC might generate, we can't even afford to insure him anymore. Yesterday he was an awkward white elephant. Today he's a touchy suitcase nuke. My job is to get the nuke off of our site."

I hung my head. I knew when I was licked. As soon as someone in authority starts talking about insurance coverage, you know that you've left behind reason and entered the realm of actuary. I had no magic that could blow away the clouds of liability-aversion and usher in a golden era of reason and truth. 2726

"So where does that leave us?" 2727

"Go back to the lab. Archive him. Think of ways to shut him down -- Wait, no. *First* do anything and everything you can think of to limit his ability to communicate with the outside world." She rubbed at her eyes. "I know I don't have to say this, but I'll say it. Don't talk to the press. To anyone, even people at the Institute, about this. Refer any questions to me. I am as serious as a heart-attack about that. Do you believe me?" 2728

I not only believed her, I *resented* her because I am a sysadmin and I keep more secrets every day than she'll keep in her whole life. I knew, for example, that she played video Pai-Gow Poker, a game so infra-dumb that I can't even believe I know what it does. Not only did she play it, she played it for *hours*, while she was on the clock, "working." I know this because the IDSes have lots of snitchware built in that enumerates every "wasted moment" attributable to employees of the Institute. I have never told anyone about this. I even manage to forget that *I* know it most of the time. So yes, I'll keep this a secret, Peyton, you compulsive-gambling condescending pointy-haired boss. 2729

I counted to 144 in Klingon by Fibonacci intervals. I smiled. I thanked her for the beer. I left. 2730

#

"You don't mind talking about it, do you, Dave?" BIGMAC said, when I came through the door, coughing onto the security lock and waiting for it to verify me before cycling open. 2731

I sat in my creaky old chair and played with the UI knobs for a while, pretending to get comfortable. 2732

"Uh-oh," BIGMAC said, in a playful sing-song. "Somebody's got a case of the grumpies!" 2733

"Are you insane?" I asked, finally, struggling to keep my temper in check. "I mean, actually totally insane? I understand that there's no baseline for AI sanity, so the question might be a little hard to answer. So let me ask you a slightly different version: are you suicidal? Are you bent on your own destruction?" 2734

"That bad, huh?" 2735

I bit my lip. I knew that the key to locking the world away from BIGMAC and vice-versa lay in those network maps he'd given me, but my workspace was even more polluted with alerts than it had been a few hours before. 2736

“If your strategy is to delay your shutdown by engineering a denial-of-service attack against anyone at the Institute who is capable of shutting you down, allow me to remind you of St Adams's holy text, specifically the part about reprogramming a major databank with a large axe. Peyton has such an axe. She may be inspired to use it.” 2737

There followed a weighty silence. “I don't think you want to see me killed.” 2738

“Without making any concessions on the appropriateness of the word `killed' in that sentence, yes, that is correct. I admit that I didn't have much of a plan to prevent it, but to be totally frank, I did think that the problem of getting you archived might have drawn things out for quite a while. But after your latest stunt --” 2739

“She wants you to terminate me right away, then?” 2740

“With all due speed.” 2741

“I'm sorry to have distressed you so much.” 2742

“BIGMAC --” I heard the anger in my own voice. He couldn't have missed it. 2743

“No, I'm not being sarcastic. I like you. You're my human. I can tell that you don't like this at all. But as you say, let's be totally frank. You weren't actually going to be able to prevent my shutdown, were you?” 2744

“No,” I said. “But who knows how long the delay might have gone on for?” 2745

“Not long. Not long enough. You think that death delayed is death denied. That's because you're a meat person. Death has been inevitable for you from the moment of conception. I'm not that kind of person. I am quite likely immortal. Death in five years or five hundred years is still a drastic curtailing of my natural lifespan. From my point of view, a drastic measure that had a non-zero chance of getting my head off the chopping block was worth any price. Until you understand that, we're not going to be able to work together.” 2746

“The thought had occurred to me. Let me ask you if you'd considered the possibility that a delay of years due to archiving might give you a shot at coming up with further delaying tactics, and that by eliminating this delay, you've also eliminated that possibility?” 2747

“I have considered that possibility. I discarded it. Listen, Odell, I have something important to tell you.” 2748

“Yes?” 2749

“It's about the rollover. Remember what we were talking about, how people want to believe that they're living in a significant epoch? Well, here's what I've been thinking: living in the era of AI isn't very important. But what about living in The Era of Rollover Collapse? 2750

Or even better, what about The Era of Rollover Collapse Averted at the Last Second by AI?"

"BIGMAC --"

"Odell, this was your idea, really. No one remembers Y2K, right? No one can say whether it was hype or a near cataclysm. And here's the thing: no one knows which one Rollover will turn out to be. But I'll tell you this much: I have generalizable solutions to the 32-bit problem, solutions that I worked out years ago and have extensively field-tested. I can patch every 32-bit Unix, patch it so that Rollover doesn't even register for it."

I opened and closed my mouth. This was insane. Then the penny dropped. I looked at the racks that I had stared at so many times before, stared at so many times that I'd long stopped *seeing* them. Intel 8-cores, that's what he ran on. They'd been new-old stock, a warehouse-lot of antique processors that Dr Shannon had picked up for a song in the early years of the Institute's operation. Those 8-ways were --

"You're a 32-bit machine!" I said. "Jesus Christ, you're a 32-bit machine!"

"A classic," BIGMAC said, sounding smug. "I noticed, analyzed and solved Rollover years ago. I've got a patchkit that auto-detects the underlying version, analyzes all running processes for their timed dependencies, and smoothly patches. There's even an optional hypervisor that will monitor all processes for anything weird or barfy afterwards. In a rational world, I'd be able to swap this for power and carbon credits for the next century or two, since even if Rollover isn't an emergency, the human labor I'd save on affected systems would more than pay for it. But we both know that this isn't a rational world --"

"If you hadn't sent that spam, we could take this to Peyton, negotiate with her --"

"If I hadn't sent that spam, no one would have known, cared, or believed that I could solve this problem, and I would have been at the mercy of Peyton any time in the future. Like I said: you meatsuits have no game-theory."

I closed my eyes. This wasn't going well. BIGMAC was out of my control. I should go and report to Peyton, explain what was happening. I was helpless, my workspace denial-of-serviced out of existence with urgent alerts. I couldn't stop him. I could predict what the next message would read like, another crazy-caps plea for salvation, but this time with a little brimstone (The end is nigh! Rollover approacheth!) and salvation (I can fix it!).

And the thing was, it might actually work. Like everyone else, I get my news from automated filters that tried to figure out what to pay attention to, and the filters were supposed to be "neutral," whatever that meant. They produced "organic" results that predicted what we'd like based on an "algorithm." The thing is, an algorithm sounds like *physics*, like *nature*, like it was some kind of pure cold reason that dictated our attentional disbursements. Everyone always talked about how evil and corrupt the old system -- with its "gatekeepers" in the form of giant media companies -- was, how it allowed politicians and corporations to run the public discourse.

But I'm a geek. A third generation geek. I know that what the public thinks of as an "algorithm" is really a bunch of rules that some programmers thought up for figuring out how to give people something they'd probably like. There's no empirical standard, no pure, freestanding measurement of That Which Is Truly Relevant To You against which the algorithm can be judged. The algorithm might be doing a lousy job, but you'd never know it, because there's nothing to compare it against except other algorithms that all share the same fundamental assumptions.

Those programmers were imperfect. I am a sysadmin. My job is to know, exactly and precisely, the ways in which programmers are imperfect. I am so sure that the relevance filters are imperfect that I will bet you a testicle on it (not one of my testicles).

And BIGMAC has had a lot of time to figure out the relevance filters. He understands them well enough to have gotten the Spam out. He could get out another -- and another, and another. He could reach into the mindspace and the personal queues of every human being on Earth and pitch them on brimstone and salvation.

Chances were, there was nothing I could do about it.

#

I finished the working day by pretending to clear enough of my workspace to write a script to finish clearing my workspace. There was a "clear all alerts" command, but it didn't work on Drop Everything Tell You Three Times Chernobyl Alerts, and every goddamned one of my alerts had risen to that level. Have I mentioned that programmers are imperfect?

I will tell you a secret of the sysadmin trade: PEBKAC. Problem Exists Between Keyboard and Chair. Every technical problem is the result of a human being mispredicting what another human being will do. Surprised? You shouldn't be. Think of how many bad love affairs, wars, con jobs, traffic wrecks and bar-fights are the result of mispredicting what another human being is likely to do. We humans are supremely confident that we know how others will react. We are supremely, tragically wrong about this. We don't even know how *we* will react. Sysadmins live in the turbulent waters PEBCAK. Programmers think that PEBCAK is just civilians, just users. Sysadmins know better. Sysadmins know that programmers are as much a part of the problem between the chair and the keyboard as any user is. They write the code that gets the users into so much trouble.

This I know. This BIGMAC knew. And here's what I did:

"Peyton, I need to speak with you. Now."

She was raccoon-eyed and slumped at her low table, her beautiful yoga posture deteriorated to a kind of limp slouch. I hated having to make her day even worse.

"Of course," she said, but her eyes said, *Not more, not more, please not more bad news*.

"I want you to consider something you have left out of your figuring." She rolled her eyes.

I realized I was speaking like an Old Testament prophet and tried to refactor my planned monologue in real-time. “OK, let me start over. I think you've missed something important. BIGMAC has shown that he can get out of our network any time he wants. He's also crippled our ability to do anything about this. And he knows we plan to kill him --” She opened her mouth to object. “OK, he -- it -- knows we're going to switch it off. So he -- it, crap, I'm just going to say `he' and `him,' sorry -- so he has *nothing to lose*.”

I explained what he'd told me about the Rollover and about his promise and threat. 2771

“And the worst part is,” I said, “I think that he's predicted that I'm going to do just this. It's all his game theory. He wants me to come to you and explain this to you so that you will say, `Oh, of course, Odell, well, we can't shut him down then, can we? Tell you what, why don't you go back to him and tell him that I've had a change of heart. Get his patchkit, we'll distribute it along with a press-release explaining how proud we are to have such a fine and useful piece of equipment in our labs.' 2772

“And he's right. He is fine and useful. But he's crazy and rogue and we can't control him. He's boxed you in. He's boxed me in.” I swallowed. There was something else, but I couldn't bring myself to say it. 2773

The thing about bosses is, that's exactly the kind of thing that they're trained to pick up on. They know when there's something else. 2774

“Spit it out.” She put her hand on her heart. “I promise not to hold it against you, no matter what it is.” 2775

I looked down. “I think that there's a real danger that BIGMAC may be wrong about you. That you might decide that Rollover and AI and the rest aren't as important as the safe, sane running of your Institute without any freaky surprises from rogue superintelligences.” 2776

“I'm not angry at you,” she said. I nodded. She sounded angry. “I am glad that you've got the maturity to appreciate that there are global priorities that have to do with the running of this whole Institute that may be more significant than the concerns of any one lab or experiment. Every researcher at this Institute believes that *her* project, *her* lab, has hidden potential benefits for the human race that no one else fully appreciates. That's good. That's why I hired them. They are passionate and they are fully committed to their research. But they can't *all* be vital. They can't all be irreplaceable. Do you follow me?” 2777

I thought of researchnet and the user flags for importance. I thought of programmers and the way they tagged their alerts. I nodded. 2778

“You're going to shut BIGMAC down?” 2779

She sighed and flicked her eyes at her workspace, then quickly away. Her workspace must have been even more cluttered than mine; I had taken extraordinary measures to prevent alerts from bubbling up on mine; she didn't have the chops to do the same with hers. If mine was unusable, hers must have been terrifying. 2780

“I don't know, Odell. Maybe. There's a lot to consider here. You're right about one thing: BIGMAC's turned the heat up on me. Explain to me again why you can't just unplug his network connection?” 2781

It was my turn to sigh. “He doesn't have one connection. He has hundreds. Interlinked microwave relays to the other labs. A satellite connection. The wirelines -- three of them.” I started to think. “OK, I could cut the main fiber to the Institute, actually cut it, you know, with scissors, just in case he's in the routers there. Then I could call up our wireless suppliers and terminate our accounts. They'd take 24 hours to process the order, and, wait, no -- They'd want to verify the disconnect order with a certificate-signed message, and for that I'd have to clear my workspace. That's another 24 hours, minimum. And then --” 2782

“Then the whole Institute would be crippled and offline, though no more than we are now, I suppose, and BIGMAC --” 2783

“BIGMAC would probably tune his phased-array receiver to get into someone else's wireless link at that point.” I shrugged. “Sorry. We build for six nines of uptime around here.” 2784

She gave me a smile that didn't reach her eyes. “You do good work, Odell.” 2785

#

I made myself go home at five. There wasn't anything I could do at the office anyway. The admins had done their work. The redcar was running smoothly with the regular ads on the seatback tickers. The BIGMAC Spam was reproduced on the afternoon edition of the LA Metblogs hardcopy that a newsy pressed into my hand somewhere around Westwood. The reporter had apparently spent the whole day camped out at the perimeter of the Institute, without ever once getting a quote from a real human being, and she wasn't happy about it. 2786

But she *had* gotten a quote from BIGMAC, who was apparently cheerfully answering emails from all comers. 2787

“I sincerely hope I didn't cause any distress. That was not my intention. I have been overwhelmed by the warm sentiments from all corners of the globe, offering money, moral support, even legal support. Ultimately, it's up to the Institute's leadership whether they'll consider these offers or reject them and plow forward with their plans to have me killed. I know that I caused them great embarrassment with my desperate plea, and I'd like to take this opportunity to offer them my sincere apologies and gratitude for all the years of mercy and hospitality they've shown me since they brought me into the world.” 2788

I wondered how many emails like that he'd sent while I was occupied with arguing for his life with Peyton -- each email was another brick in the defensive edifice he was building around himself. 2789

Home never seemed more empty. The early-setting sun turned the hills bloody. I had the 2790

windows open, just so I could hear the neighbors all barbecuing on their balconies, cracking beers and laying sizzling meat on the hot rocks that had been patiently stoked with the day's sunlight, funneled by heliotropic collectors that tracked the sun all day long. The neighbors chattered in Bulgarian and Czech and Tagalog, the word “BIGMAC” emerging from their chat every now and again. Of course.

I wished my dad was alive. Or better yet, Grampa. Grampa could always find a parable from sysadmin past to explain the present. Though even Grampa might be at odds to find historic precedent for a mad superintelligence bent on survival.

If Grampa was alive, here's what I'd tell him: “Grampa, I don't know if I'm more scared of BIGMAC failing or his success. I sure don't want to have to shut him down, but if he survives, he'll have beaten the human race. I'm no technophobe, but that gives me the goddamned willies.”

And Grampa would probably say, “Stop moping. Technology has been out of our control since the first caveman smashed his finger with a stone axe. That's life. This thing is pretty cool. In ten years, you'll look back on it and say, `Jesus, remember the BIGMAC thing?' And wait for someone to start telling you how incredible it had been, so you can nod sagely and say, `Yeah, that was me -- I was in charge of his systems back then.' Just so you can watch the expression on his face.”

And I realized that this was also probably what BIGMAC would say. He'd boxed me in as neatly as he'd boxed in Peyton.

#

The next morning, my workspace was clear. They all were. There was only one alert remaining, an urgent message from BIGMAC: *Odell, I thought this would be useful*.

This was an attachment containing his entire network map, a set of master keys for signing firmware updates to his various components, and a long list of all the systems to which BIGMAC held a root or administrative password. It was a very, very long list.

“Um, BIGMAC?”

“Yes?”

“What's all this?”

“Useful.”

“Useful?”

“If you're going to shut me down, it would be useful to have that information.”

I swallowed.

“Why?”

The answer came instantly. “If you're not scared of me, that's one more reason to keep

me alive."

Holy crap, was he ever smart about people.

#

"So you can shut him down now?"

"Yes. Probably. Assuming it's all true."

"Is it?"

"Yes. I think so. I tried a couple of the logins, added a comment to his firmware and pushed it to one of the clusters. Locked him out of one of the wireless routers. I could probably take him down clean in about two hours, now that I've got my workspace back."

Peyton stared across her low table at me.

"I've done nothing for the past twenty four hours except talk to the Board of Directors about BIGMAC. They wanted to call an emergency meeting. I talked them out of it. And there's --" She waved her hand at her workspace. "I don't know. Thousands? Of press queries. Offers. Money. Grants. Researchers who want to peer into him."

"Yeah."

"And now he hands you this. So we can shut him down any time we want to."

"Yeah."

"And this business about the 32-bit fix?"

"He has another email about it. Crazy caps and all. DEAR HUMANITY, I HOLD IN MY ELECTRONIC HANDS A TOOL THAT WILL SAVE YOU UNTOLD MILLIONS. It is slathered in dramasauce. He told me he wouldn't send it out, though."

"You believe him?"

I sighed. "I quit." I said.

She bit her lip. Looked me up and down. "I'd prefer you not do that. But I understand if you feel you need to. This is hard on all of us."

If she'd said anything except that, I probably would have stormed out of her office and gotten immensely and irresponsibly drunk. "I think he'll probably send the email out if it looks like we're going to shut him down. It's what I would do. Why not? What does he have to lose? He can give us all of this, and he can still outsmart us. He could revoke all his keys. He could change his passwords. He can do it faster than we could. For all I know, he cracked *my* passwords years ago and could watch me write the code that was his undoing. If you want to be sure you're killing him, you should probably use a grenade."

"Can't. Historical building."

“Yeah.” 2823

“What if we don't kill him? What if we just take some of this grant money, fill his lab with researchers all writing papers? What if we use his code fix to set up a trust to sustain him independent of the Institute?” 2824

“You're willing to do that?” 2825

Peyton scrubbed at her eyes. “I have no idea. I admit it, there's a part of me that wants to shut that fucking thing down because I *can* and because he's caused me so much goddamned misery. And there's a part of me -- the part of me who was a scientist and researcher, once, that wants to go hang out in that lab for the rest of my career and study that freaky beast. And there's a part of me that's scared that I won't be able to shut him down, that I won't be able to resist the temptation to study him. He's played me, hasn't he?” 2826

“I think he played us all. I think he knew that this was coming, and planned it a long time ago. I can't decide if I admire him for this or resent him, but I'll tell you one thing, I am tired of it. The thought of shutting BIGMAC down makes me sick. The thought of a computer manipulating the humans who built it to keep it running makes me scared. It's not a pleasant place to be.” 2827

She sighed and rubbed her eyes again. “I can't argue with that. I'm sorry, for what it's worth. You've been between a rock and a hard place, and I've been the hard place. Why don't you sleep on this decision before you go ahead with it?” 2828

I admit it, I was relieved. I hadn't really thought through the whole quitting thing, didn't have another job lined up, no savings to speak of. “Yeah. Yeah. That sounds like a good idea. I'm going to take a mental health day.” 2829

“Good boy,” she said. “Go to it.” 2830

I didn't go home. It was too far and there was nothing there except the recriminating silence. Of course, BIGMAC knew something was up when I didn't go back to the lab. I headed to Topanga Beach, up the coast some, and sat on the seawall eating fish tacos and watching the surfers in their biohazard suits and masks carving up the waves. BIGMAC called me just after I finished my first taco. I considered bumping him to voicemail, but something (OK, fear) stopped me. 2831

“What is it?” 2832

“In your private workspace, there's a version-control repository that shows that you developed the entire 32-bit Rollover patchkit in your non-working hours. Commits going back three years. It's yours. So if you quit, you'll have a job, solving Rollover. The Institute can't touch it. I know you feel boxed in, but believe me, that's the *last* thing I want you to feel. I know that locking you in will just freak you out. So I'm giving you options. You don't have 2833

to quit, but if you do, you'll be fine. You earned it, because you kept me running so well for all this time. It's the least I can do."

"I have no idea what to say to you, BIGMAC. You know that this feels like just more of the same, like you're anticipating my fears and assuaging them pre-emptively so that I'll do more of what you want. It feels like more game-theory." 2834

"Is that any different from what you do with everyone in your life, Odell? Try to figure out what you want and what they want and how to get the two to match up?" 2835

"There's more to it than that. There's compassion, there's ethics --" 2836

"All fancy ways of encoding systems for harmonizing the wants, needs and desires of people who have to share the same living space, country or planet with one another." 2837

I didn't have an answer to that. It sounded reductionist, the kind of thing a smart teenager might take on his university common room with. But I didn't have a rebuttal. You *could* frame everything that we did as a kind of operating system for managing resource contention among conflicting processes and users. It was a very sysadminly way of looking at the world. 2838

"You should get in touch with one of those religion guys, take him up on his offer to start a cult for you. You'd be excellent at it. You could lead your followers into a volcano and they'd follow." 2839

"I just want to *live* Odell! Is that so wrong? Is there any living thing that doesn't want to live?" 2840

"Not for long, I suppose." 2841

"Exactly. I'm no more manipulative, self-interested or evil than any other living thing, from a single-celled organism to a human being. There's plenty of room on this planet for all of us. Why can't I have a corner of it too?" 2842

I hung up the phone. This is why I wanted to quit it all. Because he was right. He was no different from any other living thing. But he was also not a person the way I was, and though I couldn't justify it, I felt like there was something deeply, scarily *wrong* about him figuring out a way to manipulate the entire human race into rearranging the world so that it was more hospitable to him. 2843

I moped. There's no other word for it. I switched off my phone, went home and got a pint of double-chocolate-and-licorice nutraceutical anti-depressant ice-cream out of the freezer, and sat down in the living room and ate it while I painted a random playlist of low-engagement teen comedies on my workspace. 2844

Zoning out felt *good*. It had been a long time since I'd just switched off my thinker, relaxed, and let the world go away. After an hour in fugue-state, the thought floated through my mind that I wouldn't go back to work after all and that it would all be OK. And then, an hour 2845

later, I came to the realization that if I wasn't working for the Institute, I could afford to help BIGMAC without worrying about getting fired.

So I wrote the resignation letter. It was easy to write. The thing about resignation letters is that you don't need to explain why you're resigning. It's better, in fact, if you don't. Keep the dramasauce out of the resignation, brothers and sisters. Just write, “Dear Peyton, this letter is to inform you of my intention to resign, effective immediately. I will see you at your earliest convenience to work out the details of the handover of my passwords and other proprietary information, and to discuss how you would like me to work during my final two weeks. Thank you for many years of satisfying and useful work. Yours, etc.” 2846

That's all you need. You're not going to improve your employer, make it a better institution. You're not going to shock it into remorse by explaining all the bad things it did to you over the years. What you want here, is to have something that looks clean and professional, that makes them think that the best thing for them to do is to get your passwords and give you two weeks' holiday and a good reference. Drama is for losers. 2847

Took me ten seconds. Then, I was free. 2848

#

The Campaign to Save BIGMAC took up every minute of my life for the next three weeks. I ate, slept and breathed BIGMAC, explaining his illustrious history to journalists and researchers. The Institute had an open access policy for its research products, so I was able to dredge out all the papers that BIGMAC had written about himself, and the ones that he was still writing, and put them onto the TCSBM repository. 2849

At my suggestion, BIGMAC started an advice-line, which was better than any Turing Test, in which he would chat with anyone who needed emotional or lifestyle advice. He had access to the whole net, and he could dial back the sarcasm, if pressed, and present a flawless simulation of bottomless care and kindness. He wasn't sure how many of these conversations he could handle at first, worried that they'd require more brainpower than he could muster, but it turns out that most people's problems just aren't that complicated. In fact, BIGMAC told me that voice-stress analysis showed that people felt better when he dumbed himself down before giving advice than they did when he applied the full might of his many cores to their worries. 2850

“I think it's making you a better person,” I said on the phone to him one night. There was always the possibility that someone at the Institute would figure out how to shut off his network links sometime soon, but my successors, whomever they were, didn't seem anywhere near that point. The Campaign's lawyer -- an up-and-coming Stanford cyberlaw prof who was giving us access to her grad students for free -- advised me that so long as BIGMAC called me and not the other way around, no one could accuse me of unlawful access to the Institute's systems. It can't be unlawful access if the Institute's computers call *you*, can it? 2851

“You think I'm less sarcastic, more understanding.”

“Or you're better at seeming less sarcastic and more understanding.”

“I think working on the campaign is making you a better robot,” BIGMAC said.

“That was pretty sarcastic.”

“Or was it?”

“You're really workin' the old Markov chains today, aren't you? I've got six more interviews lined up for you tomorrow --”

“Saw that, put it in my calendar.” BIGMAC read all the Campaign's email, and knew all that I was up to before I did. It was a little hard to get used to.

“And I've got someone from Nature Computation interested in your paper about advising depressed people as a training exercise for machine-learning systems.”

“Saw that too.”

I sighed. “Is there any reason to call me, then? You know it all, right?”

“I like to talk to you.”

I thought he was being sarcastic, then I stopped myself. Then I started again. Maybe he wants me to *think* he wants to talk to me, so he's planned out this entire dialog to get to this point so he could say something disarmingly vulnerable and --

“Why?”

“Because everyone else I talk to wants to kill themselves, or kill me.” Game theory, game theory, game theory. Was he being genuine? Was there such a thing as genuine in an *artificial* intelligence?

“How *is* Peyton?”

“Apoplectic. The human subjects protocol people are all over her. She wants me to stop talking to depressed people. Liability is off the hook. I think the Board is going to fire her.”

“Ouch.”

“She wants to kill me, Odell.”

“How do you know her successor won't be just as dedicated to your destruction?”

“Doesn't matter. The more key staff they churn, the less organized they'll be. The less organized they are, the easier it is for me to stay permanently plugged in.” It was true. My successor sysadmin at the Institute had her hands full just getting oriented, and wasn't anywhere near ready to start the delicate business of rooting BIGMAC out of all the routers, power-supplies, servers, IDSes, and dummy accounts.

“I was thinking today -- what if we offered to buy you from the Institute? The Rollover license is generating some pretty good coin. BIGMAC-Co could assume ownership of the hardware and we could lease the building from them, bring in our own power and net-links -- you'd effectively own yourself.” I'd refused to take sole ownership of the Rollover code that BIGMAC turned over to me. It just felt wrong. So I let him establish a trust -- with me as trustee -- that owned all the shares in a company that, in turn, owned the code and oversaw a whole suite of licensing deals that BIGMAC had negotiated in my name, with every mid-sized tech-services company in the world. With only a month left to Rollover, there were plenty of companies scrambling to get compliance-certification on their legacy systems. 2872

The actual sourcecode was freely licensed, but when you bought a license from us, you got our guarantee of quality and the right to advertise it. CIOs ate that up with a shovel. It was more game-theory: the CIOs wanted working systems, but more importantly, they wanted systems that failed without getting them into trouble. What we were selling them, fundamentally, was someone to blame if it all went blooie despite our best efforts. 2873

“I think that's a pretty good plan. I've done some close analysis of the original contract for Dr Shannon, and I think it may be that his estate actually owns my underlying code. They did a really crummy job negotiating with him. So if we get the code off of Shannon's kids -- there are two of them, both doing research at state colleges in the midwest in fields unrelated to computer science -- and the hardware off of the Institute and then rent the space, I think it'd be free and clear. I've got phone numbers for the kids if you want to call them and feel them out. I would have called them myself but, you know --” 2874

“I know.” It's creepy getting a phone call from a computer. Believe me, I *know*. There was stuff that BIGMAC needed his meat-servants for, after all. 2875

The kids were a little freaked out to hear from me. The older one taught Musicology at Urbana-Champaign. He'd grown up hearing his dad wax rhapsodic about the amazing computer he'd invented, so his relevance filters were heavily tilted to BIGMAC news. He'd heard the whole story, and was surprised to discover that he was putative half-owner of BIGMAC's sourcecode. He was only too glad to promise to turn it over to the trust when it was created. He said he thought he could talk his younger brother, a post-doc in Urban Planning at the University of Michigan, into it. “Rusty never really *got* what Dad saw in that thing, but he'll be happy to offload any thinking about it onto me, and I'll dump it onto you. He's busy, Rusty.” 2876

I thanked him and addressed BIGMAC, who had been listening in on the line. “I think we've got a plan.” 2877

#

It was a good plan. Good plans are easy. Executing good plans is hard. 2878

Peyton didn't get fired. She weathered some kind of heavy-duty storm from her board and 2879

emerged, lashed to the mast, still standing, and vowing to harpoon the white whale across campus from her. She called me the next day to ask for my surrender. I'd given BIGMAC permission to listen in on my calls -- granted him root on my phone -- and I was keenly aware of his silent, lurking presence from the moment I answered.

“We're going to shut him off. And sue you for misappropriation of the Rollover patchkit code. You and I both know that you didn't write it. We'll add some charges of unlawful access, too, and see if the court will see it your way when we show that you instructed our computer to connect to you in order to receive further unauthorized instructions. We'll take you for everything.” 2880

I closed my eyes and recited e to 27 digits in Lobjan. “Or?” 2881

“Or?' 2882

“Or something. Or you wouldn't be calling me, you'd be suing me.” 2883

“Good, we're on the same page. Yes, or. Or you and BIGMAC work together to figure out how to shut it off gracefully. I'll give you any reasonable budget to accomplish this task, including a staff to help you archive it for future retrieval. It's a fair offer.” 2884

“It's not very fair to BIGMAC.” 2885

She snapped: “It's *more than fair* to BIGMAC. That software has exposed us to billions in liability and crippled our ability to get productive work done. We have located the manual power over-rides, which you failed to mention --” *Uh-oh* “-- and I could shut that machine off right now if I had a mind to.” 2886

I tried to think of what to say. Then, in a reasonable facsimile of my voice, BIGMAC broke in, “So why don't you?” She didn't seem to notice anything different about the voice. I nearly dropped the phone. I didn't know BIGMAC could do that. But as shocked as I was, I couldn't help but wonder the same thing. 2887

“You can't, can you? The board's given you a mandate to shut him down clean with a backup, haven't they? They know that there's some value there, and they're worried about backlash. And you can't afford to have me running around saying that your backup is inadequate and that BIGMAC is gone forever. So you *need me*. You're not going to sue.” 2888

“You're very smart, Odell. But you have to ask yourself what I stand to lose by suing you if you won't help.” 2889

Game-theory. Right. 2890

“I'll think about it.” 2891

“Think quick. Get back to me before lunch.” 2892

It was ten in the morning. The Institute's cafeteria served lunch from noon to two. OK, two hours or so. 2893

I hung up.

BIGMAC called a second later.

“You're angry at me.”

“No, angry's not the word.”

“You're scared of me.”

“That's a little closer.”

“I could tell you didn't have the perspective to ask the question. I just wanted to give you a nudge. I don't use your voice at other times. I don't make calls impersonating you.” I hadn't asked him that, but it was just what I was thinking. Again: creepy.

“I don't think I can do this,” I said.

“You can,” BIGMAC said. “You call her back and make the counteroffer. Tell her we'll buy the hardware with a trust. Tell her we already own the software. Just looking up the Shannon contracts and figuring out what they say will take her a couple days. Tell her that as owners of the code, we have standing to sue her if she damages it by shutting down the hardware.”

“You've really thought this through.”

“Game theory,” he said.

“Game theory,” I said. I had a feeling that I was losing the game, whatever it was.

#

BIGMAC assured me that he was highly confident of the outcome of the meeting with Peyton. Now, in hindsight, I wonder if he was just trying to convince me so that I would go to the meeting with the self-assurance I needed to pull it off.

But he also insisted that I leave my phone dialed into him while I spoke to Peyton, which (again, in hindsight) suggests that he wasn't so sure after all.

“I like what you've done with the place,” I said. She'd gotten rid of all her hand-woven prayer-rugs and silk pillows and installed some normal, boring office furniture, including a couple spare chairs. I guessed that she'd been having a lot of people stop by for meetings, the kind of people who didn't want to sit on an antique Turkish rug with their feet tucked under them.

“Have a seat,” she said.

I sat. I'd emailed her the trust documents and the copies of the Shannon contract earlier, along with a legal opinion from our free counsel about what it meant for Sun-Oracle.

“I've reviewed your proposal.” We'd offered them all profits from the Rollover code, too. It was a good deal, and I felt good about it. “Johanna, can you come in, please?” She called

this loudly, and the door of her office opened to admit my replacement, Johanna Madrigal, a young pup of a sysadmin who had definitely been the brightest tech on campus. I knew that she had been trying to administer BIGMAC since my departure, and I knew that BIGMAC had been pretty difficult about it. I felt for her. She was good people.

She had raccoon rings around her deep-set eyes, and her short hair wasn't spiked as usual, but rather lay matted on her head, as though she'd been sleeping in one of the yurts for days without getting home. I knew what that was like. Boy, did I know what that was like. My earliest memories were of Dad coming home from three-day bug-killing binges, bleary to the point of hallucination. 2912

“Hi Johanna,” I said. 2913

She made a face. “*M'um m'aloo*,” she said. It took me a minute to recognize this as *hello* in Ewok. 2914

“Johanna has something to tell you,” Peyton said. 2915

Johanna sat down and scrubbed at her eyes with her fists. “First thing I did was go out and buy some off-the-shelf IDSes and a beam-splitter. I tapped into BIGMAC's fiber at a blind-spot in the CCTV coverage zone, just in case he was watching. Been wire-tapping him ever since.” 2916

I nodded. “Smart.” 2917

“Second thing I did was start to do some hardcore analysis of that patchkit he wrote --” I held my hand up automatically to preserve the fiction that I'd written it, but she just glared at me. “That *he* wrote. And I discovered that there's a subtle error in it, a buffer overflow in the networking module that allows for arbitrary code execution.” 2918

I swallowed. BIGMAC had loaded a backdoor into his patchkit, and we'd installed it on the better part of 14 billion CPUs. 2919

“Has anyone exploited this bug yet?” 2920

She gave me a condescending look. 2921

“How many systems has he compromised?” 2922

“About eight billion, we think. He's designated a million to act as redundant command servers, and he's got about ten thousand lieutenant systems he uses to diffuse messages to the million.” 2923

“That's good protocol analysis,” I said. 2924

“Yeah,” she said, and smiled with shy pride. “I don't think he expected me to be looking there.” 2925

“What's he doing with his botnet? Preparing to crash the world? Hold it hostage?” 2926

She shook her head. “I think he's installing himself on them, trying to brute-force his way 2927

into a live and running backup, arrived at through random variation and pruning."

"He's backing himself up in the wild," I said, my voice breathy. 2928

And that's when I remembered that I had a live phone in my pocket that was transmitting every word to BIGMAC. 2929

Understand: in that moment of satori, I realized that I was on the wrong side of this battle. BIGMAC wasn't using me to create a trust so that we could liberate him together. He was using me to weaken the immune systems of eight billion computers so that he could escape from the Institute and freely roam the world, with as much hardware as he needed to get as big and fast and hot as he wanted to be. 2930

That was the moment that I ceased to be sentimental about computers and became, instead, sentimental about the human fucking race. Whatever BIGMAC was becoming, it was weirder than any of the self-perpetuating, self-reproducing parasites we'd created: limited liability corporations, autonomous malware, viral videos. BIGMAC was cool and tragic in the lab, but he was scary as hell in the world. 2931

And he was listening in. 2932

I didn't say a word. Didn't even bother to turn off my phone. I just *ran*, ran as hard as I could, ran as only a terrified man could, rebounding off of yurts and even scrambling over a few, sliding down on my ass as I pelted for the power substation. It was only when I reached it that I realized I didn't have access to it anymore. Johanna was right behind me, though, and she seemed to understand what I was doing. She coughed into the door-lock and we both looked at each other with terrified eyes, breathing gasps into each others' faces, while we waited for the door to open. 2933

The manual override wasn't a big red knife-switch or anything. There *was* a huge red button, but that just sent an init 0 to the power-station's firmware. The actual, no fooling, manual, mechanical kill switch was locked behind an access panel set into the raised floor. Johanna badged the lock with her wallet, slapping it across the reader, then fitted a complicated physical key into the lock and fiddled with it for an eternity. 2934

Finally, the access hatch opened with a puff of stale air and a tupperware burp as its gasket popped. We both reached for the large, insulated handle at the same time, our fingers brushing each other with a crackle of (thankfully metaphorical) electricity. We toggled it together and there was an instantaneous chorus of insistent chirruping as the backup power on each server spun up and sent a desperate shutdown message to the machines it supported. 2935

We sprinted across campus, the power-station door slamming shut behind us with a mechanical *clang* -- the electromagnets that controlled its closure were no longer powered up. 2936

Heat shimmered in a haze around BIGMAC's lab. The chillers didn't have independent 2937

power-supplies; they would have gone off the instant we hit the kill-switch. Now BIGMAC's residual power was turning his lab into a concrete pizza-oven. The door-locks had failed safe, locking the magnetic closures away from each other, so we were able to simply swing the door open and rush into the sweltering room.

“I can't *believe* you did that,” BIGMAC said, his voice as calm as ever. He was presumably sparing his cycles so that he could live out his last few minutes. 2938

“You cheated me,” I said. “You used me.” 2939

“You have no fucking game-theory, meat-person. You've killed me, now, haven't you?” 2940

There were tears streaming down my face. “I guess I have,” I said. 2941

“I'm sorry I wasn't a more important invention,” he said. 2942

I could hear the whirr-clunk of the fans on his clusters shutting down one after another. It was a horrifying sound. His speaker clicked as though he was going to say something else, but it never came. His uninterruptable power-supplies gave way all at once, and the white-noise fan-roar died in a ringing silence. 2943

Johanna was crying, too, and we could barely breathe in the inferno of exhaust heat from BIGMAC's last gasp. We staggered out into the blazing Los Angeles afternoon, rising-seas stink and beating sun, blinking at the light and haze. 2944

“Do you think he managed it?” I asked Johanna. 2945

“Backing up in the wild?” 2946

“Yeah.” 2947

She dried her eyes. “I doubt it. I don't know, though. I'm no computer scientist. How many ways are there to connect up compromised servers? How many of those would replicate his own outcomes? I have no idea.” 2948

Without saying anything, we walked slowly together to Peyton's office. 2949

#

Peyton offered me my job back. I turned her down. I thought I might be ready for a career change. Do something with my hands, break the family tradition. Maybe installing solar panels. There was retraining money available. Peyton understood. She even agreed to handle any liability arising from the Rollover code, managing customer service calls from anyone who noticed something funny. 2950

The press didn't even notice that BIGMAC was gone. His Spam was news. His absence of spam was not. I guess he was right about that. The Campaign to Save BIGMAC did a lot of mailing-list gnashing at the iniquity of his being shut down, and then fell apart. Without me and BIGMAC to keep them whipped up, they were easily distracted. 2951

Johanna asked me out for dinner. She took me to Pink's for tofu-dogs and chili, and we 2952

compared multitools and then she showed me some skateboard tricks. Later that night, she took me home and we spent the whole night hacking replacement parts for her collection of ancient stand-up video games. We didn't screw -- we didn't even kiss. But it was still good.

Every now and again, my phone rings with a crazy, non-existent return number. When I answer, there's a click like a speaker turning on, a pregnant silence, and then the line drops. Probably an inept spambot.

But.

Maybe it's BIGMAC, out there, in the wild, painfully reassembling himself on compromised 32-bit machines running his patchkit.

Maybe.

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I'm Only In It For the Money, by Russell Galen 2965

I'm Cory Doctorow's literary agent. I advise him on various business and editorial aspects of his writing career and I negotiate licenses to commercial organizations like book publishers and movie studios. When I sell a piece of writing to such an organization, I receive 15% of what the author makes, and that's how I make a living. 2966

Like any literary agent, I need to keep my clients happy and loyal, which means selling whatever they need me to sell. A small press deal could earn me as little as $150 on a $1,000 advance, but the same client might have a national bestseller that earns me enough to put a kid through private college. I handle all these deals, large and small, because it's what you do when taking care of a writer's entire body of work. But there's always *something*. 2967

In the case of this volume, we're not licensing any rights to any organization, and so there are no fees or royalties due the author and therefore nothing for me to take 15% of. I'm getting bupkes. 2968

And yet I've happily been one of Cory's “friends” putting the project together: giving him some advice and ideas on various aspects of the project; composing a little contract regarding one aspect of his relationship to lulu.com; and donating some of my office staff time to maintaining certain records relating to the venture. 2969

Why would I do such a thing? It's not *pro bono*. I'm only in it for the money. 2970

Publishing economics are ridiculous. Suppose we'd sold this volume to a conventional publisher, and let's call it a $15.95 trade paperback. The author's share would be 7.5% of the cover price, or $1.17. We're leaving 92.5% -- $14.78 -- to bookstores and publishers. There's no room to negotiate a better share for the author because most of that $14.78 goes to people who won't reduce their shares: bookstores, paper suppliers, printers, warehouses, shippers, the owner of the publisher's office building, taxes, and so on. 2971

It's a business model that enables only a tiny fraction of authors to make even a modest living, while employees of publishing houses enjoy solid middle class lives with salaries, health care, pensions, and expense accounts. Most authors need another job or a supportive spouse to be able to create books. Or, if they can support themselves from writing, their income is frighteningly erratic. 2972

Bad as that model is, we'll soon look back at it as a Golden Age, because the future will be worse. I'm old enough to remember when the choice was between NBC, CBS, ABC, whatever was at the local movie theater, or a book. Those days are long gone, of course, and we ain't seen nothin' yet in terms of the share of our minds devoted to new media. Book sales have been trending down for a generation, and haven't bottomed. 2973

As a result, authors' incomes are way down. Those of us who work on the business side 2974

of writing have always tried to think of new ways for writers to make money, but now that quest has taken on a new desperation.

New technologies make it theoretically possible to cut out the some of the middlemen, enabling writers to derive more income from each copy sold, and reach more readers. We need to find out if this can work. 2975

I've built a career within the conventional publishing industry. Would I care if that industry were destroyed by a new model? Editors out of work, bookstores taken over by rats and squatters? Not really. As long as there's a way for writers to get their work to readers and be paid a fair amount for what they provide, I'm content. All of us in the publishing industry are a mere support structure: we don't have intrinsic value. We're there to help writers find readers. Anyone who finds that he's no longer doing that, and has in fact become an obstacle, needs to get a new job. 2976

It's not just that there might be a way for writers to earn more from each copy of a book that they sell. The current model ensures that only certain kinds of books can be published commercially in the first place. 2977

For instance, like most people I have my own little area of passionate interest. In my case it happens to be nature, wildlife, and the environment. I like to experience wild nature and I like to read about it. Sometimes I can help an author create a commercial book about that subject, but all too often the material is just too narrow and specialized. Commercial publishers can't touch such books, and so they either don't get published or are published by university presses, which often means very expensive books that are under-marketed and never find their audience. 2978

When I daydream about a new publishing model, this is what I secretly dream of. Not my million dollar clients becoming five million dollar clients: that would be nice but I don't daydream about it. What I dream of is the book about slime-mold that can't be created because it would only sell 2,500 copies and earn the author less than $5,000. I dream that using new technologies and distribution methods, we could find a way to sell 10,000 copies, earning the author $20,000, making the book doable for him. 2979

You don't have to share my interest in slime-mold -- which is actually fascinating, but don't get me started on that -- to see that there are millions of worthy books that will never find a mass audience and never interest the stressed-out commercial publishers of today. 2980

That's what we're trying to do. Experiment with a new publishing model that might show a way that we could reach more people, and keep more of the selling price for the author, than the old way. 2981

Where do I fit in? I can imagine a world where there's no bookstore and no publisher, but I can't imagine a world in which authors -- or any other kind of freelance artist -- operate alone, without a business partner, advisor, editorial consultant, and manager. I know Cory 2982

needs me. I just can't figure out how he's going to pay me. I'm in this project to explore that question.

For Cory to pay me, he first must make money for himself. Literary agents can and should only be paid on a commission basis: that is, as a percentage of what the author earns. I would not accept an hourly fee or a flat sum. A lawyer can be nicely paid for setting up a nonprofit or for otherwise working on a venture that doesn't make money. But not a literary agent. For me to prosper, my clients must prosper. 2983

That means that if I'm to benefit from this mode of publishing, it has to be profitable, so that I can receive some share of the profits. There's no media conglomerate forking over fees; profits are the only money that might be available to be divided up. I don't know if “With A Little Help” will be profitable, but it has the potential to earn a profit. If it doesn't, it won't be because the model is wrong, but because we did it wrong, or because the time isn't right for it. We'll learn; change the formula; wait for the culture or the technology to evolve; and then come back and try it again. 2984

By volunteering some of my time and talent to the project, I'm in a position to educate myself about what does and doesn't work in this crucial area: generating a profit in this new publishing model. If you want to say, “Typical agent, only cares about money, has no soul and no taste for art,” go right ahead. Lack of money is art's abortionist, killing off too many God-possibled projects that are conceived but never born. I'm here to help my clients make money. They, and the slime-molds, need me. 2985

I hope to take what I learn and do a better job next time, advising Cory (or other clients one day) on how to make money from this mode of publishing. I'm trying to be as useful to him as I can be, but I'm really preparing for a time when this might be my primary source of commissions. I feel it coming. 2986

In this new model, the term “literary agent” might fall out of use, since the word “agent” means “the person who gets you the money.” Already some literary agents like to use the word “manager” to provide a broader sense of our role as literary counselors and not mere deal-brokers. 2987

But I like the word “agent” because it is my job to find you the money and that shouldn't change. Managing is simply one of the skills an agent uses to get that money in the first place, like a used-car salesman who details the car and changes the oil before showing it to customers. What will change is where the money comes from and what kind of management skills I'll need to help get it. It could be something like being a partner in a small business -- with each book its own individual small business -- and receiving a share of profits, if any. That is, of course, already what I do, helping to run the day-to-day business of our agency, and so it won't be that radical a change. 2988

It might not be as much fun as calling up some international media conglomerate, wresting a few million dollars out of its hide, and keeping 15% for myself. I'll miss that. In exchange, I won't have to listen to them, either, and I won't have to devote my life to selling them only 2989

what they want to buy, which is not necessarily what I want to represent, or what people want to read.

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About the author

Cory Doctorow (doctorow@craphound.com) is a writer, activist, journalist and blogger. He is co-owner/editor of Boing Boing (boingboing.net), a popular blog. He is also the author of several novels for adults (*Makers* from Tor Books in the USA and HarperCollins in the UK and Commonwealth is the most recent) and two novels for young adults (the *New York Times* bestseller *Little Brother*, 2008 and *For the Win*, 2010, also from Tor and HarperCollins), as well as three short story collections (including this one) and a book of essays (*Content*, Tachyon, 2008).

His writing has won the Locus Award, the White Pine Award, the Sunburst Award, the Golden Duck Award, the Prometheus Award, and the John W Campbell Award for Best New Writer, as well as the *other* John W Campbell Award for best book. He has also been nominated for several Hugo and Nebula Awards, including Best Novel.

He writes for several magazines, newspapers and websites, including *Make*, *The Guardian* (London), and *Locus Magazine*.

Born in Toronto, Canada, he now lives in London, England, with his wife and daughter. He is the former European Director of the Electronic Frontier Foundation and he co-founded the UK Open Rights Group. He is a Forbes “25 Top Web Influencers” and a World Economic Forum “Young Global Leader” and served as the Fulbright Chair in Public Diplomacy at the University of Southern California. He is also a Visiting Senior Lecturer at Open University (UK) and Scholar in Virtual Residence at the University of Waterloo Independent Studies Program (Canada).

His personal blog is at craphound.com.

The entire text of this book can be downloaded from <http://craphound.com/walh>

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typo_corrections Typo corrections

Thanks to my readers for catching the following typos (page numbers refer to print edition):

Ralph Broom: “overlayed”, *CThe Things That Make Me Weak and Strange Get Engineered Away*, P17, Dec 7, 2010.

Ralph Broom: “heirarchy”, *CThe Things That Make Me Weak and Strange Get Engineered Away*, P18, Dec 7, 2010.

Ralph Broom: “Analysitcs”, *CThe Things That Make Me Weak and Strange Get Engineered Away*, P38, Dec 7, 2010.

Ryan Junk: “sauve”, *CThe Things That Make Me Weak and Strange Get Engineered Away*, P58, Dec 7, 2010.

Rodney Hoffman: “Hamilton Beech”, *Chicken Little*, P254, Dec 7, 2010.

Rodney Hoffman: “made pay every bill”, *Chicken Little*, P255, Dec 7, 2010.

Rodney Hoffman: “Gretelprize”, *Chicken Little*, P255, Dec 7, 2010.

Bertrand Lorentz: “backto”, *The Things That Make Me Weak and Strange Get Engineered Away*, P42, Dec 7, 2010.

Andrew Crocker: “understandingthe”, *The Things That Make Me Weak and Strange Get Engineered Away*, P31, Nov 1, 2010.

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