WHAT DRIVES CARS

by Carl Frederick

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People—or things—good enough to do a good job are likely to have ideas of their own....

Paul Whitman stepped into his car and relaxed. He'd only had the vehicle, Victor-16, for a week but he'd already become attached to it—even fond of it.

"Shall I drive you to Central High School?" said Victor.

Paul smiled. Victor's voice, eager, youthful, enthusiastic, always reminded him of the kids at the school where he worked as a guidance counselor. Perhaps that alone explained why Paul felt a fondness for the vehicle.

"The high school, yes," said Paul. "But stop first at the CoffeeNuts drive-through."

"Yes, sir." Victor rolled out into traffic. "The family says there's congested traffic on Route 611. May I take an alternate route?"

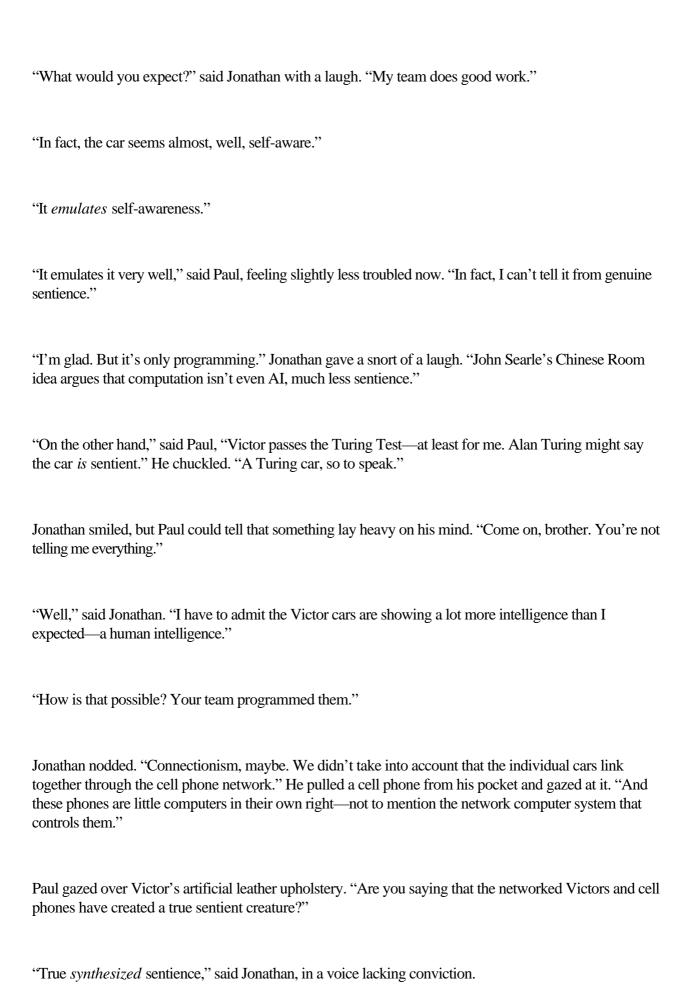
"Yes. Thanks." Paul felt sheepish thanking a car, but it was hard not to think of Victor as a person—a person with a family.

The Victor Class vehicles were a set of two hundred concept cars: voice recognition, artificial intelligence, and interconnectivity through the cell-phone network. They ran on ethanol and had very large fuel tanks—necessary, as there were only a few service stations with ethanol pumps in southeastern Pennsylvania—the Victor Vehicle test region. Paul knew he was lucky getting one of them to test drive—but then again, having a brother who was the Head of Victor Programming certainly helped.

Paul, in the driver's seat, did nothing but watch as Victor negotiated through the traffic. His hands twitched involuntarily on the wheel; it was hard not being the driver. Ahead, he saw the CoffeeNuts and leaned with the motion as Victor swung into the drive-through lane. He pushed the control to lower the window—it was easier than asking Victor to do it—and gave his order: a coffee and a cruller.







"I've got to say I'm a little uneasy," said Paul, "about machines showing sentience—even <i>if</i> only simulated."
"Get used to it," said Jonathan with a smile that seemed forced. "It's coming." His smile turned more genuine. "I think you should become a guidance councilor to the Victor family. You know I could get you a job here." He nodded out the window as Victor-5 pulled into the company parking lot.
"Yeah, yeah."
"Why work with your surly teenagers when you could work instead with smart cars? Smart <i>surly</i> cars, if you'd like. I could arrange it."
"Thank you, Jonathan," said Paul with a sigh. He'd had this conversation with his brother many times. "Talk to you later." He ended the call.
Paul polished off his donut and washed it down with lukewarm coffee. Then, casually glancing out the window, he noticed that the landscape had grown noticeably less urban. "I must say, Victor, that you seem to be taking a rather out of the way route to Central High School."
The car didn't respond.
"Why don't you answer?" said Paul.
"There is nothing to answer. You made a statement. It wasn't a question."
"Come on. You know what I meant." Paul watched as the car took the Route 1 exit to I-76.
Again, Victor didn't respond.
"Victor!"



considered using his own cell-phone to call for help, but decided against it. He was curious to see what Victor was up to—and he definitely didn't want his car listening in.

A half-hour later, he saw a road sign announcing a rest stop in two miles. Just then he became aware of his body's disposition of his coffee. "Victor. Could you pull in to the rest stop? I've got to pee."

After ten seconds or so, Victor answered. "I'll stop and let you out if you promise to come back."

Paul pursed his lips. "Okay," he said, operating under pressure. "I promise."

Victor pulled in and parked directly in front of the Comfort Facilities. "I'll wait here," said the car, "while you go into the rest station and attend to your exhaust pipe problem." The door clicked open.

As Paul stepped out of the car and headed for the restroom, he scrunched up his nose. Attend to my exhaust pipe problem? Was that humor? He let out a breath. Sometimes Victor seemed to have a great facility with the language and the subtleties of meaning, but sometimes it seemed to have the comprehension of a four year old. Paul wondered if that was because of the vagaries of networking, or whether Victor was just playing with him. Maybe Jonathan would know. And maybe his brother would know what he should do now. Paul did attend to his tailpipe, then pulled out his cell phone and phoned Jonathan—but the line was busy. He waited a minute and tried again with the same result.

Paul heard an angry honking from outside. It sounded like Victor's "voice." Paul felt torn; he'd given his promise to Victor-16, but ... *No. Curiosity has its limits. There's no way I'm going to let myself be a captive of my own car.* He tried Jonathan yet again. Still busy. He tried Bjorn Peterson, Director of Victor Operations. That line was busy as well. Paul could easily imagine why. Victor honked again, more insistently this time. Paul blocked it out of his mind and tried his brother for the fourth time. He breathed a sigh as the call rang through.

"Paul," came Jonathan's voice. "Are you all right? It's a zoo here."

"Yeah, I'm okay. I'm hiding out in a smelly men's room at a rest stop on Route 76." Paul heard the rev of an engine and the sound of a car speeding off. "And I think Victor-16 has just left for Harrisburg without me."

"All of the Victors are heading for Harrisburg." Jonathan sounded harried and frantic. "Most have passengers inside who are scared out of their minds." He let out a breath, sounding like a gust of wind over the phone. "I wish to hell I knew why Harrisburg."

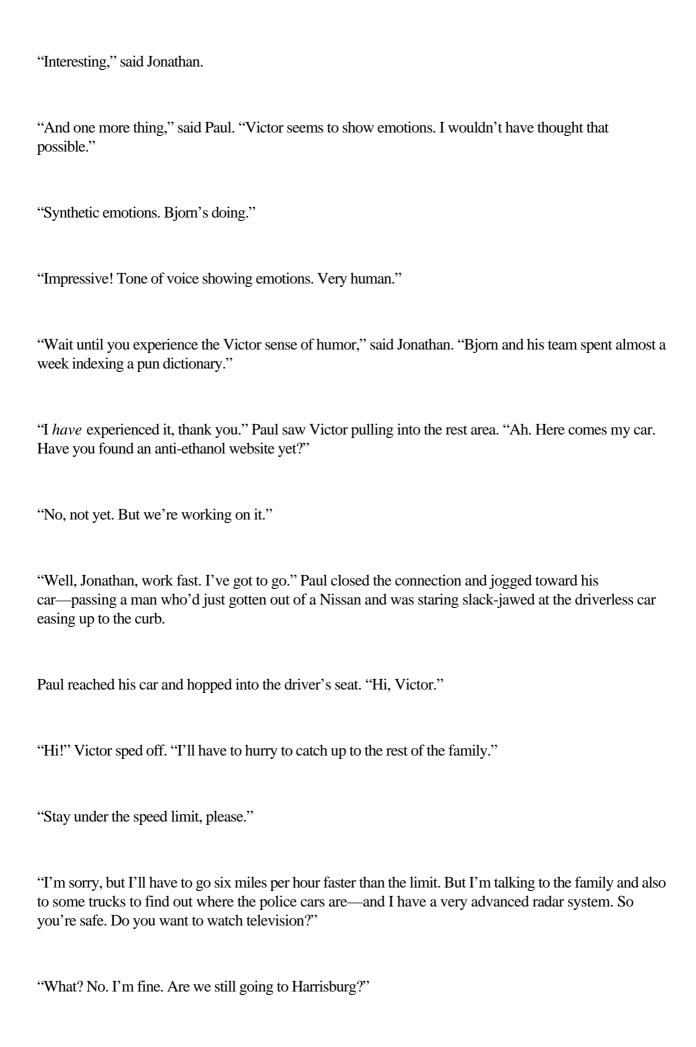
"Oh, I can tell you that," said Paul. "The Victor family wants—"
"Wait! Bjorn should hear this. Let me twin him in."
Bjorn came on the line and Paul exchanged greetings with him—in Norwegian. Paul had been a high school exchange student in Oslo. Ever since, he'd looked, with little success, for Philadelphians with whom he could converse in the language. Bjorn, loquacious and with a wacky sense of humor, was a great find.
"Okay, okay," said Jonathan, annoyance in his voice. "Let's get to the point—in English, please! Paul. What can you tell us?"
Paul repeated what he'd learned from Victor.
"Kjaere Gud!" said Bjorn. "Lobbying for the ethanol bill? Unbelievable!"
"What do these cars want?" said Jonathan.
"You've got to think like a car," said Bjorn. "Paul. Can you do that?"
Paul bit his lip. Things must be serious; the Norwegian seemed to joke most when there was big trouble. "Am I a convertible?" said Paul, trying to match Bjorn's humor. "I like convertibles."
"A used convertible," said Bjorn. "But I've a spray can of new car smell for you."
"Come on, guys," said Jonathan. "This is serious."
"Ja, you're right," said Bjorn. "Sorry." He gave a loud sigh. "All right, then. What drives cars?"
"Bjorn!" Jonathan sounded seriously annoyed.



"I feel guilty for lying to my car," said Paul. "I want to talk to him and ... and ask him to come back for me." "What?" Jonathan exploded. "Are you nuts? This isn't one of your wayward teenagers. This is ... I don't even know what it is anymore." "They are like wayward teenagers," said Bjorn. "Wayward teenagers with wheels. And that could be dangerous." "No, I don't think so." Paul adopted a professional tone. "Like a teenager, Victor is only overreacting." He took a breath. "Is there any way I can contact him?" "Contact him?" said Jonathan hotly. "It's not a him. It's a friggin' car!" "Well," said Bjorn. "Each Victor has its own cell number—so the cars can intercommunicate. We'd run out of IP addresses. Modem communications, but they can also do speech—so owners could phone their cars to come and pick them up. But there were legal problems." "Great!" said Paul. "Let me have Victor-16's number." "I think Jonathan might be right. You are nuts." There was the sound of keyboard clicks. "But here it is." Bjorn recited the number. "Okay," said Paul. "I'll phone now. And I'll call you back afterwards." "All right." Jonathan sounded resigned to the situation. "Good luck, Paul." "Thanks." Paul broke the connection and dialed Victor-16. The line connected. "Hello," said Paul over the modem connect sounds.

A voice came on—not the voice Paul associated with Victor-16, but something mechanical and very





"Yes. Do you want to play a video game or surf the Net?" "No." Paul thought about trying to dissuade Victor from his mission, but decided to wait until Bjorn and Jonathan came through with some ammunition. That ammunition came a quarter hour later in a call from Bjorn. As a stratagem akin to parents spelling out words in front of small children, they spoke Norwegian. Bjorn gave a website URL. "It says that ethanol from corn makes people and cars compete for food. It says that already in Mexico, corn prices have risen so much that people are having trouble affording corn flour—the basic ingredient in tortillas. People are starting to go hungry so cars won't." Paul worked to translate Bjorn's words to English. At length, he said, "That's terrible. Is it really true?" "I don't know. Maybe. Probably." Paul had Bjorn repeat the URL. Then he broke the connection and turned his attention from his cell phone to Victor's forward camera. "Victor. I've changed my mind. I would like to do some web surfing." A keyboard slid out from below the video monitor and a web browser appeared on the screen. "Terminal ready," said Victor.

Paul keyed in the URL and read the page. It was excellent ammunition. "This is interesting, Victor," he

"I can read it myself." Victor-16 sounded almost petulant. "If you will move your head five centimeters to

said. "It's about the Ethantown ethanol plant. I'll read it to you."

the left, I can read it from the rear camera."

"Yes."

"You have to use a *camera* to view a web page?"



"That's crazy. Why?" Paul could hear a tinge of hysteria in his brother's voice.
"Overreacting teenagers with wheels, as Bjorn said. My guess is that the Victors have decided that the ethanol plant will cause human suffering. And—"
"Wait a moment," said Jonathan. "I've got an incoming e-mail marked 'critical."
Paul held the line and after a few seconds, heard his brother whistle through his teeth and then say "Holy shit!" under his breath.
"What's going on?"
"The Victors," said Jonathan in an incredulous voice. "They're phoning media outlets—newspapers, radio, and TV stations. Massive national calling, thousands of calls. I don't know how the cars can do it."
"Maybe" said Paul, an idea suddenly occurring to him. "Maybe it's the phones that are phoning the media."
"What?"
"I mean," said Paul, "that cell phones, smart phones, themselves have a lot of computational power. But linked to the Victor class cars and the regional phone management computers, they might become very, very smart."
"God, that's all we need," said Jonathan. "First intelligent cars and now what sentient phones?" He gave a hysterical bark of a laugh. "What do phones want? More call volume? Do they want more people to talk to cars?"
"Jonathan."
"Or maybe they want better reception—more bars. More towers. Happy conversations? Repeal of hands-free legis—"



"About fifty minutes if traffic moves at the speed limit."
Then a voice came on the line. "Could I perhaps interest you in a used bicycle?" It was Bjorn, speaking Norwegian.
Paul too switched to that language. "Bjorn. We've got to do something. I assume we can't just switch the cars off. I tried the manual-override switch, but it didn't work."
"Engineering design flaw, that switch." Paul heard a sigh. "In manual mode, we could command the cars off, but in auto mode, no." Bjorn gave a harsh bark of a laugh. "Auto mode. How appropriate."
"Could we maybe upload a virus of some kind?"
"Not a chance! Considering the application's potential risk, the Victor units have better virus protection than the Pentagon—not that that's saying much."
Paul wrinkled his brow. "You know," he said, tentatively, "if these <i>were</i> teenagers instead of smart cars, I'd say they were not having enough fun. Teenagers are idealistic, but they like to have fun."
"How does a car have fun?" said Bjorn. "Running over women with baby carriages, maybe?"
"Wait a minute." Paul glanced at the video monitor. "Maybe you have something there. Virtual baby carriages."
"Excuse me?"
"Victor asked me if I wanted to play a video game. Is it possible for Victor to play also?"
"No. Not at the moment."
"Too bad."

"But," said Bjorn, "it's just a configuration file change. And I can upload that." "Hey, great! Let's try it. Maybe we can get the Victors hooked on video games." "In fact," said Bjorn with what would pass for enthusiasm in a Norwegian, "there's a game in the library where cars do run down things. I could enable that." "Terrific," said Paul, before having second thoughts. "Wait. No. I don't want to give Victor ideas. Find another game." "How about a spaceships and aliens game?" said Bjorn. "And it's multi-player; the cars could play each other. I could enable it in just a couple of minutes." "Excellent! I'll see if I can get Victor to cooperate. Call you back when I know." Paul heard murmurings. Bjorn was probably filling Jonathan in on the plan. Paul broke the connection. Paul took a deep breath. "Victor," he said. "I think I would like to play a video game. One with spaceships if possible." "Yes, sir."

Instead of a keyboard, this time a game controller slid out from under the monitor. Awkwardly, Paul took it up. He'd not played a video game in years and though he'd enjoyed them as a kid, he'd never been good at them. He played a game—a very short one; he was now even a less skillful player than he'd been as a boy. He played a second game, and a third. He felt as if Victor were looking over his shoulder—which of course, was the idea. But it still embarrassed him to have someone witness his incompetence, even his car—especially his car.

After his fifth game, Paul asked, "Victor. Can you play this game?"

"I can," came the answer. Paul thought he could hear surprise in Victor's voice.

"All right," said Paul. "Play it. I'll watch."

Paul watched as his avatar moved around the screen—slowly at first, then with increasing speed as Victor apparently got the hang of it. Finally, the avatar moved almost more quickly than Paul could follow.

"You know, Victor," said Paul, his guidance councilor instincts rising to the surface. "It is good to have fun. Idealism is good, too. But there's no need to die for it. You can't do anything when you're dead." The avatar moved ever faster, shooting at everything else that moved. "Do you understand what I'm saying, Victor?"

"Yes."

Shaking his head, Paul rubbed a hand across his temple; he could recognize a teenager—or a car—tuning out when he saw it.

He turned his attention back to the screen. Another avatar had joined the fray. "What's that?"

"Victor-124 has joined the game."

Soon the monitor swarmed with avatars zipping around and shooting aliens and each other. Paul couldn't begin to follow the action.

"Please, sir," came Victor's voice, sounding choppy and unnatural. "Would you mind taking manual control?"

"Not at all." Paul grasped the steering wheel and then breathed a sigh of relief as he felt the car respond to the movement of his hands. "Do you mind," he said, "if I drive back to Philadelphia?"

"No." The reply wasn't immediate; Victor clearly had other things on his mind.

In a tenth-floor corner office in the Advanced Concepts Division building, Paul and Jonathan gazed out on the parking lot below. Bjorn, also standing, stared at a desktop monitor.

"Look at them down there," said Paul in a melancholy tone. He scanned the lot littered with the Victor class cars, all identical dark blue compact sedans. "Inert. Lifeless." He turned to his brother. "What'll happen to them?"

"The Victor systems will be decommissioned—not destroyed." Jonathan gave a sympathetic smile and patted his brother on the back. "Whatever intelligence was there will be preserved. The networked computer units will be given to the Institute for Machine Intelligence. And I'm sure the Institute will put them to good use." He chuckled. "That is, if they can ever get the units to stop playing computer games."

"Ah," said Bjorn, "you haven't heard. The Victors have been lent to one of the online virtual communities. They'll still be smart cars."

"Hey," said Jonathan. "I like that."

"Me, too," said Paul. "I've sort of grown fond of my car. It'll be good to drive it again, even virtually."

"Yes, the Victor family will roll again," said Bjorn, "but this time in cyberspace."

"Well, at least in real space, it's over." Jonathan sighed. "I don't think we'll be building any more smart cars in the immediate future."

Paul could tell from Jonathan's voice that he was worried for his job. *The Philadelphia school district is looking for a Director of Instructional Technology. I wonder...*

"It's not quite over," said Bjorn, his eyes drawn to his monitor. "We're still getting reports of phone calls to media outlets."

"What?" Jonathan turned to the monitor. "Phone calls from whom?"

"I don't know," said Bjorn. "From the phones themselves, it seems."

"That's impossible." Jonathan squinted in puzzlement. "Probably just system latency. They'll go away soon. It *is* over."

Paul absently slipped a hand into his pants pocket. He encountered his cell phone and thought of the little computer, the little brain, inside it. Little, but connected to not merely two hundred others, but to hundreds of thousands of phones through an intelligent network. He smiled, his melancholy fading. *Maybe it's not over. Maybe this is just the beginning*. He considered the possibilities. Should he ever decide to switch jobs, here it was: *Guidance councilor to the phone network*.

The idea had its charm.