

PALIMPSEST
by HOWARD V. HENDRIX

How far can this arms race go?

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“You think it’s possible?” MéMé Gelernter asked, flicking back the blue and green tips of her blond hair as she stared out of our window.

I followed her gaze to where it lingered. Below us, in front of InterPortation’s corporate headquarters, street-preachers and protesters filled the boulevard.

“Do I think *what’s* possible?”

“You know. What they’re saying.”

“Which is...?” I said, turning away and thus causing InterPortation code to start scrolling through the information space before my eyes again.

“That God is always sending us a message we can’t refuse. One we can’t live without. One we shouldn’t try to block.”

I sat back in my chair, pulling my head out of i-space.

“MéMé my dear, I have no doubt the divine ground of all being works in mysterious ways. If that being *were* trying to send us all a message, however, even *I* doubt the message would come in the form of unwanted and apocalyptic chain e-mail.”

“You don’t think virtual manna is hidden somewhere in the godspam, then?”

“No,” I said, sighing heavily. “And not electronic grace or web blessings, either. Our concern here is the tools, not the rules. Our job descriptions do not include pondering moral, legal, or religious questions. Back to work, please.”

MéMé nodded. She turned from the window and sat down at her workstation. I stuck my head back into i-space and returned to work myself.

MéMé was too idiot-compassionate for her own good. Her heart was on her sleeve for every stray cat or stray protest ideology she met on the

street. At least in i-space, her head was in the right place. She was an undeniably sharp information engineer. With her once again on task, it wouldn't be long before we finished the final filters.

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Calling it unwanted “e-mail” wasn't quite true, since it was in fact virtual mail, far more fully immersive than the old flatlander stuff. Not entirely true either, to say it *wasn't* manna, given that “manna” was the transliteration of two Hebrew words meaning “What is it?”

What the original “it” might actually have been was variously defined in the Bible as the “grain of heaven,” the “bread of angels,” the “meat” which God “rained down on the Israelites like dust ... until they had more than enough.”

God's ... spam. Not the pink whatzit in the Hormel can—Shoulder Pork and hAM? SPiced hAM? Not the old Monty Python sketch song refrain, either. Spam, dragon eggs, and spam. The Wild Old Days. The days of high filtration percentages and low false positives. When there were no federal laws prohibiting unsolicited solicitations, no marshal to enforce the law on the electronic frontier. When such solicitations were mostly simplistic e-mails and pop-ups pushing commercial stuff—penis and breast enlargement, generic Viagra, banned CDs. Sex, drugs, and rock 'n' roll.

When it first began to show up, there was no consensus on who was sending the godspam. Some claimed atheistic hackers were the culprits, while others believed it was the work of Islamo—or Judeo—or Christo-fascist terrorists. Whoever was behind it, it was much easier to block than the sly beast the commercial stuff had by then already become.

A “Jesus” here, or a “Buddha” there, or an “Allah” or “Lord Krishna” anywhere—accompanied by strange symbols, unlikely return addresses, threats of global apocalypse, personal damnation, or slime-mold status in one's next life—taken together, such were almost always a tip-off to some sort of virtual proselytizing, blockable by the most rudimentary rule-based content filters.

Then the churches objected, in the courts, that such blockers were stifling communication among the faithful. Their lawyers argued that such defenses were in fact heuristic hammers, treating even legitimate religious discussions as nails to be pounded down wherever they popped up. The tangle of issues—freedom of speech and expression, separation of Church and State, common law prohibitions against unauthorized use of

another's property (computer networks, in this case)—all would take decades to unsnarl. Long before which time, of course, e-mail went truly virtual, and unsolicited infosphere communications made a huge comeback.

Attempts by legislators to attach monetary or computational costs to each piece of virtual mail—tiny sums, which nonetheless piled up into considerable amounts given the huge volumes of messages sent by the virtual proselytizers—were all eventually struck down as burdensome intrusions of State power into religious affairs.

Blacklisting, whitelisting, signature-based filtering—all failed. Too low a percentage of godspam filtered out. Or too high a false positive rate, killing too many legitimate messages. Or too hard to maintain and keep current, especially in the face of zealots willing to continually falsify their network locations.

Collaborative filtering schemes collapsed too, when user-voters failed to reach consensus on which missives were legitimate religious messages and which were godspam. Probability-based Bayesian filters, like their heuristic predecessors, fell prey to the “what is it?” factor, writ large: “Manna” and “Babel” counterattacks. In the former, godspam tended to look more and more like godless nonspam, the “sacred” hidden in the profane, the “celestial” encrypted in the mundane. In the latter, the meaningful lay buried in line after line of gibberish.

Things didn't really get worrisome, however, until wireless nanotech sensors began exchanging properties with the physical environment—and godspam began weaving numbers into stone and tree and leaf, names into steel and flesh and bone. InterPortation, which had built itself from a tiny field-sensor company to the planet's largest provider of quantum-based virtual services, saw the writing on the world first. That's when IP called in my startup company, Spamazonian Extinctions.

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Being chosen by InterPortation to create the ultimate blocker was quite a coup for us. We hyped every media contact we had—to get the word out about the project, to give it as high a cultural profile as possible. I didn't realize just how high we'd managed to build that profile until MéMé and I came in to officially oversee the custom installation of Spamazonian software on InterPortation's own systems.

I should have known something was up when they asked us to park

our cars off site, a dozen blocks from InterPortation, for security reasons. As it turned out, all the streets in a five block radius around InterPortation's Sacramento headquarters had been shut down by police and protesters. Trying to make our way through and around the demonstration, we were trapped time and again in the crowds. What really stunned us, though, was when we learned that the protest furor was about *our* project.

“—sustaining *all things*, by his powerful word,’ as the Apostle puts it in the Letter to the Hebrews,” said a preacher with alpha-male, executive-gray hair.

We were trapped amid the preacher's very responsive audience, many of whom carried placards depicting InterPortation's founder and CEO, Darin Mallecott, as the Devil. This was not too difficult to do, alas. Mallecott's sharp facial features, pointed goatee, and prominent earring in his left ear only added to his reputation as a buccaneer of the business world. Perhaps it was this reputation that made his eyes and teeth seem to sparkle—with piracy at least, if not perdition.

“The *Word* is the most powerful food!” thundered the preacher. “In their exodus from Egypt, the Israelites were sustained by the instructive and testing food called manna, which God gave them to teach them that ‘man does not live on bread alone, but on every *word* that comes from the mouth of God.’”

Choruses of “Amen! Amen!” sounded. I wished we could work our way through this crowd clot faster.

“It is the message itself that sustains us. Remember what it says in *Psalms*: ‘O Lord, our Lord ... when I consider your heavens, the work of your fingers, the moon and the stars, which you have set in place, what is man, that thou art mindful of him?’ But what is God, if we should prove unmindful of Him? Remember the words of the great seventeenth-century preacher Jeremy Taylor, who tells us in his *Holy Dying* that man ‘is born in vanity and sin; he comes into the world like morning mushrooms, and as soon turns into dust and forgetfulness. To preserve him from rushing into nothing, and at first to draw him up from nothing, were equally the issues of an almighty power’!

“Those who would block God's word, who would destroy His manna, would withdraw from all of us the power that prevents us from rushing into nothing, the power that sustains *everything*—from our individual souls, to the creation in its entirety!”

More fervent amens sounded as we managed to untangle ourselves from the crowd around the preacher. As we escaped, MÉMÉ gave me a look. I shrugged. What else could one expect from such bibliolatrous throwbacks?

The next speaker we could not escape in this mad marketplace of beliefs and ideas, and he annoyed me even more.

“No, I am not a ‘philosophical idealist,’” said the young man, his face framed with wild dark beard and hair, answering over a bullhorn a question shouted at him by someone in the mob around him. “I’m a computer programmer. I don’t think the universe is just a thought or dream in the mind of God. I don’t think that if God woke up or stopped thinking, this would all disappear.

“I *do* believe, though, that our entire universe is a computational process, a universal quantum Turing machine running a foundational self-evolving algorithm. The quantum gravity theorists say the entire initial state of our universe could be burned into a single good data needle—that the foundational rule set in fact encompasses a fairly small amount of information.”

“Then why should we worry about it?” I shouted at him, confident of my anonymity in the crowd, despite all the publicity my company had received.

“What’s important,” he bullhorned back, “is not the initial state, but the ongoing evolution, the iterations and elaborations. If the Spamazonian programmers block all so-called godspam—in not only the virtual world, but also the physical one—they could generate the ultimate false positive, extinguishing the iteration command, the one that drives the universal system to keep elaborating, to keep evolving, *to keep existing*.

“Universal oblivion is too big a risk to take just so we won’t have to remember to update our blocker watchlists! In computer systems, there is no memory without electrical resistance. In human social systems, there is no political resistance without memory. We must remember how dangerous this ‘universal godspam blocker’ may be! We must keep fighting it. We must stop it!”

MÉMÉ actually looked concerned by the possibilities the man was suggesting. Seeing a break in the crowd, I grabbed MÉMÉ lightly by the arm and headed through it.

“‘All the world’s a simulation’,” I sneered to her, “‘and we are only programs.’ That nutball has spent too much time in virtuality. Mostly pornos, I’d bet.”

Next we got jammed up in clusters of various faithful whom I recognized as chanting Buddhists and Hare Krishnas, dancing Sufis, praying Hindus and Muslims, and a particularly large group in which the men wore yarmulkes.

“Oh, I get it,” MÉMé Gelernter said, listening to the rabbis and their students. “They’re Neo-Kabbalists.”

“What?”

“In Hebrew, every letter is also a number. In Kabbalah, the ten permutations of the four-letter Hebrew name of God form the ten mythic letter-numbers of creation. Those constitute the larger set of ineradicable Names, the attributes that allow us to contemplate the divine essence.”

I began shouldering a way for us through the crowd.

“Very interesting, I’m sure, but what’s it got to do with our godspam blocker?”

MÉMé stopped and listened a moment longer, then turned to me—that annoying look of concern on her face once again.

“They say that if what we’re working on succeeds, we’ll eradicate the ineradicable names. That’ll block the flow of the divine power through the Tree of the Sefirot, from Keter to Hokhmah to Binah to Hesed to Gevurah to Tif’eret to Netsah to Hod to Yesod to Shekhinah, and back again, and—”

“Let me guess. The world as we know it will cease to exist.”

MÉMé nodded. Listening to the babble of languages around me, I shook my head.

“I’m glad I don’t understand what most of these protesters are saying,” I said as we passed through the last of the crowds. We waited in line to present our credentials at the police and security checkpoints. “I’m *thankful* for what happened at Babel, for once!”

For all the mad diversity of tongues and beliefs represented in the

throngs surrounding InterPortation's headquarters, I could not help but realize that all those multitudes spoke with one voice when it came to their opposition to our project. As we entered the building, I was stunned anew at the superstition and irrationality to which so many of my fellow human beings could so easily fall prey.

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"I've been very pleased with your progress on the godspam blocker," Darin Mallecott told us the following afternoon. We met with him around an oversized teleconference table, in the dark wood environs of his penthouse office suite. "Your idea of treating all of information space as a 'gateway' at which you could vaccinate users' addresses and completely hide them from godspammers—it's a stroke of genius."

"I—we—thank you very much for that," I replied awkwardly. "Not only for myself and MéMé, but for the combined staff of Spamazonian and InterPortation technicians in the basement."

"I would request only one change," Mallecott continued. "I would like you to weaken the copy-protection encryption on your work."

MéMé and I looked at each other.

"I don't understand," I said after a moment.

"I want you to make it easier to pirate the material."

"You're paying us," I said with a shrug, "and you'll own the completed work. But, if you don't mind my asking, why?"

"An altruistic act. A *mitzvot*, as Ms. Gelernter would have it. I want to help protect as much of information space from godspam as I can."

"But you already control over eighty percent of the access corridors into i-space," MéMé said. "If the software is readily piratable, then there goes InterPortation's exclusivity. It'll saturate the remainder of i-space completely—in a matter of days."

"Hours, actually," Mallecott said, nodding. "Which is precisely what I'm after."

"Why?" I asked again. Such behavior didn't jibe at all with Mallecott's reputation for sharklike business practice. The CEO glanced away at the

view of the Sierra Nevada foothills, visible at a distance through the many windows. Then he looked back to us, his bright eyes glittering with the cutting hardness of diamond.

“Let’s just say I’m trying to do something that will be best for everyone. It’s not all about money—not all the time. If you must have a deeper reason, then you might want to consider that a particular danger has presented itself, which makes the issue of money seem insignificant.”

MéMé stared at me, then at Mallecott.

“Might that danger have something to do with the godspam encoding information into the physical environment itself?” she asked.

“Indeed,” Mallecott said.

“How does that encoding happen?” I asked.

“There are only theories. Some of my experts tell me this is the latest variant of a problem we’ve already encountered with our more advanced biological nanotech, our biotech field sensors. It’s worst with the latest and smallest modular motes.”

“‘Motes’?”

“A network of field data sensors tinier than dust motes,” Mallecott said, nodding. “Wirelessly connected. Wind and solar powered. Remotely accessible from i-space. As a demonstration project, we saturated an island in the Outer Hebrides with them. Along with researchers from Cambridge and St. Andrews, we were trying to create the fullest virtual representation, ever, of an actual physical environment. We succeeded, beyond our expectations. It appears there’s something in the godspam now that blurs the boundaries between the virtual and the physical. It has insinuated itself into everything on that island.”

“It’s reprogramming living things?” MéMé asked. “A biohack?”

“That’s the theory most of the biotechnologists favor,” Mallecott said. “But nonliving things are ‘reprogrammed’ as well. That’s why the quantum physicists favor a different explanation.”

“Which is?” I asked.

“Most of InterPortation’s work involves quantum computing. Quantum

entanglement and teleportation effects are a part of the way we do business. Some of the physicists who work for us think that what's happening on that island doesn't originate in our universe. That the island is being overwritten by aspects of a parallel universe."

"But how might that affect us?"

"If the process continues, our physicists think the entire universe as we know it might be entirely overwritten, displaced, but not until all the existing 'writing' on the big board—including us—is completely erased.

"Whichever theory is true, it's clear we can't allow either the physicists' or the biologists' scenario to come to completion. The infiltration has spread far beyond the island. That's why it's imperative we stop this godspam, which lies at the root of these boundary-blurring problems, in every case. And that we do it *before* the stuff infiltrates everything and kicks over into 'delete' mode."

Out of the corner of my eye, I saw MÉMé nodding enthusiastically. She had bought it, which was a good thing if it kept her on task and motivated about the project. I was not as convinced. Mallecott noticed.

"You still look skeptical, Paul."

"I'm just here to do my job," I said with a shrug. "Like I was telling MÉMé this morning, I'm interested in the tools, not the rules. Let the wise consider the whys of it. I'm interested only in the how."

"And from everything we've seen of the universal godspam blocker," Mallecott said, "you and your people at Extinctions certainly seem to know how. Indulge me on the copy protection issue, if you will. I look forward to the release of the final product. Oh—and tell your people we're going to throw them a hell of a party, once this is all done."

Mallecott stood then, and we shook hands with him before taking our leave. Once we were back in i-space, MÉMé worked as diligently on the project as I could ever have hoped.

The product release party was a real heller, just as Mallecott had promised. InterPortation's largest employee lounge was decked out more gloriously than the best ballroom in the best hotel downtown. The reception was catered by five-star restaurateurs. The wine and champagne flowed freely throughout the evening—so freely that it was nearly midnight before MÉMé and I left the building, to stagger away the many blocks to where we

had parked our cars.

The street blocks, sidewalks, and plazas around InterPortation, so crowded for the last week, were now empty, completely abandoned. MÉMé noticed it too.

“What do you think happened to everybody? Where’d they go?”

“Maybe they’re in their churches, waiting for the end to come,” I said, trying but failing to keep the smugness from my voice. “Maybe they’re out getting drunk. Maybe they’re all praying at home. Or maybe, since everybody knows what time our software was released to i-space—”

“—and everybody saw that the world didn’t end,” MÉMé said, a sly look on her face.

“—maybe they’re all trying to pretend their predicted apocalypse isn’t the biggest bust since Y2K.”

We laughed. I checked my watch.

“Hey, according to the figures Mallecott gave us, our software should be achieving a one hundred percent block of all godspam on Earth right about now. Virtual and physical both.”

She checked her watch as well and nodded.

“Just in the nick of time, before the stuff it’s blocking would have infiltrated everything—if Darin was right about that too.”

We stopped and stood, waiting for something to happen. Nothing did. I walked further down the street with MÉMé, secretly relieved.

Until the streetlights went out. Then, clear to the horizon in every direction, all the lights of the city went dark too.

Above us, in a cloudless night sky with only the thinnest sliver of moon, the stars came out, shockingly bright and abrupt, then just as suddenly began to go out too, as if being eclipsed by the passage of an enormous dark wing.

Who was responsible for this vast erasure? Was this happening because we’d failed—or because we’d succeeded? Who had been running the great program of us? For whom? And for what purpose?

Why?

Feeling myself and all the world around me becoming insubstantial, I remembered everything—and realized, as all of it passed before my mind's eye, that if my memories were virtual mails in the big system, then the religious terms in them would be causing them to be blocked and deleted now....

Were causing them to be blocked and deleted, the instant they were scanned?

In the last of the dying starlight, I turned toward MéMé. Beyond shock or despair, beyond anger or remorse, beyond the power of words to describe, the look on her face is the last memory I carry with me into oblivion.

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(Nine billion thanks to ACC.)