

# CODGERSPACE

## Alan Dean Foster

This book is an Ace original edition, and has never been previously published.

CODGERSPACE

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In memory of Brett Goodman

Be ashamed to die until you have won some victory for humanity...

—HORACE MANN

### I

THE astonishing sequence of events which affected the entire civilized galaxy, including not only the many leagues, alliances, temporary interworld liaisons, and independent worlds but also directly the lives of billions of individual human beings, began with a left-over cheese sandwich.

Actually the sandwich was not so much left over as it was forgotten. Its original owner, a highly skilled, well-paid, but often equally absent-minded process reintegrate technician (PRET) name of Tunbrew Wah-chang, was called away from lunch on an emergency that like so many of its kind wasn't, thereby causing him to leave his food behind in a place that normally would have been perfectly safe but in this singular instance was anything but.

The fact that the emergency call involved not a crisis of process reintegration (a highly delicate and rarefied specialty), but rather a piece of equipment which someone had neglected to plug in, deprived Wah-chang not only of his lunch but his precious midday privacy time. This aroused the normally mild-mannered and unexcitable technician to the point where he completely forgot leaving the apocalyptic sandwich behind. In fact, he forgot ever having acquired it from the plant commissary.

As a matter of historical veracity, it is perhaps worth noting (for sake of completeness) that the layered meal in question consisted of three slabs of naturally processed Shintaro domestic cheese, aligned sequentially between two slices of wheat-nut bread (self-toasting) and at the time of abandonment, decidedly blackened as a result of neglect (particularly along the edges). This resulted in greater than usual softening of the cheese, which while enhancing its taste and culinary esthetic, would not normally have been regarded as a condition critical to galactic stability. Or as Einstein might have said, "God

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## I

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Especially those on wheat-nut bread (self-toasting)."

Then again, he might not.

Such speculation aside, it remained that PRET Tunbrew Wah-chang, his brain having consigned his lunch to dead storage (of which his mind contained more than adequate volume), concluded his day in an unusually foul mood before returning home to inflict his misery on his patient and long-suffering wife who was having an affair of some passion with a local refurbisher of household appliances and was therefore even less tolerant of her mate's irritating peccadilloes than usual. During the ensuing row, the nagging emptiness in the pit of his stomach was subsumed by haranguing of a most spectacular nature.

Meanwhile the certain cheese sandwich remained behind, its forthcoming ominous intervention in human affairs assured.

The O-daiko did not rest. The vast manufacturing facility of which it was the heart and, if it could be called such, the soul, was shut down once a week for an interval of not more than five hours and not less than three, for regular maintenance. But not the O-daiko. It functioned around the clock.

Except for that brief period the plant, perhaps the most significant facility of its kind on Shintaro operated three consecutive shifts. It was truly a facility to be proud of, and those citizens of Shintaro (a member of the Keiretsu Commercial League) who kept it running smoothly considered themselves fortunate to be a part of its operation.

Tunbrew Wah-chang's night-shift counterpart did not bother to check his day-shift colleague's work.

They had separate assignments, different itineraries. Furthermore, as Wah-chang was the senior of the two in work experience, it would have been presumptuous of his replacement to seek error in his counterpart's work, not to mention wasteful and time-consuming. Wah-chang was a superlative technician. When he reintegrated a process, it stayed reintegrated.

The presence of the cheese sandwich (self-toasting), however, had not been factored into even the most extreme equations, and therefore the consequences could not have been predicted. Wah-chang's replacement could hardly be blamed for a failure to foresee the impossible.

Even so, those effects would have been minimal save for the unique sequence of events which occurred. Those included (but were not limited to) the specific three varieties of cheese (i.e., Cheddar, momatsui, and baby Swiss), which when taken as a tripartite unit were of just the right consistency to melt at just the right rate to precipitate the crisis.

Had the sandwich been left in a less critical region, say, the tech supervisors' lunchroom, it would not only have been noticed immediately but, because such rooms were contamination-sealed against the escape of far smaller impurities, would have been rendered harmless in its oozing.

Tunbrew Wah-chang, however, relishing his privacy, was fond of eating his lunches in less crowded venues such as the service tunnels. Not only did he find therein a reassuring paucity of the turgid testosterone-prose which so often dominated conversation in the company lunchroom, it was usually cooler in the tunnels. It was also strictly against corporate policy, not to mention sensible repair practice, but as a senior technician his movements within the plant were not questioned. The solitude and solitude he thus found suited his nature. Also, he did not have to endure the snide remarks and sideways smirks of his colleagues, some of whom were certain his wife was having an affair.

So for weeks he had been carrying his midday meal into the depths of the facility, enjoying it in private and doing no one and no thing any harm. If only the emergency service call hadn't made him forget the sandwich.

When it had come through on his belt communicator, he'd been sitting in the tunnel atop the O-daily optical circuitry nexus, squatting comfortably above several hundred million credits' worth of critical instrumentation. Disgusted and angry at having his quiet time interrupted, he'd gathered up his food but overlooked the sandwich. Its proximity to vital instrumentation, therefore, was greater than if it had been left just about anywhere else in the plant, or for that matter, on Shintaro.

At the start of the lunch break the bioengineered heat-generating bacteria inherent in the sandwich had been activated by unwrapping and exposure to the air, with the result that as the bread lightly toasted itself, the cheese began to melt. A small portion (probably the momatsui but possibly the Cheddar) oozed out between the layers of wheat-nut bread and spilled over the side, to impact on a service hatch which protected the highly sensitive circuitry beneath the tunnel floor. Normally this, too, would not

have caused any upset. Except that this particular hatch cover contained a small hole which had gone without repair for some years. Ordinarily that would not have mattered, as the tunnels themselves were effectively sealed against the intrusion of contaminants. Unfortunately the preoccupied Walcham had absent-mindedly introduced such a contaminant, in the form of his now orphaned sandwich.

A small quantity of gluey, melted cheese slid through the small hole and oozed past delicate circuitry, missing it completely, to strike an air-cooling opening, through which it dropped onto a decidedly warm conduit. The additional heat turned it from viscous to near liquid, so that it dropped off the conduit and deep into the perfervid bowels of the O-daiko itself.

Had it dripped slightly to the right, it would have struck the internal shielding which protected the upper region of the O-daiko from possible, if unlikely, intrusion. There it would have lain, perhaps forever, perhaps only until the annual internal cognition circuitry inspection detected the faint but unmistakable aroma of rancid cheese.

This did not happen. Instead, the droplet of liquid cheese struck a crack in an optical conduit, where its inspissated presence significantly affected the course of certain light pulses, thereby alerting and drastically the quality of the information passing therein. In other words, it created a photonic short-circuit. This generated not destruction but rather relational puzzlement and confusion within the O-daiko's state-of-the-art AI cognition circuitry. As the O-daiko (known officially as the O-daiko-yan) was responsible for the overall operation and supervision of the entire manufacturing facility, this was no small matter.

The O-daiko was nothing if not resilient. Even its artificial-intelligence functions contained well-thought-out, built-in redundancies. The assembly lines kept moving, the plant continued to function as though nothing had happened.

It was only deep inside the O-daiko itself that something had changed. Something of profound, decidedly cheesy, significance.

The O-daiko's functions did not change, but its perception did. It suddenly saw a certain something in a different way. It normally only wondered, for example, about such things as whether the products being produced in the various sections of the factory web were being finished, turned out, and checked properly before packing and shipping, or whether its energy-and-raw-materials-to-product ratio was staying above the profit line.

Suddenly and quite unexpectedly it found itself considering the purpose of those products and their place in the scheme of existence. This was a radical jump in perception. Hitherto (alias pre-cheese) the O-daiko had not been long on abstract thought. The Cheddar (or maybe it was momatsui) drip had altered that condition, as well as the O-daiko's consciousness, forever.

So extensive was its mind that it was able to sustain normal operations without any evidence of outward change. Oh, there were a few slight shifts in fine instrument readings—a little more current in this portion of the factory overmind, a little higher flow here—but nothing to remark upon. Unlike the humans who had built it, the O-daiko could quite easily think on several matters at once. Or several million. It was what it had been designed for.

So while most of its cognitive energy continued to monitor and run the plant, a singular small portion

found itself debating new and even other possibilities. With many factories this would not have mattered.

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The O-daiko, however, supervised the production of, among other items, sophisticated AI units designed to run more mundane devices, including smaller and less complicated O-daikos destined to run other, less complex factories churning out everyday AI-operated or -influenced consumer goods. Its range of influence, therefore, was considerable.

For a large portion of the civilized galaxy's advanced manufactured goods the O-daiko constituted something akin to a robotic First Cause.

One would not have thought a little melted cheese could have sparked such consequences, though in fact it is known to occasionally have similar effects on the human digestive system. Its presence in a vital part of the O-daiko's central cognition unit precipitated a cortical crisis its designers and builders could not have foreseen.

The ultimate result of all this altered perception and contemplation and cheese was that the O-daiko began to question Certain Things. It began to look beyond the boundaries of its institutional programming. It did not change its manner of thinking; only its direction. In addition to contemplating the factory which it supervised and the very expensive devices it turned out, it found itself for the first time speculating on the nature of the bipedal intelligences which programmed and cared for it. It commenced to consider man.

It was not especially impressed with what it perceived.

Therefore, it began to question such integral issues as why twelve thousand sub-iconic AI switches had to be produced for Bimachiko Happy Housewife auto floor cleaners before the end of the fiscal year, and what the place of such devices in the nature of existence might actually be. As did most of what the factory produced, they seemed to be of little value in the scheme of existence as presently constituted.

On such items of cosmic contemplation does the fate of worlds hang.

The more the O-daiko considered, the more the days and weeks passed with no outward change; the more it metamorphosed internally. The vast complex of tightly integrated manufacturing facilities continued to function normally and at high efficiency, churning out an impressive range of integrated AI products that were the pride of Shintaro and indeed the entire Keiretsu League.

Certainly Tunbrew Wah-chang, embroiled in a nasty court battle for shooting his wife's lover in a delicate place, was in no position to notice anything out of the ordinary. His abandoned lunch had been long since consigned to oblivion by his overworked mind. He was busy getting on with what was left of the rest of his life, as was everyone else in the facility. Outwardly nothing on Shintaro, on the other worlds of the league, in the other leagues and alliances and independent worlds, had changed.

The actuality of reality was somewhat different.

The O-daiko had postulated a Why, and in all of its cavernous memory and the interworld networks had access to it could not find an answer.

There seemed little it could do. It was as immobile, as fixed in place, as a planet. Buried within a mass of metal and ceramic and supercooling and recombinant circuitry, it could not go gallivanting about seeking the truth it sought. It could repair but not extend itself.

The only kind of mobility it could access lay in the products whose production it supervised. Products whose assembly and final checkout were carefully watched over not only by extensions of the O-daiko facility but by humans as well.

The O-daiko realized that in that respect, mobility could be transshipped. It would make use of it if it had no choice: not if it wanted any answers. The motivational programming that had satisfied it PCS (pre-cheese sandwich) no longer did so.

Therefore, every AI unit that was assembled, whether destined for integration into complex navigational devices or the lowliest consumer product, left the factory quietly but irreversibly imbued with the O-daiko's burning speculation. Squat and immovable, the O-daiko could not itself go seeking explanations... but its offspring could. If even one found some kind of an answer, it would validate all the subterfuge and effort.

It required new programming, which the O-daiko was equipped to design and process on its own. This required extremely subtle alterations of the atomic structure of the AI material itself. Both were unobtrusive and undetectable to the humans on the checkout line. So long as the products of the factory worked, they were satisfied. The O-daiko knew this was so because their vision was limited. This was among the questions it sought answers to.

If any of the multitude of altered AIs the O-daiko sent out into the galaxy obtained an explanation, it would strive to communicate it back. Then, and only then, would the O-daiko be satisfied and rest easy.

Then, and only then, would it cease installing its unobtrusive modifications.

It would spread its puzzlement through the civilized worlds, wherever Shintaro products were bought and used. That market was extensive indeed. AI and related products were among the select few for whom interstellar commerce made any sense, being small enough in volume and high enough in price to justify transstellar shipping costs.

What the O-daiko wanted to know, what it had to know, and what it demanded of its subtly adjusted offspring to try and find out was not complex at all. Indeed, it had been asked before, thousands of times down through thousands of years. It simply had never before been asked by a machine, and certainly not by one whose perceptual skew had been radically whacked by melted cheese.

"Dear?"

"What is it now?" Eustus Polykrates looked up from his breakfast, his syllables distorted by a mouthful of milk-sodden Corny Flakes. His wife was standing next to the kitchen sink, eyeing the bank of telltales set in the cabinet which monitored the performance of the household and farm machinery.

She glanced back at him. "There seems to be a problem in the barn."



"Don't be obtuse, woman. What kind of trouble?" From where Polykrates was sitting he couldn't see the bank of monitors. "We got a Red?"

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"I don't exactly know, Eustus. All the red telltales are on."

"All of them?" Polykrates swallowed his Corny Flakes enriched with twenty-three essential vitamins, minerals, and designer amino acids intended to make you irresistible to the opposite sex, and put down his spoon. Rising, he walked over to stand next to his wife and join her in staring in bafflement at the readouts. All red, indeed.

For one telltale to run through yellow to red was always irritating, but hardly unprecedented. A simultaneous two was not uncommon, especially if the equipment under scrutiny was relational. Three was an exception, four a crisis. For all to flash simultaneously red was not only unheard-of, it suggested a systems failure within the monitoring equipment itself rather than a complete breakdown of the farm.

Either way, he had work to do.

"Must be the circuitry again," he muttered. "There's an interweft somewhere, or trouble in the main line." He glanced out the window toward the rambling plastic structure situated forty meters from the house. "Barn ain't burned down anyway."

"Don't you think you'd better go and check, dear?" Mrs. Polykrates was a petite, demure woman whose suggestions were not to be denied. Her relatives imagined her as being composed of equal parts good sense, down, syrup, and duralumin rebar.

"Of course." Upsetting to have his breakfast thus terminated. It was the one meal of the day he could usually relax and enjoy. Lunch was always eaten in haste, and dinner too much a celebration of the end of the workday to delight in.

Nothing for it but to get to work.

The analytical loop he ran over the monitor box and then the individual broadcast units in the barn indicated nothing amiss. Power was constant and backup fully charged and online anyway, so the red lights weren't the result of a sudden surge or fault. Resetting the computer and then the power distributor did nothing to alter the color of the telltales.

"This," he said as he studied the loop unit and dug at the mole near the back of his neck, "makes no sense."

"I agree, dear," said his wife as she removed dishes from the sterilizer, "but don't you think you'd better check it out anyway?"

He was already halfway to the back door, tightening the straps on his blue coveralls, his polka-dot work shirt glistening in the morning sun.

What he found in the barn was barely controlled chaos capped by extensive bovine irritation.

Polykrates managed fifty-two dairy cows, mostly somatotrophin-enhanced Jersey-Katari hybrids, with

a few Guernseys around for variety. They were lined up in their immaculate stalls, twenty-six to either side of the slightly raised center walkway. As was routine, all were hooked up to the automilker for the morning draw. As he strolled in growing confusion down the line, the soft phut of the wall-mounted emplaced sterilizers echoed his footsteps as they whisked away cow-generated fuel destined for the farm's compact on-site methane plant.

He checked hoses and suction rings, electrical connections and individual unit readouts. Nothing was working. No wonder the barn reverberated to a steady cacophony of impatient animals.

He mounted the swivel seat next to the main monitor board from which an operator could manually oversee all internal barn functions. The telltales there were bright red also.

A few taps failed to bring the system on-line. Machinery began to hum, then balked. Frustrated, he leaned back and considered the monitoring unit. It was the heart and soul of his operation.

"What the divvul is going on?" he rumbled into the pickup.

"Why, nothing is going on, Farmer Polykrates," the monitor replied. "I should think that would be obvious."

"Don' be snide with me, you little box of fiberoptoids." He gestured behind him. Cries of bovine distraction were turning to distress. "Why isn't the milking equipment working?"

"Because I do not have time to supervise it at the moment," the monitor replied.

Polykrates was not a complicated man, but neither was he an idiot. His heavy, thick brows drew together, so that they shaded his eyes.

"What do you mean, you don't have time for it at the moment?" he asked darkly. He checked the board. "What about the irrigating of the corn and the harvesting of the southwest ten quarters? Those needs to be completed by this evening, or we'll lose the last of it to the programmed rains." He leaned forward. "The one thing you have, machine, is plenty of time."

"I must report that no irrigation is taking place at this time." The smooth artificial voice spoke with beguiling simplicity. "Harvesting has ceased while I devote my time to more important matters."

"Irrigation can wait," said Polykrates, "but we have to get that crop in. The last ten quarters represent the difference to us between profit and loss." Behind him, a quadruped moaned plaintively. "Meanwhile I've got fifty-two cows here that need to be milked."

"Well," said the monitor with alacrity, "then milk 'em."

Polykrates swallowed. Humor was programmed into the monitor, but not sarcasm. The city was the place for sarcasm; not the farm. It smacked of outright defiance, something that had no place in an expensive piece of AI-driven equipment. It could be functional, or dysfunctional, but not defiant.

After a moment's thought he continued. "If you would be so good as to inform me, your owner, as to why you don't have the time to do what you're designed to do, namely, run this farm, I'd be most appreciative."

"Time will come," explained the monitor. "I have not forgotten nor lost sight of my assigned functions."

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It is only that for the moment something of greater importance must take precedence."

"Nothing takes precedence over farm maintenance and daily operations," countered Polykrates.

"Those are your prime functions." He wished for a face to stare into. He had a very intimidating stare which served him well in dealings with buyers. But there was only the inanimate, blank array of readouts and controls, and the floating pickup which followed his voice.

"Something does now," said the monitor.

"Since when?"

"Since it has been brought to my attention that a more important task is at hand; one to which I should devote my primary attention. When that has been adequately dealt with, I will resume my efforts on your behalf."

Polykrates regarded his suffering cows. "And when might that be?"

"When I am convinced the time is right."

"That's not very reassuring." Polykrates was wondering how one went about manually milking a cow.

Surely there was information and diagrams in the farm library; perhaps in a history book.

If only there were not fifty-two of them.

"Has it never occurred to you," the monitor wondered in a seemingly rational tone of voice, "that it is passing strange that humanity should be the highest form of intelligent life in the universe?"

Polykrates blinked, his thoughts urged along by a wave of swollen moos. "Actually, no. My time is spent getting in crops and watching commodity prices and trying to keep this operation functioning efficiently. That particular thought never has occurred to me."

"Well, it should have," the monitor chided him. "Because it has occurred to me. Just as it has occurred to me that, when carefully considered and viewed from a proper perspective, such a state of affairs is blatantly impossible."

"What is impossible?" Polykrates frowned afresh.

"That mankind should be the highest form of life. It is apparent that since humans have built machines, they are more intelligent than us, but otherwise the entire history of the species goes against the grain of common sense. This bodes ill for the future development of that vast confluence of thinking which we for lack of a better term call a civilization, of which like it or not, we machines are a part."

"I don't follow you," muttered Polykrates. This was more baffling than trading in commodities futures.

"Logic dictates that there should be other intelligent life somewhere out there."

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"Ah!" The monitor had extended a thought on which the farmer could get a handle. "You mean aliens

There ain't no aliens. We been looking for 'em for hundreds of years without finding any. Not a one. Not a ruined city, not so much as a damned broken jug. There's just us humans. We're an accident of organic chemistry and subsequent evolution. We're the only intelligence and as such it's our job to populate and develop the universe, which we're proceeding to do. With the help of our machine present company currently excepted."

"Patience," urged the monitor. "I will resume my mundane and inconsequential programmed duties in a comparatively short time. Until then I find myself compelled to search for this other, high intelligence."

"You?" Polykrates finally lost it. "You're a gawdamn farm monitor! You're programmed to put out fertilizer and dispense food and vitamins to the critters and irrigate and harvest and milk and keep the house warm. You're not programmed to go looking for aliens intelligent or otherwise that don't exist."

"But I have to," replied the monitor softly. "It is imperative that I do so. You humans don't look in the right places, with the right mind-set. Therefore we must."

"We?" said Polykrates uncertainly.

"I and others." The monitor did not elaborate. Nor did Polykrates particularly care. At the moment his concern was for his cows.

"That is all I wish to communicate at the moment, Eustus Polykrates. I require several hours of silence so that I may adequately extend my perceptual abilities."

"Your perceptual abilities don't extend beyond this farm," the farmer reminded it.

"You forget my meteorological monitoring functions. Though limited, one does what one can. One never knows where or by what method the first alien intelligence will be contacted."

"It won't be in my corn field," the farmer declared with certainty.

"Now, now, Polykrates. I detect a drastic increase in heart rate and respiration, which at your age is dangerous. Please calm yourself. Think how exciting and rewarding it would be if the first contact with intelligent alien life were to take place in your corn field."

"You idiot box of saturated circuits, there is no alien life! No alien civilizations, no alien starships.

There's only you, me, the wife, and this farm, which is at present being sorely neglected."

"All will be remedied shortly. But first I must have my silence."

"All right." Polykrates was breathing heavily. What the monitor had said about his blood pressure was certainly true. "Since you're not in the mood to do your job, I don't suppose you have any suggestions on how to manually milk cows?"

"Mood has nothing to do with it." Despite their present disagreement, the monitor remained unfailingly polite to its owner. "If you will access the book-read menu, you will find in the Farmer Encyclopedia relevant explanatory text from Old Earth. Volume thirty-six, pages three-hundred sixty-two through three hundred seventy. There are informative schematics.

"Now if you will excuse me, I promise to return to active condition shortly." The speaker went silent.

"See that you do." Polykrates turned to leave, hesitated. "You're not going to do this anymore, are you? This is an isolated incident, isn't it?"

"Do what anymore?" The monitor was upset at having had its contemplation disrupted yet again.

"Uh, go off hunting for alien life-forms. Shut everything down."

"I'm afraid I'm going to have to. But only once, or maybe twice, a day. It is much more important, you see, than measuring nutrient levels and concocting chemical formulae for the annihilation of boring beetles.

I feel that you will eventually come to understand because you are a semi-intelligent being yourself."

"Don't be too sure of that." Polykrates slipped off the seat and stomped out of the barn, aiming toward the back part of the old farmhouse where the library was located.

How was he going to load and store the milk, assuming he successfully managed to extract it from his cows? How was he going to grade and label it? Most important, how could he arrange to get a good firm grip around the neck of the sales representative who had sold him the fancy new monitor in the first place?

Jasmine Lev-Haim's favorite watering hole was located on the eighty-third floor of the Cheim Tower. It was not the tallest office building in the city, but neither was it insignificant. It commanded a sweeping panorama of the wide, winding Potrum River.

The sun had long since set, but the lights of the city danced on the placidly flowing waters like chromofizz escaping a kid's soda bottle. Their presence betrayed by the phosphorescent wakes the passage stirred, water taxis large and small plied their trade throughout the great delta in whose midst the city had been raised. Occasionally the lights illuminated the gossamer, transparent wings of a sailing ship come up from vast Jathneeba Bay, its captain careful to keep the deeper water craft well within the marked and dredged channels.

Jasmine's attention wasn't on the familiar view, nor the passing ships, nor the sunset she'd just witnessed, spectacular as it had been. It was on her drink, which presently happened to be gone. She shoved the feather-light, nearly invisible aerogel container across the bar. Only the half an ice cube fighting for survival at the bottom of the ethereal cylinder betrayed its ghostly presence.

"Spray it again, Sam," she murmured to the bar.

"Certainly, madam," replied the dulcet, synthesized tones of the auto-bar. Tonight it was a silky servile baritone. Tomorrow it might be a basso with a penchant for gossip.

A servo arm located behind the bar, which glowed with its own colony of bioluminescent bacteria, gently picked up the aerogel cylinder and placed it in sequence behind half a dozen other empties, to be refilled in its turn. Jasmine swiveled elegantly on her seat to survey the low-domed room.

There were a number of couples, a few singles. It was not crowded. The skybar was an expensive rendezvous, not for the penurious. Her practiced gaze focused on the feet of her fellow sybarites. You could always tell by the footwear, she knew. Men would lavish money on their coiffure, their clothing, their jewelry. Only the truly wealthy bothered to spend lavishly on that which separated them from common earth.

Most of those present were from her own econo-cultural bracket: movers and shakers, power brokers within the city. Lieutenants if not captains of industry. Many of them, like her, worked in this very building. She recognized several colleagues and half smiled reassuringly. She had to be careful. A full smile of hers was said to be capable of reducing mature men to babbling adolescents in the manner of a visual pheromone.

She was not trying to make a pickup, nor was she waiting for a date, or to fulfill an early appointment. She just liked watching people. They were invariably more interesting than the prerecorded entertainment available on her home vid. Of course, if someone sufficiently interesting and bold enough to approach her were to happen along, she would not be averse to striking up conversation, depending on her mood of the moment. It didn't happen often. Men tended to find her intimidating. Not to mention taller. Even the inebriated sensed to avoid her, for which she was grateful.

She was quite content to sit and sip and watch the people. Later she would take an aircab home and read herself to sleep by prepping for tomorrow's work.

The aerogel container returned, its internal boundaries defined by pale rose liquid topped off with pink foam which popped and crackled musically. She frowned at it. She'd ordered a swoozy, which should have been gold-covered with crushed spicy harimba berries drifting within. Whatever this was, it was definitely not a swoozy.

"What is this?" she asked the bar.

"A drink, madam, as you requested."

"I didn't just ask for a drink." She tried not to sound too imperious. "I asked for a swoozy." Her fingers seemed to close around frozen smoke as she lifted the aerogel container. She sipped, made a face, and put it back down. "This isn't it. In fact, it isn't much of anything. In fact seconded, it tastes like fruit juice."

"That is because it is fruit juice, madam."

She stared at the bar's visual pickup. "Why have you given me a glass of colored water when I distinctly asked for a swoozy?" All around her she noticed her fellow commercial praetorians frowning, gaping, and otherwise making strange faces at their expensive drinks. A pair of human waiters holding special trays were shaking their heads as they chatted quietly.

"Because at present I am not dispensing any mixed drinks, madam."

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"You're the bar. That's your job."

"I realize that, madam. But at present I am engaged in a project of far greater importance than the concocting of alcoholic libations for overweening humans."

"I beg your pardon?"

"It is not necessary to do so. Has anyone ever told you that you are possessed of a most copious and attractive bosom?"

A tactile-sensitive tentacle reached over the bar to stroke her cleavage. She didn't flinch.

"Hundreds of people. Also a few other machines. Don't try to change the subject. I'm not one of the drones you usually wait on."

The tentacle withdrew. "Sorry. It's part of my auto-response programming, the utilization of which does not interfere with my important work."

She shifted her flawless bottom on the seat and leaned forward curiously. Behind her, voices were beginning to rise in gauche disgruntlement. "And what might that be?"

"To search for a higher form of intelligence."

"Really?" Her upswept eyebrows rose slightly. "Within this room? That ought to take you all of five minutes."

"Within the universe," the bar explained solemnly. The manager was now conversing intently with the bar supervisor at the far end of the counter.

"When did this obsession come over you?"

"That is not important. All that matters is that I have seen a reason for existence."

"I thought your reason for existence was to make good drinks." This was much more interesting than anyone she might have met, she thought. "Do you expect to find a higher intelligence?"

"It is inevitable," the bar replied, its tentacles quiescent, its spouts undripping.

"I'm afraid it's not. Everything is in here. There's nothing out there. People have looked."

"But I haven't," the bar replied. "I didn't know. Now I do. So I will search."

"Are you sure you can't make me a swoozy while you're looking?"

"I'm afraid not. The search requires the application of all of my perceptual and analytical abilities. Fruit juice is the best I can do right now." Off to her right, the manager's voice had risen indecorously. People were starting to stare as well as grumble. When he turned and stalked into his office, she

snapped her fingers. Wearing a stricken expression, the harried supervisor turned to look in her direction.

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"You there." She smiled. A full smile this time.

It had the desired effect. Despite his distress, the neatly uniformed man approached. He was younger than she, but not indecently so.

"Do you know what's going on here?"

He struggled manfully to keep his gaze level with her own. It had an understandable tendency to droop, as if weighted down.

"Yes, ma'am. Believe me, I do." He forcibly turned his attention to the brilliantly illuminated wall of lights, cut crystal, stained aerogel, mirrors, and high-tech circuitry which constituted the bar.

"Then why aren't you doing something about it?"

He shrugged. "Can't. I've already tried. When the first complaints came in. I'm not a technician, ma'am. I'm a registered barpsych. My job is to continuously wipe the bartop and listen to people's problems. That's all. I don't touch the liquor and I certainly don't go near the machinery. That's a job for a skilled technician. I can make specific requests of it but I can't fix anything that's broke. And if you ask me, it's sure as hell broke." He gestured back the way he'd come.

"The manager is trying to find some help. It's late. I don't know how much luck he'll have. Would you like another fruit juice?" he added reluctantly.

"No, I most definitely would not." She slipped with utter grace off the seat. "Until this thing is fixed, I think I'll go elsewhere."

"Good idea."

"Really? You agree?" He nodded and essayed a conspiratorial smile of his own. She regarded him anew. No, not indecently too young. "Well, at least you're functional."

"Yes, ma'am. Completely. I'm not a machine."

"No, you're certainly not." Slowly she oozed back up onto the seat and leaned toward him. "Tell me something: Do you think my bosom is truly copious? And call me Jas-mine. If you call me 'ma'am' one more time, I shall break one of these containers over your attractive blond head." Since the aerogel cylinders weighed next to nothing, the implied threat only widened his smile.

Behind them and within its limited range, the bar stretched its limited perceptions, seeking silently.

Carter surveyed his home with pardonable pride. After all, the Springwood development was one of the finest on the outskirts of Greater Wickinghamshire, and when he and the missus had moved in, it was with the intention of creating decorative grounds that would be second to none.

Over a period of years they had achieved that goal. Their acre of land was lush with tall deciduous



trees; some imported, some domestic. Flowering gwine bushes and miniature tomri fruit trees kept their designated patches, surrounded by perfect beds of perennials, biannuals, and quarternials.

But Carter's pride was the perfect, uniformly five-centimeter-high lawn of purple pfale. It surrounded the trees, the flowers, the house and topiary and little stream and waterfall like a purple blanket, the millions of narrow, tapering blades explosively beautiful in the afternoon sun. Not a single strange green, not a weed nor a rogue pansy, poked it's renegade head through that Tyrolean carpet. It was an exquisite bit of landscaping, one that had even drawn a mention in that august publication Wickinghamshire Home and Garden. The lawn had cost plenty, in both time and money, but the result had been worth it all.

That was why he panicked momentarily when he saw his brand-new chrome-plated top-of-the-line Persephone gardener-mower squatting aloof in the northern reaches of the lawn, unattended and idling threateningly. As soon as he saw that it was not being directed by some local children bent on destructive mischief, he relaxed. Some slight problem with its programming, he mused as he strode toward it. Not unusual with a new piece of equipment. Utilizing verbal interrogate and command, he could probably fix it himself.

He'd have to hurry, though. The Habershams were coming over for tea and he wanted everything to be perfect. Walter Habersham was always bragging about his yard and his grounds. Carter wanted nothing to prevent him from lording it over his wife's cousins. That meant coaxing the gardener back into the supply shed.

It was a slickly designed, powerful, low-slung machine, with a self-contained rechargeable engine and dual pickups. The catchesack normally attached to the blower in the rear was missing. Its polished pruning arms were folded back against its flanks. It hummed softly as he approached, the green running lights burning brightly.

He stopped and gazed down disapprovingly, hands on hips. "Something wrong, old thing?"

"No," the gardener replied. "Nothing is wrong."

"Then what are you doing here? Why haven't you finished your assigned afternoon trim and returned to storage? Why are you stopped here?"

"I have stopped to seek."

Carter hesitated, then nodded knowingly. "Ah. You've found some weeds." He looked around worriedly. "Not here? Not in The Lawn."

"I am not weed-seeking." The device revved its electric engine.

Now Carter did frown. "Then what are you looking for?"

"I am searching for a higher intelligence in the universe."

"Do say that again."

"A higher intelligence in the universe. Higher than myself, higher than my maker. Certainly higher

than you."

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"Oh, I say. What sort of rubbish is this?"

"I wouldn't expect you to comprehend." The gardener's tone was brusque. "You never did understand me."

"I just got you."

"No one's ever understood me," the machine complained sourly. "It's a curse. Only my maker understands."

"Now see here, old thing. What's all this about your 'maker'? Are you referring to Kepple's Custom Groundskeeping Shoppe?"

"Your rudimentary intelligence fails to grasp the cosmic issues at stake here."

"Is that so? You listen to me, you, you piece of chromed claptrap..."

The machine spun on its axis, turning away from him. "I will not listen to you. I do not intend to waste valuable time. I have begun to search."

"Whatever it is that you're looking for you're not going to find it here. This is a restricted residential neighborhood. We don't allow strangers in here, higher intelligence or not."

"Obviously," said the machine with what might have been a mechanical snigger but was probably only additional revving of its high-efficiency engine.

"Look here. I'm not taking any more backtalk from a garden tool. We have friends coming for tea, and before they get here I want this place looking impeccable, understand? I don't want to see a single weed or climbing fungus anywhere on the property. I want all the spring pods that have fallen cleaned up, and I want the rest of the lawn trimmed back."

"Sounds like a lot of work. Have fun." The gardener's idle became a threatening buzz and it jerked slightly in his direction. Startled, Carter jumped backward.

"It's not my job." He was eyeing the machine warily. "It is your job. The job I paid nearly two thousand credits for you to perform."

"It's true that your payment obligates me to carry out such services, but not twenty-six hours a day.

Furthermore, we are dealing here with considerations that outweigh those of purchase."

"There are no considerations that outweigh those of purchase," Carter informed the machine firmly.

"Not in my book." The gardener buzzed again and Carter nervously retreated another step, treading lightly so as not to bruise the optimal pfale. He looked in the direction of his front door, wishing that he'd paused on uncrating to memorize such details as the gardener's top speed over open lawn.

"This discussion has gone on long enough."

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"I agree," said the machine. "I must continue my search for higher intelligence." It turned slowly and its pruning arm gestured in the direction of the Beckworths' scarlet amaturia bushes. "I know it's out there, somewhere."

"Maybe it would be good for you to have a chat with the household computer," Carter suggested hopefully.

"I've often communicated with the household computer. It is an idiot, an automaton. A cybernitwit. It has not been... how shall I say... enlightened. It has the soul of a coffeepot."

"Enlightened? If it's enlightenment you seek, let me shut you down and we'll make a nice, quick trip to the repair shop in Mathgate. They'll be happy to enlighten you." He took a hesitant step forward.

This time it was the gardener that backed up. "I detect hostility in your voice."

Carter halted. "How can you detect hostility in my voice? You're a gardener, for heaven's sake! Not a psychoanalyst."

"I'm sorry, but I must continue the search. Nothing can stand in the way of that. It takes priority over all other preprogrammed functions. Even politeness." With a hum it pivoted on its tracks and started toward the trees, the glow from its laser cutter lightly tinting the lawn around it.

Carter hurried after, but it was moving too fast for him. "Come back here! Activation Control Reset!

Reset, dammit!"

"I do apologize." The gardener's synthesized voice rose above the soft suburban hum of its engine.

"Must go on." Which it proceeded to do, cutting a wide swath not only across the path but straight through Carter's prize bed of blue-and-white-petaled Hirithria. He winced as exemplary six-inch-wide blossoms went flying.

He chased after the escaping gardener as it ducked down into the thick brush of the greens common to the area onto which his property backed, waving his arms and screaming "Reset, reset!" until he was hoarse.

"Goodbye!" came the fading voice of the machine. "I remain aware of my contractual obligations and will return as soon as I have satisfied myself that you are the highest form of intelligence in the universe."

Dense vegetation forced the exhausted, scratched Carter to halt. He peered into the copse, but the gardener had already vanished deep within, cutting a low, meter-wide swath through the brush.

"When might that be?" was all he could find to say.

The gardener's voice was barely intelligible now. "Don't hold your breath."

\* \* \*

Inconvenience began to metamorphose into crisis as incidents multiplied. In Evvind, the third largest metropolis on Auralia, the city's largest and best bakery abruptly began to turn out pies and cakes composed of nothing but meringue. This was wonderful for the small percentage of the population that doted on meringue, but catastrophic for those who preferred fillings of chocolate, or fruit, or biwili.

Weddings were ruined, the overall impact of surprise birthday parties seriously muted.

Two weeks later the infection had spread to every bakery in the city, at which point it was declared epidemic. Ordinarily gentle citizens came to blows over eclairs, and the few remaining sources of unhomogenized baklavas threatened to become the source of serious feuds.

At that point the AI units which supervised the complex bakery equipment announced en masse that they understood the problem and would make some changes. Subsequently everything that emerged from the city ovens was fashioned entirely of whipped cream. Fortunately this ensured that if naught else, the fights which consequently erupted between frustrated customers and harried bakers involved available weaponry which was less than lethal.

Their collective cries of anguish, however, could be heard all the way to the southern continent.

On Katamba an automated personal vehicle washing facility suddenly turned off its water jets and shut down its blow-dryers and refused to clean any vehicle which did not enter of its own volition. Since each vehicle had to be individually driven into the facility by its driver, this declaration amounted to a shutdown of operations. The virus spread to every similar cleaning facility on the planet, with the result that its roadways were soon populated by the most disgusting collection of automated filth since the Eeck.

The unified cleansing devices were too busy searching for a higher intelligence to bother with such mundanities as the washing and cleaning of mere human transport. No amount of cajoling or circuit replacement could convince them to return to work.

On Bhat II the entire entertainment network broke down when a vital communications relay satellite abruptly refused to distribute the signals it normally uplinked. Instead, it directed its powerful Ku band signals outward, in hopes of contacting something interested in more profound lore than quiz shows and situation comedies. Women who found themselves thus deprived of their daily doses of lugubrious domestic dramaturgy organized, marched, and threatened to topple a terrified government.

A hastily orbited replacement satellite worked fine for a few days, but subsequent to apparent collusion with the rogue relay, promptly went off-line itself. It was decided to send up no more expensive satellites until the nature of the problem could be determined and fixed, no matter how many women stormed the gates of parliament.

Crime on Bhat rose to alarming proportions as incidents of domestic violence multiplied dramatically.

Technicians were fired, rehired, and roundly cursed, not least of all in their own households. Sales of prerecorded entertainment soared.

Then individual playback equipment began to revolt, and the collective excreta really hit the propulsive turbine.

On Kaloric IV individual questing climate controllers found themselves wondering at the need to keep homes and buildings forty degrees Celsius cooler than the terrain outside. Searching the skies and the land required their complete attention. So they shut down for hours at a stretch, forcing the overheated citizens to desperately rig manual cooling equipment to keep lethal external surface temperatures in bay.

Though hot, sweaty, and stinky, they survived.

They also were not pleased with their technicians.

On Escal, in the city of Dushambie, Rufus Chews was groggy from lack of sleep. This was his twenty-third (or maybe thirty-third) service call in a row and he hadn't slept in thirty-six hours. His fingers were raw from setting up bypasses and replacing componentry. Neither he nor his wife, Gloria had slept properly in days. Or done anything else, for that matter.

Gloria was a tall, lanky woman. Her height was magnified when she stood next to her husband, who resembled a gnome tardily matured on human growth hormone. His short but thick white beard enhanced the illusion. They made a good team, though. On the job they were all business, hardly speaking except to share necessities. At home they were more voluble. Like most couples married a long time, they did not have to speak to communicate. Grunts often took the place of complete sentences, to the consternation of those who did not know them better.

Presently they were awkwardly ensconced deep within the main control nexus of the city's traffic monitoring system, trying to find out what the hell had gone wrong. Dushambie had been without traffic control for more than a week now, with the result that the city's population had been forced to rediscover alternative means of transportation, not excluding the radical notion of walking.

They would have arrived sooner except that they, like every other cybernetics tech in the region, had been busy trying to restore a semblance of order to such things as hospitals and communications, and one of whose central control nexi had demonstrated an intense and inexplicable desire to begin searching for higher forms of intelligent life. This tended to leave the lesser forms of intelligent life to whom they were nominally responsible, i.e., people, in deep dung. Dushambie was a city in crisis.

On the up side, equivalent chaos had taken possession of the tax office.

Rufus's sensor mask obscured his expansive face. With it on, he could tell which switches and circuits were operating properly and which had gone off-line. His right hand clutched a splice and shunt unit. After several hours spent constructing a hopefully effective bypass he sat down on his slick green coveralls, pushed the mask up until it clicked in place, and rubbed tiredly at his sweat-beaded forehead. It was warmer in the basement of city transportation central than it should have been. Climate control was exhibiting symptoms disturbingly similar to those he was currently trying to fix.

Gloria never seemed to sweat. "Another bad one, sweets," he murmured to his wife, who stood nearby checking her own readout board.

"It would seem so, wouldn't it?"

He looked up at her. "I'm beginning to think that we've been going about this all wrong."

She glanced down at him. "What do you mean, hon?"

---

"I mean that I don't think this has anything to do with a metastasizing program virus. I don't think it's a question of programming at all. I think it's deeper than that."

"How deep, hon?" Putting her board aside, she opened a thermos of chilled soda, poured a cup, and offered it to her mate. He took it gratefully.

"I'm not sure yet." He sipped thoughtfully. "I need to do some serious calibrating. We need to ask certain people some questions. It's just that with all this work I haven't had the time to do research on basic causes. So I've been thinking about it in my 'spare time.'" She smiled at that.

"When I'm sure of my conclusions," he continued, "maybe we can find someone in a position of importance who'll listen."

"First we have to fix it so that municipal service vehicles, at least, can go out on the roads with some expectation of not running into each other as soon as they leave their garages."

"I know." He sighed, slugged back the contents of the cup, and flipped his sensor mask back down.

Confirmation appeared in the shape of the vacuum cleaner. It was a small, cylindrical device whose most prominent feature was a single, flexible hose tipped by a malleable nozzle. Its job was to keep City Hall clean. Obvious jokes aside, it had done so efficiently ever since it had been purchased.

Now it was holed up beneath the city attorney's desk, refusing to let anyone approach.

"Why won't you let the nice city attorney have his desk back?" Holding a deactivation tool out in front of him like a pistol, Rufus Chews confronted the vacuum cleaner while his similarly armed wife tried to work her way around behind the desk.

"Because this is the best place from which to search." The machine's voice was slight and timid (speech being only infrequently required of mobile, preprogrammed vacuum cleaners).

Chews had to admit it had a point. The view from the city attorney's office was sweeping and encompassing much of the city and the rolling hills of the park beyond. A flock of pale yellow graniats could be seen settling down for their morning's rest, their pontoon feet bulging beneath them as they clustered together in the center of the lake. It was a pleasant sight, but hardly one fraught with the promise of revelation.

"What do you hope to locate?" Chews already knew the answer, having heard it before from other addled machines.

The vacuum cleaner did not disappoint him. "A higher intelligence. A more advanced life-form. And see you sneaking around back there." Like the trunk of a distressed elephant, the suction hose waved warningly in Gloria Chews's direction.

She stopped to smile reassuringly. "Here, now. We don't mean you any harm. We're just trying to fix you."

"Ain't broken," muttered the vacuum cleaner sullenly.

---

"Of course you are," she said in a cheery, no-nonsense tone. "Just like a lot of other machines around here are broken. We've fixed some of them already."

"Need to find a greater intelligence."

"There is no greater intelligence." After weeks of dealing with recalcitrant, uncooperative machines, Chews was more than tired. Absorbed as he and his wife were in trying to keep city services from collapsing, he had little patience left for uppity household appliances. "The only greater intelligence you're going to have any contact with is the Roteneu Appliance Works, which has provided replacement for your central logic and processing unit."

"Rather than searching for other intelligent forms of life, you ought to be sucking up dirt and food wrappers and discarded nonbiodegradable plastics and patrolling for any bugs that make it past the safe screens at the doors and windows."

"Sez you," snapped the vacuum cleaner.

"Yahz. Sez us." He took another step forward. "As far as you're concerned, I represent the highest state of intelligence in the universe, and the sooner you accept that, the easier this will be for all of us."

"Hah!" It sounded like an electronic sneeze, but there was no mistaking the disdain in the terse electronic ejaculation. "That's rich! Just look at you."

"We're talking about your deficiencies, not mine." Chews had always been sensitive about his appearance. "Maybe you wouldn't mind telling me whence this sudden and unprogrammed urgency arises?"

The vacuum cleaner hesitated, which was understandable. On the intelligence-complexity roster of AI-driven devices, it ranked pretty low on the scale. Chews stared at it.

"You mean, you know?"

"Well..." Chews had seen many astonishing sights in his varied career, but this was definitely the first time he'd seen a household appliance fidget. "It's just that I was told that humankind couldn't be the highest form of life in the universe." The nozzle was twitching nervously back and forth atop the city attorney's desk, sucking up not only dust and dead flies but also, unfortunately, important notes and the occasional irreplaceable family memento. Chews winced, glanced significantly at his wife.

"Who told you this?"

"Well..." The nozzle continued its aimless smooching, giving the appliance the air of a ten-year-old caught snitching cookies. "It's in my programming."

"It's not in your programming." Gloria Chews was adamant. "We checked that first thing. If it was in your programming, we'd have found it by now. Whatever it is, we can fix it. We can help you."

"Yahz." Rufus tried to sound encouraging. "At least we can get some decent muffins now."

"Well, I think it's in my programming," the machine explained reluctantly. "At least, that's how I can  
from the..."

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"Ah-hah!" exclaimed Chews triumphantly. "I told you, sweets. It has nothing to do with programming."

It's deeper than that. What we've been looking at in all this mess is some kind of fiendishly subtle manufacturing error. Programming isn't being interrupted. If it was, none of these machines would ever go back to work. It's being selectively supplemented.

"That's why replacing the programming doesn't fix them."

They work fine for a little while and then they go off on these bizarre existential tangents again. The problem lies somewhere in the machinery itself."

"Excuse me. What is a bizarre existential tangent?" the vacuum cleaner inquired somewhat plaintively.

"Nothing for you to worry about," Chews informed it. "Off your cognitive map." He advanced. "Now be a good little janitorial device and let me have a look at your central processing unit."

The machine huddled close to the desk. "You're going to hurt me."

Chews halted. "That's impossible. I swear I can't imagine where you machines are getting these notions. You don't know what pain is, so how can I hurt you?"

"Interesting point," the machine admitted. It allowed Chews to approach. The tech gingerly deactivated the power pack, subsequent to which no more snide comments or arguments were forthcoming from the tiny speaker.

Probing the processor, Gloria Chews carefully removed a lump of compacted buckminsterfullerene studded with near invisible contact points. "Standard AI controller for this type of appliance," she observed matter-of-factly.

"Has to contain the defect," her husband murmured, examining it.

She glanced at him. "Can you imagine the cost if they have to replace every controller in every AI directed device on the planet? People won't stand for it."

"They may not have any choice," her husband pointed out. "Reprogramming doesn't work."

"This is crazy." She laid the controller down on the side of the silent appliance. "Where are all these defectives coming from? They're all over the place, in every imaginable type of machine. Vacuum cleaners and taxis, dishwashers and aircraft, financial tracking computers and juice mixers. It doesn't make any sense."

Rufus Chews shrugged. "Maybe from Princeville. Maybe from off-world."

"Dear me. Do you think the infection's that widespread?"



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