

Allen Steele: Agape Among the Robots

Art necessarily reflects
the artist—sometimes in surprising ways.

Then Samson met Delilah, the first thing he did was crush an apple against her head. Delilah didn't react in any way; she sat calmly on the park bench, her hands folded primly in the lap of her long purple dress, staring straight ahead as wet pulp ran down her face and into the neckline of her lace collar. She didn't even look up as Samson walked around the front of the bench, bowed from the waist, and gallantly offered his hand.

In the Samson Team control van, though, we were either cracking up or gaping at our monitors in dumb surprise. All except Phil Burton; glaring through the one-way glass window, almost apoplectic with rage, his mouth opened and closed several times before he finally managed to give utterance to his thoughts.

"W-w-w-what t-t-t-the . . . what the hell was that?" he demanded. "W-w-who pr-pr-programmed th-th-th-tha-that. . . ?"

"Nobody programmed it, Phil," I said. I had been worked with him long enough to intuit what he meant when his speech impediment got in the way. He looked sharply my way, and I hastily coughed into my hand to hide my grin. Phil had a tendency to think people were laughing at him even when something else funny was going on. "Honest. I checked Samson's routine myself. That wasn't supposed to happen."

"I-I-I know th-th-th-th. . . ." Phil shut his eyes, took a deep breath, and silently counted to ten. While he was counting, I glanced past him at Keith D'Amico; although he was still chuckling, he had already checked out his own screen. He caught my eye and shook his head. No, he didn't have a clue as to what went wrong either.

"Phil, Jerry . . . I've put Samson in standby mode." This from Donna Raitt, seated at the console on the other side of me. Unlike Keith and me, she hadn't lost it when Samson had assaulted Delilah with a deadly fruit; she was watching her screen, her hand cupped over her headset mike. "It looks like D-team has done the same," she added quietly. "I haven't heard from Dr. Veder's group yet."

"Oh, but you will . . . you will." Keith was doing his Yoda impression again. "Beware the dark side, Luke . . ."

"Knock it off." Phil had managed to get control of his stutter. He glared at Keith, then turned back to me. "Okay, I believe you. It's a glitch, that's all." He glanced out the window, taking a moment to study the two robots frozen in the wooded atrium. "Access his memory buffer from the beginning of the test up to when Donna put him on standby."

"Death Star in range within ten seconds," Keith murmured.

If Phil heard that—and judging from the annoyed expression which briefly crossed his face, he

did—he chose to ignore it. He turned to Bob, the kid operating the remote camcorders. "You got everything, didn't you?"

"What . . . oh, yeah, yeah, it's all here." Bob was wiping tears from the corners of his eyes. "Do you want a copy, Dr. Burton?"

"No, I want you to delete the whole thing." Bob stared at him in surprise, and for a moment his hands moved to the editing board. "Goddammit, of course I want a copy!" Phil snapped. "Run it off now! Move!" He returned his attention to me. "C'mon, Jerry, gimme everything you got . . ."

"Coming right now." I had already loaded a fresh 100 MB disk. A few deft commands on the keypad above my lap, and a bar-graph appeared on my screen, indicating that the data Phil wanted was being copied. I looked again at Keith; behind Phil's back, he had his right hand raised, and he was counting off the seconds with each finger he folded into his palm. Five . . . four . . . three . . . two . . . one . . .

"Delilah Team just called in." Once again, Donna had clasped her hand over the wand of her headset. "Dr. Veder wants to meet with you in the test area . . . umm, right now, Phil."

The color vanished from Phil's face. "Uhh . . . t-t-tell her I'll b-b-b-be there as . . . as . . ."

My terminal chirped. I popped out the disk, shoved it into Phil's hand, then snapped my fingers at Bob. He ejected the DVD from the camcorder, slapped it into a jewelbox, then passed it to Keith, who tapped it against Phil's shoulder. That seemed to wake him up; he blinked a few times, then turned to snatch the DVD from Keith's hand.

"He's coming now," Donna said quietly into her headset. "Sorry for the problem. We had a problem here, but . . ."

"Stick to the rules. No contact except between team leaders." Phil took another deep breath, then clapped the two disks together as he turned sideways to squeeze past her and me as he headed for the control van's door. "Wish me luck."

"May the Force be with you," Keith said, and I shot a look which told him that I'd like to stick a light-saber where a Jedi couldn't find it. "Good luck," he added, albeit reluctantly.

"Thanks." Phil grabbed a roll of paper towels from the shelf near the door. Then, almost as an afterthought, he looked back at Keith. "Wipe the memory buffer, will you? I don't want this to affect the next test." Then he stepped out of the van, slamming the door shut behind him.

For a moment no one said anything, then everyone collapsed in their seats. "Man, oh man," Keith muttered, covering his face with his hands. "I thought he was going to have a stroke . . ."

"Thought *he* was going to have a stroke?" Donna shook her head. "You should have heard what was going on in D-team's trailer. Kathy sounded like she was ready to . . ."

"Are you off-line?" I asked quietly, and her eyes went wide as she lunged for the mute button. Keith chuckled as he reached for the two-pound bag of Fritos he kept stashed beneath the console. I glanced at Bob; he said nothing as he hunched over his screen, replaying the test on his monitor. Fresh out of MIT, he had been working for LEC for less than five months now, and only very recently had been assigned to the R3G program. He was wisely keeping office politics at arm's length, nor could I blame him.

Through the window, I watched Phil as he walked toward the bench where Samson stood frozen, his right hand still extended. He glanced nervously toward the opposite side of the atrium, then he tore a wad of paper off the roll and began hastily wiping the apple shards off Delilah's spherical head. I had to wonder why someone on her team had felt compelled to put her in a dress. Perhaps to accentuate her feminine role; although the test was supposed to work out bugs in their handshaking procedures, the scenario Phil and Kathy had mutually devised was supposed to playfully emulate a quaint, old-fashioned courtship. So far, though, the results weren't very promising.

"Oh, such a nice man," Keith said, propping his sandals up on his console as he shoved a fistful of chips in his mouth. "Look, he's cleaning . . . uh-oh, here she comes."

From behind him, Dr. Katherine "Darth" Veder came stalking through the trees, her hands shoved in the pockets of her lab coat. Even before he saw her, Phil must have heard her coming, for he fumbled with the roll in his hands as he reluctantly turned to face her.

"Oh, boy, is she pissed or what?" Bob murmured.

"What," I replied, and Donna arched an eyebrow knowingly.

"*Dum-dum-dum-dah-de-dum-dah-de-dum*," Keith hummed. "Volume, please. I don't want to miss this."

The van was soundproofed, but we had a parabolic mike aimed at the test area. Donna started to reach for her board to activate it. "Don't," I said quietly, shaking my head at her. "Let's let them handle this themselves." Smiling a little, Donna withdrew her hand.

Keith sighed in disgust, then pulled on his headset and tapped a command into his console. I had little doubt that he was patching into Samson's external mike to eavesdrop on their conversation, if it could be called that. Through the window, I could see Kathy yelling at Phil, her small hands gesturing wildly as she pointed at him, at Samson, at Delilah, at our van, and back at Phil again. Although Phil's back was half-turned to us, his hands were almost as busy, first making gestures of supplication and apology, then briefly returning to his sides—he was probably counting to ten again—before rising again to make irate motions of his own.

Donna rested her elbows on the console and cupped her chin in her hands. Bob picked up the month-old issue of *Spin* he had placed on top of one of the mainframes. Keith pawed at his bag of chips, watching with interest while the two team leaders ripped into each other.

"I wish these guys would hurry up and admit they're in love," he muttered.

Meanwhile Samson and Delilah patiently waited nearby, ignored yet omnipresent, as stoical as only robots can be.

Okay. Time to backtrack a bit.

You know about LEC, of course . . . or at least you should, if you pay attention to TV commercials, browse the web, or visit shopping malls. Lang Electronics Corporation is one of the three major U.S. manufacturers of consumer robots; it started out as a maker of IBM-clones in the early '80s, then diversified into robotics shortly after the turn of the century, introducing its first-generation robot vacuum cleaners and home sentries about the same time that its closest competitors, CybeServe and Cranberry, entered the market with their own household 'bots. CybeServe was the leading company, and solidified that position after it was bought out by Mitsubishi; Cranberry, on other hand, was hurt by poor sales and a reputation for making second-rate 'bots that tended to forget instructions, burn actuators, and taser the mailman. By the time CybeServe and Mitsubishi merged, Cranberry had laid off one-third of its employees and was on the verge of declaring bankruptcy.

This left LEC in somewhere in the middle. It remained strong enough to fight off hostile takeover attempts by larger electronics companies in both America and Japan, and its Valet and Guardian series of home 'bots held their own in the marketplace, not only selling as many units as CybeServe but even surpassing their sales in Europe. The success of its first-generation robots prompted LEC to invest considerable capital in developing a second-generation series of universal robots. Biocybe Resources in Worcester, Massachusetts, had recently introduced its Oz 100 biochips, pseudo-organic microprocessors capable of handling 100,000 MIPS—Millions of Instructions Per Second, the robotic equivalent of megabytes—and LEC had built them into its Gourmand, Guardian III, and Companion 'bots, successfully bringing them to market nearly two months before CybeServe brought out their rival systems. It also helped that CybeServe's 'bots were more expensive and that their CybeServe Butler had an embarrassing tendency to misunderstand questions or commands given in less than perfect English (e.g., "Is the dishwasher running?" No, it's still in the kitchen. "Answer the door, please." But it hasn't asked me anything. And so forth.).

(If all this is beginning to make your eyes glaze over, please be patient. Home 'bots may be rather commonplace these days—if you don't already own one, chances are one of your neighbors does, and your kids may be dropping hints about how nice it would be to find a CybeServe Silver Retriever or a LEC Prince barking and wagging its tail beneath the Christmas tree—but I'm relating events which occurred about ten years ago. It may seem like business talk, but it has quite a bit to do with the story at hand, so bear with me, okay?)

CybeServe wasn't about to let itself get stampeded the way Cranberry was several years earlier, so after it spent a small fortune working out the bugs in its second-generation 'bots and an even larger fortune in consumer advertising, it took the next logical step: the development of a third-generation, all-purpose universal robot, one which could serve as butler, housekeeper, sentry, cook, chess-player, dog-walker, babysitter . . . you name it. And just to put the icing on the cake, CybeServe intended its new 'bot to be humanlike: bipedal, about six feet in height, with multijointed arms and legs and five fingers on each hand.

This was probably the most significant factor, for with the exception of a few experimental

prototypes like Honda's P2 of the late '90s, virtually every robot on the market looked like a fire hydrant, an oversized turtle, or a vacuum cleaner with arms. A humanlike robot, however, would not only be aesthetically familiar, but it would also be able to adapt more readily to a household environment, since it would be able to climb stairs or place objects on tables.

Although CybeServe tried to keep their R3G program secret, the cybernetics industry is small enough—and the Robot Belt along Route 9 in Massachusetts short enough—that it was only a matter of time before word leaked out of its Framingham headquarters. The fact that their R3G project was codenamed Metropolis, an ironic allusion to the robot in the 1927 silent film directed by Fritz Lang, was a clear signal that CybeServe meant to pull an end-run around its rival in Westboro .

When Jim Lang, LEC's founder and CEO, learned that CybeServe was actively engaged in the development of a third-generation 'bot, the lights stayed on all night in the fourth-floor boardroom. The following morning, Slim Jim summoned his department heads to the executive suite, where he read them the riot act: LEC was now in a race with CybeServe to be the first company to produce a third-generation universal robot.

As luck would have it, though, the company wasn't caught flat-footed: during their spare time, two of its senior engineers had already been working on third-generation robots.

Where Phil Burton or Kathy Veder managed to find any spare time at a company where everyone in the R&D divisions typically puts in a 7-by-14 work week is beyond me, yet nonetheless these two had been using their downtime to tinker in their labs. On their own initiative, both Phil and Kathy had drafted plans for universal 'bots which would utilize the new Oz chips being produced by Biocybe. Since the Oz 3Megs were capable of processing three million MIPS, this meant that a third-generation robot could have the approximate learning ability of a Rhesus monkey, as opposed to a second-generation 'bot with the IQ of a well-trained mouse.

The fact that they had designed their robots independently of each other, without one being aware of what the other was doing, was no great surprise to anyone. Phil Burton was in charge of the division which developed the Companion robot, while Kathy Veder was the senior engineer behind the Guardian III. Their departments were located at opposite ends of the LEC quad, and their staffs shared little more in common than the company cafeteria. Not only that, but the two couldn't be more unlike: Phil Burton, tall and rather skinny, with thinning blond hair, and a lifelong stutter which betrayed his shyness, and Kathy Veder, short, plump, with unruly black hair which was seldom combed and an aggressive manner which bordered on outright hostility (hence the nickname). A pair of *über*-geeks who couldn't have agreed on the proper pronunciation of banana if someone threatened to take away their Usenet accounts.

Nonetheless, Lang was delighted that they already had a head-start, and asked them to show him their work. However, Kathy was a little more reluctant than Phil to comply; in fact, rumor had it that Jim had to memo Darth three times before she finally coughed up her notes and blueprints, while Phil delivered his material almost immediately. The rest of us chalked up her reticence to peer rivalry, never realizing that there was something else going on just under the surface.

Lang carefully studied their plans, talked to some of his other geeks—myself included—and eventually reached the conclusion that, although each robot was designed differently, they were so fundamentally similar that either could serve as LEC's entry in the R3G race. However, since the company didn't have the time, money or resources to manufacture two third-generation 'bots, it was one or the other. To make matters worse, there was no accord among the brain trust upon which robot should be chosen; Kathy's people were solidly behind her Guardian IV design, while Phil's group was equally convinced that Companion II was the superior system.

Jim Lang loved strategy games. He collected antique chess sets and backgammon boards, and was renowned among Go enthusiasts as something of a master. Indeed, when LEC was a small start-up company in the late '70s, its first major product had been a modular pocket game system, the now-forgotten Lang Buddy. So it came as no great surprise that his solution took the form of a competition.

Dr. Burton's group and Dr. Veder's group were divided into two teams, respectively code-named Samson and Delilah, with Dr. Burton and Dr. Veder as their leaders. Each team was given a substantial R&D budget and access to the same material resources, not the least of which were copies of the Oz 3Meg chips. However, the members of each team would not be allowed to talk to one another or share notes; only the team leaders were given that privilege, if they saw fit to do so.

The objective of Slim Jim's game was the fast-track development of a fully-operational, self-learning universal robot within six months. At the end of this period, each team would let their robots be tested—first by themselves, then interacting with each other—in a series of environments approximating real-world conditions. The team which produced the best robot would not only see their system enter mass-production, but they would also be awarded large bonuses, along with royalties from the sale of each unit. Indeed, the members of the winning team could very well walk away with several hundred grand in their pockets.

It was a hell of an approach, to be sure, and over the course of the next six months I didn't get much sleep, let alone very many free weekends or holidays. Yet Samson itself was built within only three months, and we began installing and testing its conditioning modules shortly thereafter. Although we knew that, on the other side of the quad, behind a pair of keycard-access doors, Delilah Team spending an equal amount of effort on their own 'bot, we had little doubt who would come out ahead. In fact, I was beginning to price Porsches.

But building a new robot is one thing. Dealing with the human factor is quite another.

"Okay, Samson," I said, "fix me a peanut butter and jelly sandwich."

"Yes, Jerry." The voice which came from his mouth grid sounded almost exactly like Robert Redford's. That had to be Donna's choice; she was a movie buff, and *Butch Cassidy and the Sundance Kid* was one of her favorites. So was Keith, but at least he hadn't again sampled Dennis Hopper's vocal patterns from *Blue Velvet*. That had been a little scary.

Samson turned and walked toward the small kitchenette in one corner of the training suite. The suite resembled a large, two-room apartment, with everything you'd normally find in a well-furnished bachelor flat; in fact, some members of the team crashed there overnight when they

were too tired to drive home. The only difference was the two-way mirror on the wall above the couch; behind the reflective glass, Donna and Keith were quietly watching the session from the observation booth.

Samson had no difficulty finding his way to the kitchen; his three-dimensional grid-map had already memorized the suite, and even when we rearranged the furniture Samson quickly relearned his way around. As he trod past the dinner table, the coffee in my cup sloshed slightly over the rim. "We're going to have work on the shock-absorption," I murmured as I jotted a note on my clipboard. "Maybe some padding on his treads."

"I'll take it up with the shop," Donna's voice whispered in my earpiece, "but they're not going to be happy about it." I knew what she meant. Although Samson's frame was constructed of lightweight polymers, he still weighed more than two hundred and fifty pounds. Still, we couldn't have a robot who shook the floor every time he walked by.

Samson stopped in front of the kitchen counter. In earlier tests of his cooking repertoire, we had laid everything out he needed in plain sight. This time, though, the counter was clean. Two days earlier, we had stocked the kitchen, then spent the better part of the afternoon showing him what everything was and where it was stored. If his conditioning module had properly tutored him, he should figure it out with no problem.

And sure enough, Samson reached up to the cupboard above the counter and, ever so gently, pulled out a jar of peanut butter and a loaf of bread. He carefully placed them on the counter, then turned to the refrigerator, opened it, and accurately selected the grape jelly from the nearly identical jars of mayo and mustard placed next to them. Sometime later we'd put two different flavors of jelly in the fridge, but right now his artificial vision was doing well to recognize and read printed labels.

Samson located a butter-knife in the utensil drawer, laid it on the counter next to the jars of jelly and peanut butter. He had no problem opening the bread loaf—although it had taken him several hours to learn the trick of loosening twist-ties without ripping open the wrapper—but I held my breath as he picked up the peanut butter. Before I led Samson into the room, Keith had deliberately tightened its lid as firmly as possible, then bet me ten bucks that Samson couldn't open it without breaking the jar. But this time Samson clasped the rubberized fingertips of his left hand around the lid and, while holding the jar steady in his right hand, gradually exerted pressure until he unscrewed the lid.

"Very good, Samson," I said. "You're doing well." I glanced at the window and rubbed my thumb and fingers together. Donna chuckled as Keith muttered an obscenity, and now I had beer money for tonight.

"Thank you, Jerry." Although the cyclopean red eye in the center of Samson's forehead didn't turn my way, I knew that he could see me nonetheless. Although the eye contained two parallax lenses, Samson's bullet-shaped head contained a variety of motion and heat detectors which continually updated my location in the room. We had already tested their capability by putting a cat in the room; although the cat, frightened out of her feline wits by this lumbering man-thing, had constantly raced around the apartment, growling and spitting and raising her fur whenever Samson came near, the robot had deftly avoided trampling her underfoot. The SPCA probably

would have objected, but it was better to have our 'bot get acquainted with house pets during the teaching phase than receive lawsuits later.

Samson spread peanut butter across one slice of bread, then grape jelly across another—"A little more jelly, please, Samson," I asked, and he complied—then he successfully closed the two halves together without making a mess. He located a small plate in another cupboard and placed the sandwich upon it, then picked up the knife again and cut it cleanly in half.

So far, so good. Then he began to take the sandwich apart, carefully pulling apart the two halves of each section and laying them on the counter, much as if he was . . .

Oh, no. I shut my eyes, shook my head. "Samson, what are you doing?" I asked, even though I already knew the answer.

"Jerry, I'm fixing the peanut butter and jelly sandwich," he replied. "Please tell me what is wrong with it."

From the observation booth, I could hear Keith and Donna whooping it up. I scowled at the window—Keith better not try using this as an excuse to waltz on his bet—then I looked back at Samson. "Samson, there is nothing wrong with the sandwich," I replied, speaking as I would to a small child who had erred. "My previous instruction was a verbal colloquialism. In this context, to 'fix' any form of food means 'to prepare,' not 'to repair.' Please remember that."

"I'll remember, Jerry." Samson stopped what he was doing, began putting the sandwich back together again. "I'm sorry for the misunderstanding. Are we still friends?"

The last might seem odd, but it was part of the approval-disapproval protocol programmed into Samson's conditioning module. Although Samson couldn't know the meaning of friendship—or at least, technically speaking, not as a human emotion—it was part of his repertoire to ask for forgiveness when he made an error. That had been Phil's idea; not only would it give third-generation robots a closer resemblance to humanity, but it would also give their owners a more user-friendly means of checking their onboard systems. Casual queries like "are we still friends?" or "am I bothering you?" sound more benign than "error code 310-A, resetting conditioning module, yes/no?"

"Yes, Samson, we're still friends," I replied. "Please bring me the sandwich now."

I turned back to the dinner table, picked up my lukewarm coffee and took a sip, then clicked my pen and started to make a few notes. Behind me, I heard Samson was walking over to the table, bearing my lunch. Through my earpiece, Keith asking Donna if she wanted to go to Boston for dinner tomorrow night, and Donna saying—as usual—that she was busy. I'd heard this before. Donna had recently divorced her second husband and Keith had never married; the two were friends and colleagues, but their attraction was anything but mutual. Donna was understandably reluctant to strike up a workplace romance, and particularly not with the likes of Keith, who thought fart jokes were the height of . . .

"Jerry, look out!"

Donna's warning reached me just an instant too late. I looked up just as Samson slammed a peanut butter and extra-jelly sandwich into the side of my face.

Maybe that sounds funny, in a *Three Stooges* kind of way, but mind you this came from a robot capable of picking up one end of a six-foot couch without perceptible strain. The sandwich was soft, sure, but the plate upon which it rested was hard; even if I had known what was coming, it's still likely that I would have been knocked out my chair.

I sprawled across the tile floor, more surprised than injured, with grape jelly drooling down into my right eye and peanut butter plastering my hair against my face, the plate rattling against the table. Towering above me was Samson, six feet of cobalt-blue robot, his right hand placidly returning to his side.

"Jerry!" Donna screamed. "Are you. . . ?"

"Samson, shut down!" Keith bellowed. "Samson, code S. . . !"

"No, Samson!" I yelled. "Code B-for-Break!"

"Code B understood." Samson double-beeped and became motionless, yet his chest diodes remained lit.

Good. He had obeyed the orders of the person closest to him. Had he shut down, as Keith's Code S instruction would have made him do, there was a chance that the abrupt loss of electrical current might have erased the last few moments from his memory buffer. Code B, on the other hand, simply returned him to standby mode.

I sat up quickly, glanced toward the window. "It's okay, I'm all right," I said. "I'm unhurt. Just stay where you are."

Even as I spoke, though, I heard the door open behind me. Glancing over my shoulder, I saw Keith just outside the room. The last thing I wanted was for him to barge in and start throwing questions at Samson, so I waved him off. He hesitated, then he reluctantly shut the door, leaving me alone with the robot.

I let out my breath, then I clambered to my feet, walked over to the sink, and wetted some paper towels. There was a small bruise on my cheek, but I didn't find any blood mixed in with the peanut butter and jelly; the shirt, though, would need a trip to the dry cleaner. Cleaning up gave me a chance to calm down a little; when I returned to the table and picked up the chair, I was ready to talk to Samson once more.

"Samson, come back on-line, please," I said as I sat down, and the 'bot gave me a single beep. "Do you remember what you were doing before . . . uh, just before I gave you the Code B?"

"Yes, I do, Jerry. I gave you the sandwich you asked me to fix for you."

So far, so good. His new usage of the word "fix" indicated that his short-term memory wasn't impaired. The rest, though . . . "Samson, you didn't give me the sandwich. You hit me in the face with it. Do you remember doing that?"

"Yes, I do, David."

"Why did you do that? Hit me in the face with the sandwich, I mean?"

"It seemed to be the right thing to do."

I expected to hear something from the booth; when I didn't, I touched my ear with my right hand, found my earpiece missing. Sometime during the last few minutes, it had become dislodged, probably while I was washing my face at the sink. But I didn't want to interrupt the conversation to go searching for it, so I let it pass.

"That was the wrong thing to do, Samson," I said. "You could have hurt me."

"I'm sorry, Jerry. Please forgive me."

Again, it may seem strange for a robot to ask a human for forgiveness, but this was another aspect of Samson's conditioning. For him, begging forgiveness was an acknowledgement that he understood he had made an error and a tacit statement that he would never do it again. And indeed, he never would, not in a thousand reiterations of the same sequence. Unlike humans, robots don't make the same mistake twice.

Yet getting nailed again with a PB&J was the least of my concerns. "I'll forgive you if you tell me why it seemed like it seemed like the right thing to do."

Silence. I had posed the question the wrong way. "Samson, why did you think hitting me in the face with the sandwich was the right thing to do?"

"Because you're I want to do the right things for you, Jerry."

Great. Now we were stuck in a logic loop. Yet this was the second time today he had struck someone else—either another robot or a human—with an object he was supposed to give to them. For such an occurrence to happen twice in such short succession couldn't be a coincidence. Time to try a different tack . . . "If you want to do the right things for me, Samson, then how do you feel about me?"

"I love you, Jerry."

Wha-a-a-t?

Even if he sounded like Elizabeth Taylor rather than Robert Redford, that response couldn't have shocked me more. Samson was programmed to learn the identities of his human operators and accept them with platonic, selfless affection. Agape, if you want to use the seldom-used

term for such a condition (and, no, it's not pronounced *ah-gape*, like the way you may stare at something, but as *ah-gaw-pey*). Since Samson had become operational, I had spent well over a hundred hours with him in this room, patiently instructing him how to make the bed, wash dishes, vacuum the floor, program the TV, fetch me a soda, answer the front door and greet guests, play various board games, and feed the cat. If I were to ask Samson how he felt about me, he should have replied, "I like you, Jerry. You're my friend."

Love was not supposed to be in the algorithms. I was pretty damn sure he didn't know what he was saying. But what was it that he *meant* to say. . . ?

Once more, I heard the door open. Looking over my shoulder, I saw Donna urgently gesturing to me. I wanted to continue this train of thought, yet since I didn't know exactly what to say next, perhaps now was a good time to grab a Coke. "I like you, too, Samson," I said as I stood up. "Let's take a break. Code B."

"Code B understood," Samson said, and there was another double-beep as he went off-line again. If I didn't return in ten minutes to rescind the order, he would automatically come back on-line again, then seek out the nearest wall-socket and plug himself in for a recharge. Until then, he was an inert hunk of machinery.

Right. An inert hunk of machinery who had just proclaimed his love for me.

I found Phil in the observation booth, bent over one of the monitors as he studied the video replay of the session. He didn't look at me as I came in, but moused the scrollbar on the bottom of the screen to review my interview with Samson. Keith was seated in his chair on the other side of him; he glanced in my direction, then quickly looked away. I noticed the cordless phone near his left elbow; that explained how Phil had gotten down here so quickly. Keith, you prick; you're always ready to crack jokes behind the boss's back, but whenever you get a chance to suck up to him . . .

"Why didn't you let Keith shut down Samson?" Phil asked quietly, still gazing at the screen. At least he wasn't stammering this time.

"I wanted to make sure we didn't lose anything from Samson's memory." I stepped aside to let Donna slide past me, but she remained behind me, standing in the open door of the darkened booth. "This was the second time today Samson has attacked someone, and I wanted to find out why."

Phil shook his head. "Sorry, Jerry, but that's an unacceptable risk. If there's something critically wrong with his conditioning protocols, we can't let him stay active after an accident." He turned to Keith. "Download everything from his buffer and give them to me, then erase his memory of this test."

"Hey, whoa, wait a minute! I just spent two hours in there with him! You can't just erase everything because. . . !"

That ticked him off. Phil slapped the desk as he rose to face me. "D-d-d-don't t-t-tell me wh-why-

whu-what I ca-ca-ca-ca . . ."

"Damn straight I can!" I snarled back. "That's my conditioning routine you're screwing with here, Phil, and this is the second time today you've told Keith to wipe the memory buffer!" I jabbed a finger at the motionless robot on the other side of the window. "And in case you didn't notice, that friggin' thing just said he *loves* me! Now there's got to be a reason for that!"

Phil stared at me in astonishment, and I can't say I wasn't rather amazed myself. In the four years that we had worked together, we had seldom raised our voices to one another. We weren't great friends, but even after the stress of the last six months, it was hard for the two of us to get really mad at each other. Unlike, of course, his stormy relationship with Darth Veder . . .

And it was then, deep within my brain, that a couple of synapses sparked in a way those two particular synapses had never fired before. Phil and Kathy . . .

Okay, time out for a little soap opera. *True Geek Romance*, or perhaps *Computer Wonks In Love*. Either way, here it is:

A long time ago, in a galaxy far, far away . . . okay, so it was about twelve years ago, just across the Charles River on the MIT campus . . . there were two post-grads working in the Artificial Intelligence Lab, both studying advanced AI as applied to robotics. A nice couple of kids in their late twenties; neither of them much to look at, and hardly the type you'd imagine prancing hand-in-hand through the lily fields, but hey, love isn't only blind, but it's also got a bizarre sense of humor. They found each other, they worked together for a time as colleagues, then close friends, then . . . well, you get the picture.

But it didn't take. That's the problem with romances among highly intelligent people; they *think* too much about what they're doing, instead of just letting their *cojones* go their own merry way. They were a mismatched couple, or at least so they told themselves, prone to argue about every little detail, whether it was about the theories of Norbert Wiener or what kind of pizza to order tonight. Late one evening, after the latest tiff, she stormed out of his Cambridge apartment, and he retaliated by throwing her books into the street, and that was pretty much the end of that. They both received their MIT doctorates only a few months later, and since each of them already had jobs awaiting them on opposite sides of the country, they left Massachusetts with scarcely a final goodbye.

But every great affair has a touch of irony. A decade went by, during which time LEC decided to diversify into consumer robotics. Jim Lang hired corporate headhunters to recruit the best cybernetics talent available, and as fortuitous circumstances would have it, the two former lovers were lured back to Massachusetts. Imagine their surprise when they discovered that they were now working for the same company. Different divisions, perhaps, but the same company nonetheless.

So now it's twelve years later, and they were still trying to iron out their relationship. Only this time, they'd built robots which program themselves by observing human behavior and imitating it.

"Keith, Donna," I asked, "would you mind excusing us for a moment?"

Keith stared at me before he realized that I wanted him to leave, then he shrugged and rose from his chair. Donna gave me a quizzical look, but didn't say anything as Keith closed the door behind them.

Phil waited until we were alone before he spoke. "Whu-whu-whu-what d-d-d-do you w-w-wa-wa-want t-t-t-to. . . ?"

"Phil, sit down and count to ten." He glared at me but took my advice anyway, taking the seat Keith had just vacated. While he was counting, I crept to the door, put my hand on the knob, waited a couple of seconds, then yanked it open. Keith stood just outside, pretending to scratch his nose. He mumbled something about getting a cup of coffee and scurried down the hall. I shut the door again just as Phil had reached ten. "Okay now?" I asked.

"Sure." He let out his breath. "All right, Jerry, what do you want to talk about?"

"Okay, just between you and me . . . are you seeing Kathy again?" Phil's mouth dropped open, and for a moment I thought he was going to start stammering again. I saw the denial coming, though, so I headed it off. "Look, everyone knows you two were once an item. Frankly, I don't care, but if it makes any difference, I'm not going to tell Jim. Just to satisfy my curiosity, though . . ."

"Ummm . . . yeah, we've started seeing each other again." He seemed mortified by the admission. "But not on company time," he quickly added. "We've only gone out a couple of times."

Somehow, that sounded like a lie. I didn't keep track of Darth's hours, but I knew for a fact that Phil practically lived at the lab, going so far as to keep a fresh change of clothes in his office closet and a toothbrush in his desk. "Sure, sure, I believe you. Just dinner and a movie now and then, right?"

"Yeah, t-t-that's all." He nodded, perhaps a little too quickly . . . and that stutter of his was better than a polygraph. "P-p-please don't let anyone know. If Jim fi-fi-fi-finds out w-w-we're . . ."

"I know, I know." And that's what bothered him the most, the chance that Jim Lang would discover that the leaders of his two rival tiger-teams were having an affair. For a chess player, that would be like finding out that the white queen and the black king were sneaking off the board to fool around. "Trust me, Slim Jim's never going to learn about this . . . or at least from me, at any rate."

Phil nodded gratefully, then his face became suspicious. "So why do you want to know?"

"Well . . ." I coughed in my hand. "You just said that you two weren't seeing each other on company time . . . and really, I believe you, honest . . . but just for the sake of conjecture, if you were seeing each other here at the lab, umm . . . would you be doing it where Samson might be at the same time?"

"B-b-buh-buh . . ." Phil stared at me as if I was his father and I had just asked if he knew how to put on a condom. And then his eyes involuntarily traveled toward the window.

While we had been speaking, without either of us taking notice, Samson had automatically gone into recharge mode. The robot had walked to the nearest electrical outlet, withdrawn a power cable from his thorax, and inserted it into the wall socket. Since Samson now spent most of his downtime in the training suite, he knew exactly where all the outlets were located.

It suddenly occurred to me that the outlets were all within line-of-sight of the suite's bedroom. The one which all of us had used when we were too tired or busy to go home.

And Samson, of course, knew how to change the sheets when asked to do so.

When I looked back at Phil, I saw that he was staring straight at me. Nothing further needed to be said: he knew that I knew, and I knew that he knew that I knew. That's another thing about highly intelligent people; no matter how smart they may be, most of them have a hard time lying with a straight face.

Phil didn't say anything. He rotated the chair to the console, where he found a spare disk, slapped it into the drive, and tapped a couple of commands into the keyboard. "Sorry you had to lose this afternoon's session," he said quietly, not looking back at me as Samson's memory buffer downloaded onto the disk, " but I think we've got a flaw in the conditioning module . . ."

"Aw, c'mon! He's just confused. He sees you and Kathy in there . . ." I saw the angry look on his face reflected in the window, but I didn't stop myself . . . and then he sees you two fighting. No wonder his conditioning is . . ."

"That's enough!" He ejected the disk from the drive and stood up quickly, shoving the disk in his trouser pocket without bothering to first put it in its case. "Th-th-this is none of your buh-buh-business, and I-I-I'd ap-ap-appreciate it if y-y-you'd k-k-k-kindly stay out of it. Samson needs to b-b-be reprogrammed. Th-th-th-that's all."

No argument either way. Phil's relationship with Kathy wasn't any of my business, and there was no doubt that Samson conditioning module needed drastic modification. Like it or not, our team had designed a third-generation robot which took all the wrong cues from human behavior. Kathy and Phil could fight out their problems on their own, but it wasn't right to send a robot to market whose training inadvertently reflected their love-hate relationship.

"Sure, Phil," I said. "Whatever you say."

Still not looking directly at me, Phil nodded as he headed for the door. "Th-th-that's the end of t-t-t-today's exercise," he said quietly. "I-I-I'll work on S-s-s-samson tonight, have it r-r-ready for t-t-tomorrow's test with D-d-d-d-d . . ."

"Sure you want to do that?" Tomorrow morning we had another test scheduled with D-team. Same routine as before: Samson comes out of the woods, offers an apple to Delilah, bows to

her, offers his hand and asks if she wants him to join her on the bench. Both teams had agreed this as a test of whether the two robots could work in unison without operator intervention. "Maybe we should ask for a delay."

Phil appeared to think about it for a moment, then he shook his head. "No," he said at last. "We'll do the test tomorrow. Between now and then, don't touch Samson. Just let me take care of this, okay?"

"Sure," I said, and he nodded and let himself out of the booth. It wasn't until long after he had closed the door behind him that I realized he had stopped stuttering.

By this time, though, I had taken a seat at the console and begun doing a little work of my own.

The two R&D programs were supposed to be isolated from one another, but the seal wasn't airtight. Kathy and Phil weren't the only couple who were keeping company when no one was watching; there was a cutie on Delilah Team with whom I was cooping from time to time, sometimes sleeping over at her apartment and vice-versa. What she didn't know, though, was that I had learned her password. It was a sort-of-accidental discovery; one time we were lounging in bed together, she took a few minutes to check her company email on TV, so I was able to see her password when she entered it. I had never abused that knowledge, but there's always a first time for everything, so it was with no small amount of guilt that I used my occasional girlfriend's password to gain access to D-Team's files.

It took a couple of hours of rummaging, but after a while I managed to locate a batch of reports regarding Delilah's trial runs. I wasn't surprised to discover that D-team had their own problems with their robot. Like Samson, Delilah sometimes behaved aggressively when the circumstances called for her to be friendly. The fault obviously lay in the conditioning module, yet no one—at least, not those who had written the reports; I couldn't find any from Kathy Veder—had been able to figure out what was providing negative stimuli to the robot.

But I knew. Delilah was being also being trained in a suite much like Samson's. It didn't take a rocket scientist, let alone a cyberneticist, to realize that this suite was sometimes being used by Drs. Veder and Burton for certain extracurricular activities . . . with Delilah in the same room, watching the entire time, absorbing everything. Learning all the wrong lessons about the human condition.

It could be argued either way whether Samson and Delilah truly had any emotions of their own. Were they merely imitating Phil and Kathy, or had they developed inner lives, as incredible as that may seem? Regardless of the explanation, though, their environment was causing them to sometimes behave in what appeared to be an irrational manner.

Yet love—even agape, its highest expression—isn't rational. It cannot be reduced to bar-graphs and lines of source code; once you get past pheromones, body language and casual eye-contact, there is no reason for it to happen, save for the biological imperatives to procreate, maintain tribal associations, or remain close to one's family. But love does nonetheless persist, and sometimes under the strangest of circumstances.

Were Samson and Delilah in love? Probably not; they were robots, machines with none of the beforementioned hangups. You could spend countless man-hours of R&D trying to resolve that question. Yet the only people who had the answer were their own creators . . . and they had a hard enough time researching and developing their own feelings toward each other.

When I arrived the trailer the following morning, the rest of Samson Team was already getting ready for the test. Phil, however, was nowhere to be found, and neither was Samson. I paged him but he didn't return the call, and while Bob was setting up his camera and Keith was opening his first bag of Fritos for the day, Kathy Veder appeared in the atrium, walking Delilah ahead of her.

Delilah was dressed in the same ankle-length, high-collared gown she had worn the day before. Once again, I wondered what purpose it served to put clothes on a robot. It didn't seem to impede her movements—indeed, the dress had been cut so that it allowed her double-jointed arms and legs to move more freely—yet it was unnecessary to assign a gender-role to a machine. On the other hand, perhaps Darth was attempting to humanize her creation; if that was the case, it might be a good marketing strategy, yet rather futile since Delilah's spherical, nearly featureless head belied the femininity of her outfit.

Kathy stopped next to the bench, turning her back to us as she waited for Delilah catch up. Donna hadn't switched on the shotgun mike, so we couldn't hear the instructions Kathy gave the 'bot. She pointed to the bench, and Delilah walked over to it, her feet whisking beneath the hem of her dress, until she turned and daintily sat down, once again folding her silver hands in her lap. Kathy bent over Delilah and closely examined a panel in the side of her slender cylindrical neck. I glanced at the clock. We were already running fifteen minutes late . . .

The door behind me opened, and at first I thought it was Phil. "What took you so. . . ?" I started to say until I glimpsed Keith hastily stashing his chips beneath the console. I turned around and saw Jim Lang entering the trailer.

"Mind if I join you?" he asked. As always, Jim was dressed in sandals, faded Levis and a Hawaiian shirt. In all the time I had worked for LEC, I had never seen him wear a coat and tie, not even for stockholder meetings.

"No, Jim, not at all." I recovered fast enough to not show just how startled I was by his unexpected arrival. "We're . . . ah, still setting up here. If you want to take a seat. . . ?"

"Thanks, Jerry. Excuse me, Donna . . . it is Donna, isn't it?" Ignoring her forced smile, Jim eased past her, then settled down in Phil's empty chair. "Sorry to interrupt, but I was just curious to see how things were making out down here."

Right. Slim Jim never showed up anywhere just out of curiosity. When he made an appearance outside the executive suite, it meant that he had become aware that a project was having problems. "We're doing great, Jim," Keith said, just a little too quickly. "Just . . . uh, working out a few bugs here and there."

I looked away so that Jim wouldn't see me wince. Brilliant, Einstein. Yet Slim Jim only nodded.

He gazed through the window at Kathy Veder and Delilah. "I don't see Phil," he said. "Where's . . . ah, yes, here he comes now."

I followed his gaze, spotted Phil walking through the trees on the other side of the atrium. He saw Kathy, stopped a few yards away from the bench as she looked up at him. Their eyes locked for a few seconds, and for a moment or two I thought he was going to say something to her, or she something to him. But nothing happened; he lowered his head and strode quickly toward the trailer. Her gaze followed him, and in that instant when her face turned toward the trailer, I caught the briefest glimpse of an expression I couldn't quite identify. Loathing? Longing? Hard to tell . . .

"We're lucky to have them working for us, don't you think?" Jim asked quietly.

I didn't realize he was speaking to me until I glanced his way, saw that he was looking at me. "Oh, yeah," I replied. "Very lucky. Two great scientists, uh-huh." And perhaps it wasn't too late to send my resumé to CybeServe . . .

Phil was startled to find Jim sitting in his chair when he entered the trailer. He murmured a hasty apology for being late, which Jim accepted with a perfunctory nod, then he squeezed past the CEO to stand behind Keith. "G-g-good m-m-m-morning," he stammered as he leaned over Keith's shoulder to check out the screen. "Are w-w-w-we re-re-re-ready?"

"I'm not sure." Keith cast a wary sidelong glance in Jim's direction. "When I ran a diagnostic a few minutes ago, I found a new protocol in the conditioning module. I checked it out, and it looks like it was written last night. Do you know anything about. . . ?"

"Y-y-yes, i-i-it's a n-n-new p-p-program." His Adam's apple bobbed in his thin neck, and he seemed determined not to deliberately look at Jim Lang. "I t-t-t-think w-w-w-we're ready to pr-pr-pro-proceed."

Jim raised an inquisitive eyebrow, but said nothing as he propped his elbows on the console and clasped his hands together beneath his chin. Out in the atrium, Kathy Veder had just turned to walk away from Delilah. Phil caught Donna's eye and quickly nodded his head, and she switched on her mike. "D-Team, we're ready to roll."

"R-r-roll now," Phil said. Keith and I traded an uncertain glance. Dr. Veder was still in the atrium; she hadn't yet returned to her trailer. Keith's hands hesitated above his keyboard, and Phil tapped him on the shoulder. "Commence the t-t-t-test, p-p-p-please," he said, and Keith shrugged as he typed in the command which would bring Samson online.

"Aren't you going to wait?" Jim asked quietly.

Phil didn't reply. Instead, he closed his eyes, and his lips moved as he subaudibly counted to ten.

Something weird was going on here, and it wasn't the sort of weirdness I like. While Phil's eyes were shut and Jim was looking the other direction, I opened a window from my menu bar and

moused the emergency shut-down icon. When the Y/N prompt appeared onscreen, I moved the cursor above the Y. One tap of my index finger, and Samson would freeze like an popsicle.

Out in the atrium, Kathy Veder was almost at the edge of the clearing when Samson came marching through the trees. She stopped in mid-stride, confused and startled, judging from her expression, not just a little alarmed. My mind's eye flashed upon a scene from *The Day the Earth Stood Still*—the robot Gort carrying the unconscious Patricia Neal in his arms—and my finger wavered above the Return key. Oh, no, Phil can't be that crazy . . .

But then Samson stopped. He bowed from the waist, as if he was a gentleman who happened upon a lovely young woman while strolling through the woods. Kathy's face changed from fear to amusement; she stepped aside, and Samson straightened up and walked past her.

"Oh, very good," Jim murmured. "Good object recognition."

I let out my breath and moved my hand away from the keyboard.

Samson continued walking toward Delilah. As he approached the bench where she sat, his right hand opened the cargo panel on his chest, and reached inside. At this point, he was supposed to pull out an apple and offer it to the other robot. He had gotten that part right yesterday, until he decided that slamming the apple against her head was an appropriate sign of affection. On either side of me, I could see Donna, Keith, and Bob stiffening ever so slightly.

But what Samson produced wasn't an apple, but a heart.

Not the organic sort, but the St. Valentine's Day variety: a red plastic toy of the sort you might place within a bouquet of roses you send to your true love.

From the edge of the clearing, Kathy Veder watched as Samson stepped around the bench and, with grace and tenderness, held it out to Delilah.

Delilah remained still, her hands still folded in her lap, her fishbowl head staring straight ahead.

"Please," I heard Phil whisper.

And then Delilah's head moved toward Samson, as if noticing his presence for the first time. She raised her left arm, opened her palm and turned it upward, and waited.

Samson took another step forward and, ever so carefully, placed the heart in her hand.

Kathy folded her arms across her chest, covered her mouth with her hand. She was watching the robots, but her gaze kept flickering toward us, toward the window behind which Phil stood.

I glanced at Phil. He was silent, but his posture was exactly like Kathy's.

Delilah took the heart and placed it in her lap. Samson bowed just as he had done for Kathy, but

he remained rooted in his tracks until Delilah raised her left hand and, in a very ladylike fashion, motioned for him to join her on the bench.

Samson took two steps closer, turned around, and sat down next to Delilah, his hands coming to rest on the bench.

Then Delilah laid her right hand upon his left hand.

And then both robots became still.

That was *almost* what they were supposed to do.

For a few moments, no one in the trailer said anything. Everyone stared in astonishment at the tableau. I felt someone brush against the back of my chair, but I didn't look up to see who had just moved past me. My entire attention was focused upon Samson and Delilah, the quiet spectacle of two robots holding hands on a park bench.

"Fantastic," Jim Lang whispered. "I'm . . . that's utterly . . . my God, it's so damn real." He turned around to look up at Phil. "How did you. . . ?"

But Phil wasn't there. He didn't even bother to shut the door behind him as he left the trailer. When I peered out the window again, I saw that Kathy Veder had disappeared as well.

In fact, I didn't see either of them again for the rest of the day. A little while later, during lunch hour, I casually strolled out to the employee parking lot and noted, without much surprise, that both of their cars were missing.

"That's incredible conditioning," Jim said as he pushed back his chair. "How did you guys manage this?"

Bob chuckled as he unloaded his camcorder. Donna and Keith, two days away from their first date, just grinned at each other and said nothing. I made the program-abort window disappear from my screen before the boss noticed and shrugged offhandedly.

"Just takes the right conditioning," I replied.

If you're a robot-owner, or least one who has a Samson or a Delilah in your home, then you know the rest. After considerable research and development, and the sort of financial risk which makes the *Wall Street Journal* see spots before its eyes, LEC simultaneously introduced two different R3G models: his-and-hers robots for the home and office. They cook dinner, they wash dishes, they answer the door, they walk the dog, they vacuum the floor, they make the beds, and water the roses and virtually anything else you ask them to do. Sure, CybeServe brought their Metropolis to market first, but who wants that clunky piece of crap? Our robots will even carry your kids to bed and sing them a lullaby.

People sometimes ask why Samsons and Delilahs have a small heart etched on their chest

plates. The corporate line is that it's there to show that our robots have a soul, but anyone who knows anything about cybernetics knows better than that. After all, that's utter nonsense. Robots are just machines, right? And who in their right mind would ever believe that a machine can learn to love?

I don't have an easy answer to that, and I've spent more than fifteen years in this industry. If you want, I'll forward your query to Dr. Phil Burton and Dr. Kathy Veder. However, you shouldn't expect an answer very soon. Ever since they got married, we've had a hard time getting them to come to the office.