

## AN IDEA WHOSE TIME HAD COME

by Robert Grossbach

We'll always have new frontiers—and problems that keep catching up with us!

If it's comfort to anybody, I'm probably my own worst torturer. My sole defense (an admittedly weak one) is that the inevitable often becomes obvious only in retrospect. Tiny missteps are magnified by chaotic unpredictability until they become catastrophes. My actions were far from the proximate causes of the disaster they spawned, but still ... still ... how did I fail to see?

I will say this: You have to put it in context. The times were desperate. By 2115, America had become a third-rate and very nearly a third-world power. Asia had a four trillion new-dollar balance of trade advantage and could make us do virtually anything by threatening to withhold purchase of our Treasury notes. Medicare had declared bankruptcy four decades earlier. We'd been banned from using the International Space Elevator for failure to pay our dues. Our last manufacturer of anything, GE, had gone under in 2083: We'd become a nation that produced virtually nothing. And don't give me that re-warmed twenty-first century "information era" bullshit. The real players make *stuff*: holovisions, cars, quantum computers, stem cell rejuvenants, superconductors, airplanes. Extract metals from the earth or synthesize nanoware in factories and make things that help people live better, longer, more productively. Our biggest exports remained Hollywood spectacles and rock music. A secession movement was gaining strength in the "Southwest Alliance," as the nascent coalition of Southland, Arizona, New Mexico, Nevada, Colorado, and Utah had presumptuously begun calling itself. Our borders were non-existent.

Everybody knew it and all political parties agreed: We were in deep shit and sinking fast.

The thought came to me spontaneously, arising from no particular stimulant I can remember. It was about 9:00 a.m. on a balmy September day and I was taking my usual walk on Oregon Avenue near Rock Creek Park in DC when it just sort of flew into my head: An Idea Whose Time Had Come. I guess I should first tell you this, if you don't already know: At the time I was a man of some accomplishment. Political hack might be one description, ex-congressman from Suffolk County, NY, another; ex-national secretary of transportation, ex-presidential co-chief of staff, philandering never-home cheapskate (this, not totally inaccurate, from my ex-wife), king-maker, behind-the-scenes power broker, back-room double-dealing manipulating insider—all of those apply to some extent. The point is, I had access, and when I got the Idea Whose Time Had Come, I could very quickly command the attention of the right people to turn it into reality. The first one I called was Evan Hager, and we met that very day at 1:00 p.m. at the Democratic National Committee Headquarters on South Capitol.

"So you actually believe an artificial intelligence can be president of the United States...." Hager said. He smoothed one of his few remaining hair strands up against his fat, deeply grooved, sweat-streaked forehead. His tone was what one would expect if I'd told him I believed a parakeet would be an excellent choice to sing lead tenor in *Pagliacci*.

"I think it's a necessity. And by the way, Evan, 'AI' has not been considered PC for twenty years."

"Right." He shook his head. "NBI. You happy?"

“No, what I’m thinking of is not a pure non-biological intelligence, but rather something with a few DNA strands thrown in.”

“Hybrid intelligence. HI. You know what? Screw that. Sounds like a marriage between a dolphin and a Toyota.”

“Whatever you call them, Russia has one as Premier, India has one, China has one, Japan has one, Korea has one, Brazil has one. The whole world is pulling away from us, Evan. They have every piece of information on everything—their economies, their air traffic, their medical resources and costs, their militaries—instantly at their”—I was about to say fingertips—”disposal.”

“And control.”

“Yes, and control. But that’s not necessarily a bad thing. It’s exactly what makes them so efficient. And precisely why they’re wiping the floor with us in all respects.”

“Dictatorships are always efficient.”

“Oh, come on, Evan, stop with the debater’s points. You know very well even here the head HIs get input—instant input, I should add—from every congressperson, senator, military branch, ombudsmen citizens’ panel, science organization, university—virtually everyone everywhere with half a brain—and they integrate that into their thought process. They can’t *not* integrate it; it’s hard wired for Chrissake. Just look at Minnesota, Oregon, Southland, Nevada, Missouri...” I’d named the five states that, at the time, had HIs as governors. “There are no disasters there. In fact, they’re all doing super well.”

Hager forced a stertorous mass of air through his generous nostrils. “This is not Minnesota, Lenny.”

I leaned back in the antique French Mahogany easy chair, peered at him over the top of my spectacles. (Yes, I have optiplants; the spectacles are an affectation—so what?) “Fine. So who do we have? What Democrat will sweep us to victory next November?” A pause. “Kish?” The defeated vice president from ‘12, a universally acknowledged lightweight. “Vendelin?” Senator from Mass. Brilliant, wheelchair-bound, rumored to have two years to live at most. “Gafoor?” Speaker of the House, liked boys under age ten. “Connolly?” A prune had a better personality. “Denlinger?” Alcoholic. “Waddell?” Owned by Big Oil, severe lisp.

Even Hager had to laugh. “Okay, okay, point taken. We got nobody.”

“So you’re conceding the Republicans four more years...”

He narrowed his eyes. “The country won’t last four more years.”

I nodded.

He began to push his fat frame up off the chair. “It’s crazy. Completely crazy, even for you, Lenny.” A muscle writhed near his left temple. “I’ll make some inquiries.” The huge head swiveled through several cycles. “What a freakin’ idea.”

Evan Hager was the chairman of the Democratic National Committee. A month later, I was at a conference table, same building, different floor, doing Q&A in a room packed with

two dozen people, people who could raise money in the Hamptons and Beverly Hills, people who knew the locals in Iowa and New Hampshire, who'd stood shoulder to shoulder with them in the freezing cold before the caucus and the primary, people who'd come up the hard way with the union guys, people who had skins colored black, brown, and yellow, people who'd been there, done that—and people who were experts in, among other things, constitutional law.

“Natur’l bawn citizen,” intoned Lawrence Ritter, in his soft South Carolina drawl. Ritter had been the attorney general under the last Democratic president, Harley Schaefer. “That’s what the Constitution says. Now, ahr we not talkin’ about a device that’s neither natur’l, naw was bawn ... in any customary usage of that term? No offense meant to any of those now present. But won’t that be the first thing the Republicans challenge, not to mention the other contendahs in owah own party?”

As far back as high school, I’d learned to compensate, as much as possible, for whatever intellectual deficiencies I had by extensive preparation. “Lawrence, if I may, I believe my colleague is far more qualified than I am to address that.” I turned to the bony, gray-corkscrew-haired man on my right, one of the two guests I’d brought into the room with me. “Ladies and gentlemen, some of you may know this gentleman...”

I imagined it was kind of like introducing Einstein in the mid twentieth century. Alvin Marco held an endowed chair at Carnegie Mellon University. He was a professor not only of computer engineering, but also an attorney specializing in constitutional law. I’d asked him about the latter, of the need for it, when we’d first met two weeks earlier.

“In my field, any time you worked on something, wrote something, invented something, there were always a dozen legal implications, complications, and ambiguities. So rather than consult a lawyer for every one, which would have consumed all my time and paralyzed every initiative, not to mention cost a fortune for the university, it was easier for me to just become my own expert.” He grinned. “Passed the Pennsylvania bar the first time too.”

It was like Einstein crowing over how he did a *Times* crossword puzzle. Only in this case, it was the author of *The Theory of Sentience*, the Nobel-winning paper that was the foundation for virtually all modern NBI and HI synthesis, and had spawned a dozen new industries and thousands of scientific and philosophical articles. I won’t pretend to have even a glimmer of real comprehension, but what I understand is that it’s a kind of fusion of information theory and neural network theory. One of the more controversial results was an objective measure of the degree of sentience—say, that which separates an ant from a dog from a human infant from a human adult—and which was related to the number of signal-generating and receiving components (e.g., neurons), the speed at which they produced and processed signals, the number of interconnections, the velocity and coding of the communication between them, and the speed at which the connection strength could be modified. The end result was the Marco number, and it was used to evaluate not only the relative sentience (which many interpreted as intelligence) of humans, but also NBIs and HIs. I don’t think I need to spell out the legal issues right here; suffice to say that, in the last four decades, the Marco number had created more wealth for attorneys than all the medical malpractice lawsuits in the country.

“This is Professor Alvin Marco from Carnegie Mellon University in Pittsburgh.” I decided to cut short my introduction. Those who knew him were already suitably impressed. Those who didn’t would either find out later who he was, be influenced by what he had to say ... or would be left to wallow in their ignorance.

Marco cut right to the chase. “Today, there are literally millions of people walking around with microchips implanted in their skulls, replacing parts of their damaged brains, or augmenting some of their natural functions. Who of us would say that these people were not human? How much of the brain can be replaced before one loses that status? Five percent? Ten? Fifty?” He glanced around the room. “The questions are rhetorical, of course. No one can answer them. But now let us consider approaches from the other direction; as far back as 2007, the Israelis—Tel Aviv University—were already culturing networks of neurons on silicon substrates, connecting to them with wires, and imprinting them with multiple rudimentary memories that persisted for days. And now, many of our so-called hybrid intelligences use these as part of their processing networks. So, again: How would you characterize an HI that had 5 percent of its structure composed of these neural chips? Still ‘artificial?’ What about 50 percent of its structure?” There was something feral and steely in his grin. “You see what I’m getting at.” His head bobbed slightly. “I believe one could make a convincing legal argument that a hybrid intelligence is born at the moment of its structural and programmatic completion and power turn-on.”

“But what about the ‘natur’l’ part, Professor?” Ritter persisted. “You could hardly argue that was natur’l.”

“Natural *born*. The two are connected. Is a cesarean baby natural born? Is a four-month-premature baby natural born? Is a baby conceived by artificial insemination natural born? Why, right in the description is the word ‘artificial.’ And yet I think we’d all agree that any one of the above, if born in the U.S., would not be disqualified for the presidency. In fact, those cases really help illuminate the distinction the Constitution’s authors wanted to make: The word ‘natural,’ in their context, meant someone born in the U.S., not someone resulting from an *in vitro* procedure that our founders, brilliant as they were, could never have imagined.” He rested his bony fingers on the table. “Look, I can’t guarantee a win if this comes before the Supreme Court, but I do believe we’d have a very good fighting chance.”

“Especially with Justice Sunnyvale58,” observed one of the fundraisers. Sunnyvale58 was the sole HI member of the court.

It seemed to go more easily after that, the usual issues being raised: What states were we likely to have problems with as far as getting a name on the ballot? What about timing? What about resistance from the Big Contributors? (The most important thing for a candidate was whether he, she, or it could raise sufficient money to run a campaign. Never mind that the potential president was a homicidal pervert moron; could he come up with cash?) Of course, here, there were also some less usual considerations.

“What about instantiation?” Gilbert Breckenridge asked. Breckenridge, recently retired Exabyte CEO, was one of the aforementioned Big Contributors.

I quickly intervened. “Gil, I think you may need to...” I moved my hands in a random swirling pattern. “...elaborate a bit.” I mean, I knew what he meant, as did 70 percent of the others; it was the remaining 30 percent this was addressed to.

“How will the candidate look?” Breckenridge said bluntly. “Will it just be a TV screen? A robot? A room full of computers?”

Before I could say anything, my second guest stood up. “The thing will look something like this,” it said.

Flustered, I lamely interjected, “Ladies and gentlemen, I think all of you know the governor of the State of Oregon, John Stanford76.” (Seems hard to believe, but in those days—a full thirty-five years after the Supreme Court decision declaring AIs and HIs with Marco numbers above 100 “persons,” allowed to vote, have Social Security numbers, etcetera—they were still nevertheless required by law to have their principal city or university of origin, plus the final two digits of their year of creation, as part of their last names.)

“Governor, I meant no offense,” Breckenridge offered.

“And none taken,” Stanford76 said. As noted, I had come prepared. The first questions an opponent (or voter) would ask of an HI built from scratch would be: What makes you qualified to govern anyone? What’s your experience? It was a valid challenge, and I’d selected one of the few choices in the U.S. at that time who could give a reasonable answer. “I believe my present instantiation would do fine,” said the governor.

As everyone knows, he was movie star handsome. His movements were all completely natural, even graceful. (Picture fifty-year-old Jal Tarver.)

“There are some recent enhancements we could make if we choose to—my Japanese contacts have been urging me to try them for some months now—but I will tell you, at least in my last two campaigns in Oregon, my physical ‘instantiations’ as you call them, were simply not an issue. Now, the idea has been raised of having a fairly large number of additional me’s in order to appear at many locations simultaneously—campaign stops, rallies, meetings, what have you—and this is something I believe we should carefully consider. These bodies are not cheap to fabricate. Right now, I have a total of four, and these are quite sufficient to cover my present responsibilities.”

There was a hush in the room that lasted nearly thirty seconds. Another moneyman, Fang Wong from Squibb, brought up the next point I’d anticipated. “The Constitution also disqualifies someone, and I quote, ‘who has not attained to the age of thirty-five years.’”

“As you can tell from my name—which information is accurate—I was built in the year of the Tricentennial,” Stanford76 said. “I was twenty-eight when I ran for my first term as governor of Oregon in ‘04. I’m thirty-nine now.” Toothy smile. “Course, I’ve been augmented a bit since I was born.”

“Who hasn’t?” offered Ophelia Bonadera, one of the five women in the room. She glanced down at the small sheaf of handouts I’d provided, which they’d had for two weeks. “Governor, I see you’ve done quite well in the private polls Mr. Ingerman commissioned, with one important demographic exception—women. Does that concern you? Should it concern us?”

The governor tilted his head and his eyebrows lifted slightly. (Call them instantiations, ‘bots, golems, whatever you like: They may not be flesh, but they are indistinguishable from it.) “Concern? Of course. Worry? My own judgment is: not at this point. But of course, yours may differ. I can only point out that in the last state election, I carried that exact demographic by more than 25 percent, *against a female opponent*. Who was young and good-looking, too—as if I needed more of a challenge.”

A chuckle rippled through the room.

He pushed away from his chair. “Of course, there’s always the possibility that Oregonian females are somehow fundamentally different than their counterparts in other

states....”

“I doubt that very much, Governor,” Bonadera said, widening her eyes, smoothing her hair, and smiling toothily, seemingly quite unaware that she was flirting with something many considered closer to a refrigerator than a man.

As for Stanford76, I’m not sure what he was thinking or feeling, but at that point he abruptly strode around the table and paused just before the walnut-paneled door. “Ladies and gentlemen, I’m going to depart for a moment now, although I’ll remain on the premises. I do this because I believe that what you need first—what we all need before there’s any possibility of proceeding—is a frank discussion, and I think my continuing presence would inhibit that. I will leave you with this: If you are interested in accepting me as a presidential candidate, then I am interested in running. I believe I can help this party and help our country. I believe I can campaign honorably, vigorously, and effectively, and I believe I can win the general election. If you decide you can lend me your backing—and let there be no mistake, I’m referring to great heaping gobs of your time, your energy, your contacts, and your money—that would be wonderful. But if not ... if not, know that there will be no bitterness or regrets or animosities whatsoever, and that I will support with all my strength whatever candidate the party does decide on.” He glanced over the assemblage. “If there are any questions—personal, financial, policy”—big grin—“*structural*, just give me a call. My contact info is available to everyone, and I answer all my emails within 1.2 seconds.” He closed the door behind him.

I waited a judicious moment. “So, what do we think?” I held up my own copy of the handout. “You have the polls, you have the state ballot information—no problem there, you have his position papers on the major issues...”

It was Evan who spoke first. “There are still plenty of things to discuss.”

“Of course. So let’s discuss them.”

He looked around the room. “Anyone?”

“I like him,” Wong offered.

“Long as we can get him on the ballot, he’s got mah vote,” Ritter said.

No one else volunteered anything.

“Let’s get him back in here,” Evan conceded after another moment.

And the rest, as they say, is history.

\* \* \* \*

It is not my purpose to document that history in detail herein. There were the usual campaign exigencies: leaking the governor’s possible candidacy, polling the grassroots state people, hitting up as many of the Big Money people as fast as we could, finally making the official announcement, blah blah blah. It was the kind of thing I could do in my sleep, and oh yes, by the way, I was the campaign manager. The governor had decided this a day after our first meeting.

“You understand that is not a requirement here,” I told him. “If it gets to that point, you

can select whomever you'd be most comfortable with. If you want to tap Cerino"—Eddie Cerino had run his last two state campaigns—"that would be fine. A mistake"—big grin—"but fine. Obviously, as the candidate, it's entirely your decision."

Stanford76 looked at a point just over my left shoulder. "I'm a fast researcher," he said, matching my smile. "You're it. I love Eddie, but his experience at the national level doesn't compare. So if you want it, you're it."

He was my idea; I wanted it. But the "I love Eddie" led me to one last question. "Governor—"

"If you're going to be my campaign manager, you'll need to call me John."

"John, I need to know the core reason you're interested in running. It'll stay in this room and it's fine if it's not PC—I mean lust for power is a perfectly understandable motivation, if that's it. But I'd like to understand..."

He held up a palm. "I get it, and it's okay. What you really want to know is how a non-biological or hybrid intelligence can *want* anything. What does the word even mean in a non-human context? Am I right?"

Sheepishly, I lifted my eyes toward the ceiling.

"First, I presume you've heard of 'emotion modules?'"

"Of course." For many years, virtually all AIs and HIs with Marco numbers over 100 had so-called "e-modules" installed as part of their basic structures, in order to permit them to empathize, understand, and effectively interact with humans. Old hat.

"I have several. Essential for a politician, a lawyer, a salesman. As you may or may not know, these modules contain the equivalent of mirror neurons, those nerves in human brains that lead you to mimic the behavior of others and that, as humans mature, give rise to empathetic reactions. It's why you feel like crying when you see someone else cry, why you feel like laughing when others laugh. Now, my emotion modules happen to be implemented by bio-chips, but, really, this is cosmetic, something for show, something that makes humans more comfortable. They could just as well be done in hardware. Better, maybe."

"So you're saying you have the same feelings as a human being?"

He glanced at the ceiling. "To paraphrase Shakespeare, 'Hath not an HI eyes? Hath not an HI hands, dimensions, senses, affections, passions?'"

"You left out organs."

He grinned. "Well, you can't have everything. There's also stuff about 'fed with the same food, hurt with the same weapons, subject to the same diseases.' Look, I'm no more a human than I am a Jew. My point, in answer to your original question, is that I can at least feel emotion, although I'll never know and neither will you whether I feel it in the same way you do. So I *want* to be president because I understand *wants*, I literally *havewants*, and one of those wants is for our country to regain our prosperity and security. I believe we are in danger and—rightly, wrongly, megalomaniacally—I further believe that I am the best option to move us out of it." He shrugged. (I'd seen it ten thousand times, but the casual human gestures never ceased to amaze me.) "So did that come anywhere close to answering your

question?”

“Gov—John, that was far more than I hoped for or expected, and I appreciate your indulgence.”

“No, no, it’s something you had to ask—I’m glad you did—and I hope I responded satisfactorily.”

“You absolutely did.” I turned to leave.

“Of course, there’s also that blind lust for power you mentioned, but we’ll leave that between us.”

I laughed on my way out. I guess one of his emotion modules included a sense of humor.

\* \* \* \*

Shortly after the official announcement in early December, the two other Democratic challengers also declared: Ben Ordell and Merilee Montenegro. Ordell was a ninety-five-year-old liberal congressman from Connecticut who’d received his third life extension treatment a month earlier. He spoke slowly and carefully and had moderate, centrist views on the major hot-button issues—U.S. contributions to the space elevator, response to secession threats from the Southwest Alliance, ongoing funding of the Superconducting National Transportation System (SUNTS), the Treasury-note blackmail by China and India, the NBI quota increases, etcetera. Actually, his positions were quite similar to the governor’s, although he had two problems: He was massively, soporifically dull and he was homely. Two *big* problems.

Montenegro, senior senator from Pennsylvania, was neither, but she was the antithesis of the sitting president: Big spender with no clear plan for where the money was coming from, willing to make an “accommodation” with the Alliance, willing to make tariff and trade conciliations to China and India if they’d keep buying our Treasury notes, in favor of unlimited Category 1 (Marco score J 100) NBI production and citizenship.

Stanford76 finished second in Iowa to Ordell, took the New Hampshire primaries by 30 percent margins over both of the others. While Ordell alluded to the governor’s constitutional eligibility in several of his speeches, he did not mount any kind of legal challenge. Montenegro commented that she thought the governor’s candidacy was good for the party and the country, since it “would encourage more NBIs and HIs to participate in the electoral process.”

The rest of the primaries were smooth sailing. Not that there weren’t occasional glitches here and there—one of the instantiations freezing during a speech before the Teachers’ Union in Minneapolis, two overheating on the same day in Florida and having to be returned to the factory for repairs. Embarrassing, good fodder for the comics and columnists, but hardly serious. After all, it was well understood even by your common undereducated American that the Instants (as they were called) were but extensions of the actual HI—something like 3D holograms, except literally able to “press the flesh”—and that the real being was back in Oregon, though in constant near-instantaneous radio communication with the satellite units.

And so, by early March, it was over. At the conclusion of the Texas and Ohio

primaries, the governor had an insurmountable lead in delegates; his nomination by the National Convention on August 28 was a formality. After consultation with the staff, he selected Ben Ordell as his running mate, and Ordell, surprisingly to many, gave quite a rousing speech on the convention's third night. So there you had the ticket. In the words of one right-wing tabloid: an old man and a machine. Stanford76 was the Democratic candidate for president. First a Catholic, then a black man, then a woman, then a Latino, then a Jew, and now, finally, finally ... a non-human intelligence.

On August 29, I called a meeting with the governor, Professor Marco, and the chief consulting officers of the two leading corporations in computer integration. One of the things we needed to get started on was how the governor, should he be elected president, would be integrated with the country's social security, life extension, defense, power grid, etcetera systems. After all, this integration, this economic and operational efficiency, was at the heart of the governor's campaign, the very core of his superiority and desirability as the country's leader. The two CCOs were the last to arrive.

Bill Gates, rumored on his fifth rejuvenation, looked very much like photos I'd seen of him when he'd been in his forties. Boyish, owlsh, professorish, puckish—take your pick. He'd tired of his charity foundation work ten years after it had started, abandoned it to “unretire,” founded Exabyte, one of those employee-less corporations (only consultants), quit after another fifteen years, and repeated the cycle ... several times. At present, Exabyte had the leading NBI operating system, Starscape. Steve Jobs, gaunt, shaven-headed, bearded, driven-looking, also with four or five rejuvies, had gone over to Raspberry, developed its quantum computer line, its competing NBI line, and a dozen other innovative products. Raspberry had acquired Disney studios in the 2050s, Warner Bros. a few years later, and was now rumored to be going after Fox.

We opened with a thirty-minute introduction: ten from me outlining the tasks and the timetable, ten from the governor elaborating on what he wanted to accomplish, and ten from Marco discussing some of the technical issues. I explained that, if they were interested, each company would get one, and only one, chance to bid the job. A proposal would be required that would have technical, managerial, support, and pricing sections. It would be evaluated by the governor and his staff, a winner would be declared, and then it would need to be implemented within a thirty-day period after the governor took office.

Gates spoke up as soon as Marco had finished. “I’ll tell you right now, Exabyte is interested. As you know, the governor is currently using our Starscape operating system interfaced to the various Oregon state networks, and so an extension to the national computer grids is something we can do very easily and efficiently.”

Jobs chimed right in. “Raspberry, too, is interested. And”—he steepled his fingers—“if you’ll indulge me, there’s a quote from a twenty-first century hockey player that I love. ‘I skate to where the puck is going to be, not where it has been.’ If you examine our history, you’ll see that Raspberry is best suited to take the governor to where the puck is going to be.”

There was some small talk after that, some back-and-forth feigned good-natured kidding between Gates and Jobs, and then the allotted hour had expired. “Gentlemen,” I said, as we all stood up, “it’s gonna be fun.” In retrospect, of course, that is not the word one would use to describe the result.

As expected, the first thing the Republicans did was challenge the governor's legitimacy in the Supreme Court. And as Justice Sunnyvale58 said in his 5-4 majority

opinion: "The 2080 Court decision [U.S. v. Sarlow] clearly and unambiguously established that entities with Marco scores of 100 or greater, *no matter what their construction or composition*, are constitutionally endowed with the same rights and privileges as human beings. Since indisputable evidence was presented that the appellant [Stanford76] far exceeds the Marco score criterion, he falls within the decision's realm of applicability. Since, further, the appellant was fabricated within the boundaries of the United States more than thirty-five years ago, and has been resident here for more than fourteen years, he unquestionably meets all the requirements of Article II, Section 1 of the Constitution for eligibility for the office of president." Of course, two of the justices wrote dissenting opinions, but these were for the archives only. The reality was: The race was on.

Again, this is not a history. There's plenty of that, and will be for generations to come (hoping there are such). The sitting president (and, mostly, all he did was sit) was Republican Ian Wheeler, crusty (as they kidded) Maine ex-fisherman, populist, issue-simplifier, isolationist, confrontation-happy vetoer of any and all Congressional legislation. He was a good speaker, give him credit for that. Not bad looking, in a craggy, fishy sort of way. Came from humble beginnings, able to make people feel he was One of Them, and quick to point out that Stanford76 wasn't.

"The principal issue in this race," he said, in a speech first delivered in Albuquerque and then repeated with minor variations everywhere, "is whether you want to have as your president a being that does not feel pain, a being that has never experienced childbirth, a being that has never *raised* a child, a being that has never shed tears and in fact, cannot shed tears, a being that has never been laid off from a job, a being that has never made love to a woman, a being that has never gone hungry because it doesn't eat, a being that has never worried about where its next job was coming from, a being that has never waited in a doctor's office, never had a headache, never been in a hospital. Do you want such a being to be in charge of our country? Would you trust it to make decisions that may result in your child going off to war? Would you trust it to make economic decisions that will determine if you'll have food on your table? Or your child's table? Would you trust it to make decisions on your medical care?"

Demagoguery 101. A warmed-over, tailored repeat of everything that had ever been said about Catholic candidates, blacks, Jews, Muslims, and, yes, NBIs. Horrible—but effective. Except, as we know, and to the joy of all of us right-thinking, faith-in-humanity progressives, not effective enough. Stanford76, with his reasoned, logical, issue-focused campaign—explaining the advantages he could bring, the efficiencies of integration, the savings, the equality to the capabilities of other countries, the checks and balances on him that would be exercised by Congress, by the courts, by a half dozen ombudsmen groups, by his human vice president—slowly but surely began to take the lead in the polls. People wanted change, something different; yes, they were a bit frightened of him, a bit puzzled, a bit awed, perhaps, but also curious and hopeful. It was pretty clear where we were headed with four more years of Ian Wheeler. With the governor, it would be an adventure, strange, uncharted, but with something that was possibly quite wonderful at the end of it.

Of course, it helped a bit that the governor could be in twenty-five places at once—we'd opted for that number of instantiations (one for every two states)—and make appearances twenty-four hours a day. He could hold over three hundred simultaneous press conferences, while also addressing (and conversing with!) individuals and organizations. He could call up just as many instantaneous facts and figures as could the president, even with Wheeler's implant link to the White House databases. Naturally, Wheeler wouldn't debate him, but it didn't matter. Stanford76 began to pull inexorably, decisively ahead. You could sense it, feel it in the air, hear it in the talk among the young people. And then, just as his

message was deepening its roots, as the enthusiasm for him swelled and became palpable, he proceeded to blow it.

I remember the day and exact time: September 14, 6:05 a.m. We were in San José, and one of my assistants called me. “Hey, jerk, I’m still sleeping, can’t—”

“Len, I apologize, but you won’t be sorry I woke you. You need to see this. Turn on the holo and tune to CNN.”

And there it was, freaking Team Coverage: That night, Stanford76 had gotten married.

\* \* \* \*

As everyone knows, the country promptly went crazy. The holocasts, the dailies, the talk shows—it was front page news for two weeks. The HI governor of Oregon and Democratic candidate for president of the United States had taken one Kimberly Louise Bowman to Las Vegas and married her in a civil ceremony. Kimberly, as it turned out, had been his personal secretary for fourteen years and had a five-year-old boy from a previous marriage. Now, it wasn’t that this was the first instance an NBI or HI had married a human—it wasn’t what you’d call routine, but it certainly had happened before often enough—but this particular HI, at this particular time; *that* was unusual.

“I’m not criticizing,” I said carefully, “but can you just give me a hint as to why exactly now—”

This was twenty minutes after I’d heard the news on CNN. Stanford76 sat across from me, wearing a suit. (Before the campaign, I’d never thought much about the fact that HIs did not have to sleep, did not have to change into their pajamas or shave or shower; they were always ready, except when having their superconducting batteries recharged or replaced, always on, available 24/7.) Ben Ordell, in a robe, looking numb, jaws seeming permanently agape, was on the holophone from Ohio.

“I think it was the proper thing to do,” the governor said. “I think it will humanize me to the public.”

“You do...”

“Yes.”

“Do you, uh, does one of your emotion modules—”

“I have known Kim for many years. To the best of my ability to discern, the feelings I have for her are indistinguishable from love.”

“Uh-huh, uh-huh.” Indistinguishable from love. My own feelings were indistinguishable from retching. It was all I could manage to keep from losing consciousness. “And you did it now because you’re confident this will help your chances.”

“Yes.”

Well, what can I say, except how utterly and completely wrong he was. How totally removed from reality. Within days, the polls showed him dropping fourteen points. When

Kimberly went out on the stump with him, shaking hands, speaking to women's groups, giving interviews to the pop holos and mags, he dropped another ten. From a lead of seven clear percentage points, he was down seventeen before anyone knew what hit him. I mean, it wasn't Kim's fault per se; she was charming, articulate, and educated—it was just, well, the country viewed the marriage as a crass, cold, calculated abuse of an age-old human institution in a tawdry, desperate attempt to attract votes. It was perceived as a mockery, and the electorate simply wasn't buying it. Or else they were simply frightened (hell, *I* was frightened). A non-human presidential candidate acting on impulse? Thanks, I'll pass. And pass they did. Another week, another drop of ten in the polls.

There simply was no *spinning* this, no way to *clarify the candidate's position*, or muddy it, no "Oh, what I meant to say was..." There was nothing. The machine had gone out and taken a bride. This was a body blow, a rib-breaker, and there was nothing to do but gasp, suck up the pain, slog ahead on the campaign trail, and hope the fickleness and short memory of the public would begin to erase some of the damage.

And sure enough, slowly, slowly, after another month, the boos at every speech began to subside, the mocking signs grew ever-so-slightly less hostile, the late-night comics made it only their fourth or fifth joke instead of the first, and the anti-Stanford76 demonstrations were less well attended. President Wheeler was not exactly a paragon of popularity: The economy continued its relentless slide into the toilet, the UN passed a censure resolution that severely restricted—again, because of failure to pay its dues—American access to deep space antimatter harvests, and China announced another wage freeze for workers in its U.S. auto plants.

The second week in October, after studying the report from Professor Marco and his team, I met with Bill Gates in the Marriot Seattle Waterfront hotel.

"Bill, as I'm sure you've by now deduced, Exabyte has been selected as the winner." I extended my palm. "Congratulations."

His tepid handshake was hard to read. "Thank you, Len. Well, that's good, I guess, right? You're going to get a first-class effort."

"I'm sure we will." I paused. "You are okay with this, yes?"

"Absolutely. I'm very pleased. Any time we beat out Steve ... No, no, seriously, this is a great opportunity for Exabyte and for the country." His gaze was out the window of the suite, where Mt. Rainier glistened in the distance.

"We're counting on you, Bill. Not only for the installation, but also for the service and support. Obviously, support is a very important part of this."

"Absolutely."

"So the lawyers will draw up the contract." I smiled. "Four years of support, with an option for another four."

"You got it." Still no smile. "I just hope the governor..."

"I know what you mean."

\* \* \* \*

A week later came the second campaign-turning event. The governor had continued to trail in the polls, not sinking further, but not making up ground either, down by that deadly, constant eighteen points. The general feeling was that that was the deficit he'd carry going into the election, and that it would be insurmountable. And then he was assassinated.

Which, by itself, was no big deal. Someone blew his head off at a rally in Omaha, and someone else blew up another instantiation during a visit to a nursing home in Birmingham. (A third, near-simultaneous attempt on another body was botched in Baton Rouge.) So, okay, loss of property. Expense (pretty much covered by insurance). Shock and affront to the American voting system, not to mention the national psyche. Except it was more than that. Because, at the nursing home, Kimberly had been standing right next to him, and she had been killed for real.

The holo-snippets of the governor—delivering her eulogy (wearing dark glasses, no less), trailing the pallbearers as they emerged from the church, in the limo on the way to the cemetery—flooded the national airwaves. Millions—literally, *millions*—of sympathy cards, flowers, charitable gifts in Kimberly's name poured into campaign headquarters and the governor's mansion in Portland. He'd retreated there after announcing his campaign would be suspended but would at some indeterminate time resume. ("I know that Kimberly would have been the first to agree that we cannot allow the forces of darkness and anarchy to triumph over decency and democracy.")

I remember on the third day after the funeral seeing him in his office, hunched over his desk in semi-darkness. We'd really hardly had time to speak since the awful event.

"John?"

He looked up.

"I, uh, I just wanted, uh, I don't think I've ever really told you, I mean with all the arrangements and everything, the press ... I, well, I just wanted to say how very sorry I am for your loss. I know, I mean, I'm sure it hurts a great deal. There's, you know, never any words that do any good, but—"

"Thank you, Len. I appreciate the thought. Very kind of you. Thank you."

I nodded, lingered an inarticulate moment, then finally left him alone. His demeanor was indistinguishable from grief.

A week later, *a week with no campaigning*, he had jumped thirteen points in the polls. A week after that, he was up by five. When the campaign finally did resume on October 28, he was ahead by nine. He won the national election by eleven percentage points in the popular count.

No one on our side was under any illusion: He'd rode to victory on a sympathy vote. In a terribly sad and perverse way, he'd been right: Kimberly Bowman had indeed humanized him to the public.

He was sworn in on January 2, 2116. A day after the election he'd asked if I would be his chief of staff, and of course I agreed. On Valentine's Day, there was a little mini-ceremony—just Gates, Marco, Ordell, the cabinet members, a few senators, a few staffers including myself, a few Big Contributors—as the Starscape operating system

hooked up the president one-by-one to the various national computer grids. It went incredibly smoothly, not a single major hitch, and at the finish Gates gushed, "This is really historic."

And it worked. Worked incredibly well for two and a half splendid years. Years in which federal spending was dramatically reduced, the Superconducting National Transportation System was extended north to Boston and west to St. Louis, the new dollar rose against the new yen and new yuan, the estimated number of rogue NBI factories was cut in half, America regained its right to use the space elevator, and the secession-mongers of the Southwest Alliance at least lowered their voices. Undeniable progress, a raising of the national morale, a renewal of the possibilities of America. And then came the night of August 14, 2119.

This time it happened around 12:15 p.m. I was not exactly asleep, but not far from it when the call came from the president's personal aide.

"Sir, this is Allan."

"Yes."

"The president has frozen."

"What?"

"Completely locked up. He just sits there. Doesn't respond to any questions or stimuli."

I sat up. "Shit." I forced myself to think. "Are we talking verbal only, or—"

"Voice recognition, optical, keyboard—you name it. His operating system just ... We've tried everything, sir."

"Rebooting?" I felt a sour panic rising like reflux up my esophagus.

"Everything I could think of. Sir, I have to remind you that, although I'm technically knowledgeable, I'm far from an NBI or HI systems expert."

"Did you call service? You gotta call service immediately."

"I did, first thing. That's the problem...."

"What do—okay, give me five minutes, I'll be right over." I threw the blanket off my legs. "No word of this to anyone, right? Absolutely no one."

"Yes sir. Of course."

The guard at the White House gate let me through with scarcely a glance. It was hardly the first time I'd made an unannounced late-night appearance. I strode quickly through the silent West Wing corridors, barely acknowledged the marine guard in the anteroom, and burst through the Oval Office doors. Stanford76 was seated at the president's desk, commensurate with his usual practice: To visitors and staff alike, the president would appear as much as possible like past holders of the office. He would attend, if not dine at state dinners; he would personally receive guests; he would roll Easter eggs on the South

Lawn with the children. Never mind that his actual guts were inside the Oval Office desk, and never mind that a concealed rope of fiberoptic cables as thick as an elephant's trunk led from there to the communications center that linked him to everything and everywhere.

His aide, a young man named Chang with degrees in both poli-sci and software engineering, looked up as I entered. "I—I—I didn't know what to do." His obvious near hysteria somehow, perversely, managed to calm me.

"It's okay, it's okay. You did the right thing to call me." I moved toward Stanford76, seated behind the desk. His gaze was fixed straight ahead, eyes open, glassy, unblinking. His limbs were rigid. I waved my arms in front of him. "Mr. President? Mr. President, can you hear me?" Nothing. I turned back to Chang. "You said you called service...."

"As soon as I recognized the problem was beyond my ability to deal with; mine or anyone's on staff here."

"And..."

"They wouldn't help, or couldn't help, or both—I don't know."

"*What?* What? No, no, no, that makes no sense. What's their number?"

He spoke it into the phone and an instant later the avatar, a pleasant, thirtyish appearing female materialized in the holospace.

"Hello," came the smoothly synthesized voice. "You have reached the service department of Exabyte Incorporated. All our lines are busy right now, but there are several alternative options you may wish to try. If you have access to a computer you may go to our website, [www.Exabyte.com](http://www.Exabyte.com), where you will see a tab for customer service. If it is technical support you require, you may speak or display the twenty digit purchase order number located on the back panel of the box your equipment came in, and the holo will show you the type of service you are entitled to. If your service contract did not specify phone support or you do not have a service contract, you may nevertheless be able to speak to a technician for an extra charge that will be shown on your phone. Alternately, you can write your problem in an email and receive a guaranteed personal response within twenty-four hours. Yet another option is to consult our list of frequently asked questions, which does not require a service contract. If none of these options is satisfactory, please stay on the line and a representative will be with you shortly."

My hysteria was returning. I motioned to Chang. "You did this?"

"Yes."

"How long—"

"About seventeen minutes. Not too bad."

"Not too bad? *Not too bad?* The United States of America has no president, and you're telling me, 'Not too bad!'" I saw my own dread mirrored in his eyes and tried to control myself. "All right, okay. I want you to get two people over here immediately. Immediately. The first one is Professor Marco. You have his number?" Wide-eyed nod. "And the next is Bill Gates."

“But—”

“Wake him the fuck up, send marines to his goddamn house, do whatever it is you have to—I want him here! You understand? I want him here, now!” I hated myself for terrorizing the kid, but he seemed in almost the same stasis as the president.

He scurried out. I waited alone in the office, trying to breathe regularly, telling myself to just keep calm, just keep calm, moving my head in circles, shutting my eyes, squeezing that nasty little voice out of my brain that insisted this can't be happening, this can't be happening, this—

“Hello, this is Robert at Exabyte Technical Support, how may I help you?” Very heavy clipped, singsong accent. The name sounded like “A-rubberrrt.” The holo showed a smiling twentyish man with brown skin and jet black hair. At least it was a human, not an avatar.

“This is Leonard Ingerman, chief of staff for President Stanford76. We have an emergency here.”

“I'm sorry to hear that, sir. May I have your phone number?”

I gave it to him.

“And that is in...?”

“What do you mean?” I could barely understand his words, some combination of his accent and my own highly emotional state.

“What country are you calling from, sir?”

“America, for chrissake! Where are you?”

“Excuse me, sir?”

“Where ... are ... you ... located?” I wondered if my head would explode before he could answer.

“I am in Bangalore, India, sir.”

“Look, we have a horrible emergency here!”

“I understand that, sir. Thank you for the information. Now, can you read or show me the twenty digit purchase order number located on the back panel of the box your equipment came in?”

I felt myself becoming light-headed. “This equipment didn't come in a box. Or maybe it did originally many years ago, but that doesn't matter. This equipment is a hybrid intelligence that is currently president of the United States, and this is a fucking DEFCON 12 emergency! Do ... you ... understand ... me?”

“Yes sir, and I am trying to do my best to help you in this situation, but to do so, I need the twenty digit—”

“I don't have the goddamn number!” I shouted. “I don't have it!”

"I see. Mmmm. Well, then, can you tell me, is the machine in question a QC, a printer, a display—"

I was panting. "The machine in question is an HI. Its operating system is Exabyte Starscape."

"Ah, so this is an operating system problem?"

I didn't know if it was or not. "Yes, that's what it is. A freakin' Exabyte freakin' operating system problem and you—you need to fix it right now. RIGHT NOW."

"Yes, sir, I understand that." Pause. "Can you find a serial number on the side of the machine?"

"What? The machine is, I dunno, in the desk or something."

"Yes, sir. See if it's there."

"Hold on."

I walked around behind Stanford76's chair, moved it back, got down on my hands and knees, and peered under the desk. A squat, featureless, gunmetal gray cabinet rested on the floor. The left face was flush with the desk's mahogany side panel. I stretched and twisted my neck and shoulders around to the right ... and saw the small metallic label about a third of the way down from the top. I called out the embossed serial numbers, then wrenched myself upright.

"Yes, thank you, please give me a moment now, sir."

At that instant, Chang returned. "Marco is on the way. Gates is coming, but he's also sending ahead a repair crew."

"How long?"

"Marco in a half hour, repair crew in a half hour to forty-five minutes, Gates in about an hour."

I exhaled, shut my eyes. My neck ached.

A moment later, Robert returned to the phone. "Sir, I have located that serial number in my database and it is covered by our premiere on-site service contract. We can have someone there by ... mmm ... 10:15 a.m. your time tomorrow."

"Tomorrow."

"Yes, sir."

"Is there anything you can do now? Anyone there who might be able to help me with this over the phone?"

"I can try, sir. Let me ask you this: Is there a keyboard input into the HI?"

I turned to Chang. He pointed to a keyboard on a small end table near one of the upholstered easy chairs. "There is a keyboard," I said.

"Okay. Now, try this: Simultaneously press down these keys—control, alt, and delete."

I hung up.

\* \* \* \*

The rest has been well documented. Gates's crew showed up after thirty-five minutes and isolated the problem a half hour later. Apparently, a bio virus had somehow gotten into one or more of the president's emotion modules, caused the latter to generate signals that overwhelmed the non-bio interfacing and operating systems, and resulted in the equivalent of a nervous breakdown. The suspicion was that the original parasite had been transmitted via a human carrier, and the president's visitor list—which included representatives from China, India, and Korea, as well as Southland and Nevada—was scrutinized for suspects ... but nothing definitive resulted.

The problem was repaired three days later (when the new bio-modules had been programmed and installed), but by that time Vice President Ordell had already convened the cabinet, as required by the twenty-fifth amendment to the Constitution. Further, that body had subsequently transmitted to the President pro tempore of the Senate and Speaker of the House its written declaration that the president was unable to discharge the powers and duties of his office and that therefore Ordell should assume the position as acting president.

I met with Stanford76 at his home in Oregon, where he'd been—I guess the word is "shipped"—after he'd been disconnected from the various computer grids.

"Have you made a decision?" I asked. The reference was to the amendment's Section 4, according to which he could now transmit his own declaration to the House and Senate that his disability no longer existed, and request his restoration to the presidency. Of course, the VP and cabinet could fight it, in which case the entire Congress would need to vote and blah blah blah etcetera.

"Ya. I'm not going back." He—I guess maybe you'd call it his principal instantiation—was sitting on a lawn chair on his rear patio. (I wondered where in the house the gray metal cabinet was located.) There was a barely perceptible breeze. A sparrow chirped from a nearby tree.

"You're not."

"No."

"May I ask why?"

"Why? Because it could happen again. Because I have no right." He turned slightly to face away from me. "Because it was a bad idea."

"Well, I guess, I mean it turned out that way, but no one could have foreseen..."

The words hung there. As everyone now knows, what had happened during the time the president was "out" was that all our national computer systems—military, national security, air traffic control, SUNTS, social security, GPS, life extension, electric power grid,

even plane and hotel reservations—had been completely infiltrated and disabled. The Southwest Alliance had convened an emergency assembly and had seized the opportunity to secede from the union and declare itself the Southwest Republic. Even under optimistic scenarios, it would take the rest of the U.S. months, if not years, to recover, and until then the country would be in chaos, our government close to anarchy, and our military useless.

“It was a bad idea,” Stanford76 repeated. “The efficiencies I achieved, the advantages I brought, depended on integration, and it was precisely that integration that made us so utterly vulnerable.”

“Well, okay, but ... but other countries have made it work. Russia, India, China, Japan...” My words reminded me of the rationale I’d given Evan Hager at what now felt like an eternity ago.

“Maybe their time will come. Anyway, it was a lesson, a very painful one.”

“Mmm.” I nodded. A few moments went by; only the sparrow broke the silence. “I guess there’s not much more to say.”

“Apparently not.”

I left him then, sitting motionless on his patio in the August sun.

And so the hearings continue, the endless investigations by every deliberative body ever conceived, the depositions, the committees, the solemn testimonies, the techies (including Marco and Gates and Chang, and even—the only person who actually lost his job as a result of the events—“A-rubberrrt,” on holo from Bangalore), the reporters, the accountants, and ... the attorneys. Miles-long locust swarms of angry, buzzing barristers. I think the number of lawyers on this will eventually exceed even those involved with Marco number lawsuits, maybe even exceed the number of insect species on Earth. It’s become not only a national obsession but a veritable national industry. (I’ve never understood economics, but perhaps it will revive the economy.)

To this day, they still don’t know who the culprit is; the likelihood is they never will. The Southwest Republic is, of course, the leading suspect, but China, Russia, and India are not far behind; the anti-space-elevator activists can’t be ruled out, and neither can the rogue NBI people; even Ordell is suspected by some, as is Steve Jobs. Regarding motive, take your pick, invent your own, I won’t bother with it here.

As for me, well, I’ve had to retain my own team of lawyers, who will undoubtedly end up with every last new-dollar of savings I’ve ever managed to accumulate. So mostly I sit around now, preparing for the next deposition, the next testimony, the next face session with the attorneys on how to answer this or that, when to make eye contact, when to invoke the Fifth, etcetera. Occasionally, in all my spare time, I run things through my mind, and sometimes—maybe when I wake up, as I often do, in a nightsweat at 4:00 a.m.—I have what I believe is an original thought about something, an inspiration, a brainstorm.

Except now I just roll over, and keep it to myself.